Selected Acquisition Report (SAR)

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

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

As of FY 2015 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

Table of Contents

Common Acronyms and Abbreviations

Acq O&M - Acquisition-Related Operations and Maintenance
APB - Acquisition Program Baseline
APPN - Appropriation
APUC - Average Procurement Unit Cost
BA - Budget Authority/Budget Activity
BY - Base Year
DAMIR - Defense Acquisition Management Information Retrieval
Dev Est - Development Estimate
DoD - Department of Defense
DSN - Defense Switched Network
Econ - Economic
Eng - Engineering
Est - Estimating
FMS - Foreign Military Sales
FY - Fiscal Year
IOC - Initial Operational Capability
$K - Thousands of Dollars
LRIP - Low Rate Initial Production
$M - Millions of Dollars
MILCON - Military Construction
N/A - Not Applicable
O&S - Operating and Support
Oth - Other
PAUC - Program Acquisition Unit Cost
PB - President’s Budget
PE - Program Element
Proc - Procurement
Prod Est - Production Estimate
QR - Quantity Related
Qty - Quantity
RDT&E - Research, Development, Test, and Evaluation
SAR - Selected Acquisition Report
Sch - Schedule
Spt - Support
TBD - To Be Determined
TY - Then Year
UCR - Unit Cost Reporting

Program Information

Program Name

Family of 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

Responsible Office

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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 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/Low Probability of Detect waveforms. These terminals will be an essential component of the strategic nuclear execution system. FAB-T terminals will upgrade the existing ground (fixed and transportable) Command Post Terminals (CPTs) as well as the airborne E-4B and E-6 aircraft CPTs. Terminals for the B-2, B-52, and RC-135 aircraft are planned for future installments. Mission capabilities include Presidential and National Voice Conferencing; Integrated Tactical Warning Attack Assessment; Emergency Action Message Dissemination; Telemetry, Tracking & Control; and Force Reportback.

Executive Summary

In 2013, the Program made significant progress toward completing development. Production Planning contracts were awarded to the two FAB-T vendors, Boeing Corporation and Raytheon in order to lock in production prices.

The Program will continue with the Command Post Terminal (CPT)-Only path in accordance with the FY 2015 PB. Procurement of the Advanced Wideband Terminals (AWTs) is planned for outside the Future Years Defense Program starting in FY 2020. The FY 2015 PB also added Procurement funding for six terminals for the President of the United States aircraft, increasing the total Production Quantity from 216 to 222.

The Boeing development effort began Flight Testing in April 2013 and will continue as necessary through May/June of 2014. The Boeing team completed Functional Qualification Testing in August 2013 and began Reliability Verification Testing in October 2013.

The Raytheon development effort conducted a Preliminary Design Review in February 2013 and a Critical Design Review in June 2013. A nine month demonstration was completed in June 2013. A prototype demonstration was conducted in October 2013.

Risk remains for both contractors to complete terminal testing within the planned schedule.

The Program Office conducted Production Source Selection activities in 2013. Four Production Planning contracts, two for CPT only variant and two for the CPT and AWT variants, were awarded in September 2013. The Program Office released the final call for revisions for the CPT-Only proposals in December 2013. Revisions were received from both offerors.

The Program is on track for contractor down-select and decision to proceed to the Production and Deployment Phase in 2014. Following the Production down-select decision, cost estimates will be updated. An Independent Cost Estimate will be developed to support an updated APB. The APB will include updated costs, schedule, and quantity distributions.

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

Threshold Breaches

APB Breaches		
Schedule		☑
Performance		☐
Cost	RDT&E	☑
	Procurement	☐
	MILCON	☐
	Acq O&M	☐
O&S Cost		☐
Unit Cost	PAUC	☐
	APUC	☐

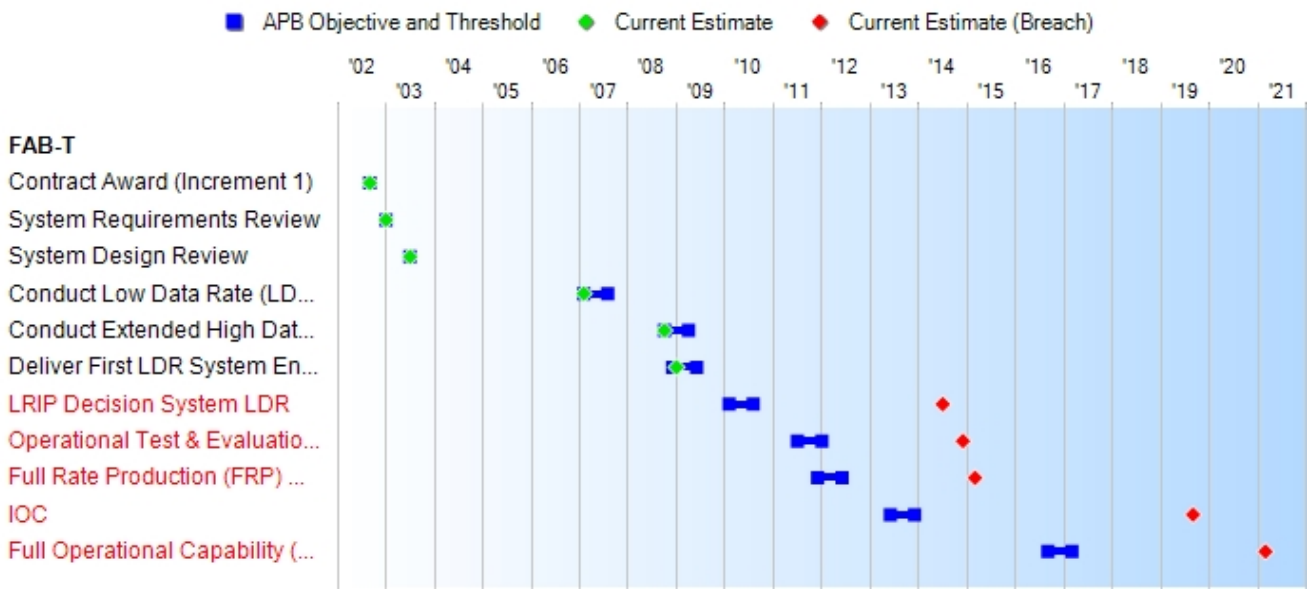
Nunn-McCurdy Breaches		
Current UCR Baseline		
	PAUC	None
	APUC	None
Original UCR Baseline		
	PAUC	None
	APUC	None

Explanation of Breach

The Schedule and RDT&E Cost breaches were reported in the December 2012 SAR. PAUC is no longer breached.

In Calendar Year (CY) 2012, the entire program was restructured to control costs and introduce competition. Competitive production proposals were received 1st quarter CY 2013. A revised Independent Cost Estimate and APB to rebaseline the program is targeted to precede the Defense Acquisition Board.

Schedule



Milestones	SAR Baseline Dev Est	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	**JUL 2014**[1]	(Ch-1)
Operational Test & Evaluation (OT&E) Complete	JUL 2011	JUL 2011	JAN 2012	**DEC 2014**[1]	
Full Rate Production (FRP) Decision	JUL 2011	DEC 2011	JUN 2012	**MAR 2015**[1]	
IOC	JUN 2013	JUN 2013	DEC 2013	**SEP 2019**[1]	
Full Operational Capability (FOC)	SEP 2016	SEP 2016	MAR 2017	**MAR 2021**[1]	

[1] *APB Breach*

Change Explanations

(Ch-1) The Current Estimate for LRIP was delayed from February 2014 to July 2014 due to on-going Production Source Selection.

Memo

Breached Milestone dates have been reported in previous SAR cycles. The FAB-T SAR continues to report against the 2007 APB. The Under Secretary of Defense for Acquisition, Technology & Logistics Acquisition Decision Memorandum, dated August 23, 2012, directed a new APB be developed prior to the Production pre-award In-Process Review Defense Acquisition Board (DAB). To support this DAB an Independent Cost Estimate will be developed to support an updated APB. The revised APB will include an accurate and applicable schedule for the program to report against.

Performance

Characteristics	SAR Baseline Dev Est	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 test conducted with LDR AWT AUG 2009 showing transmit and receive interoperabil-ity with legacy AF CPT for text, voice, and data through operational Milstar satellites, included reception of test EAMs	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 accredita-tion 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 accredita-tion 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 accredita-tion process at time of contract award	During 2007, FAB-T TPO created a DITSCAP to DIACAP transition plan; This has now been approved by the Air Force Space Command DAA and FAB-T is on the DIACAP C&A path	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	FMC w/o damage/ degradation, throughout the nuclear environment that the	FMC w/o damage/ degradation, throughout the nuclear environment that the	TBD	FMC w/o damage/ degradation, throughout the nuclear environment that the

	craft is expected to survive, while meeting PCMR requirements	aircraft is expected to survive, while meeting PCMR requirements	aircraft is expected to survive, while meeting PCMR requirements		aircraft is expected to survive, while meeting PCMR requirements
AWT Legacy Milstar Support	Provide legacy Milstar dedicated connections to transmit/ receive functions associated with individual Milstar service/nets (Milstar LDR BC and AEHF equivalent BC)	Provide legacy Milstar dedicated connections to transmit/ receive functions associated with individual Milstar service/nets (Milstar LDR BC and AEHF equivalent BC)	Provide legacy Milstar dedicated connections to transmit/ receive functions associated with individual Milstar service/nets (Milstar LDR BC and AEHF equivalent BC)	Block 6 LDR terminal acquired downlink, uplink and logged on operational Milstar satellite	Provide legacy Milstar dedicated connections to transmit/ receive functions associated with individual Milstar service/nets (Milstar LDR BC and AEHF equivalent BC)
AWT Nuclear Interoperability	Inter-operate with platform required JCS nuclear protected IER	Inter-operate with platform required JCS nuclear protected IER	Inter-operate with platform required JCS nuclear protected IER	Flight test conducted with LDR AWT AUG 2009 showing transmit and receive interoperabil-ity with legacy AF CPT for text, voice, and data through operational Milstar satellites, included reception of test EAMs	Inter-operate 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	NSA Evaluation of Block 6 completed JUN 2009. Multiple IATT	Protect all transmitted and received Information

				authorizations received in 2009; Full certification expected FY 2012	
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	TBD	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	Successful demonstration via laboratory test completed in FY 2011	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	Demonstration partially completed (33% complete) in FY 2011; planning to be fully complete in FY 2012	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	Compatibility with legacy EHF baseband functions associated with individual AEHF service/ networks, SCIS, NPES, IEMATS, DIRECT and the Red	Compatibility with legacy EHF baseband functions associated with individual AEHF service/ networks, SCIS, NPES, IEMATS, DIRECT and the Red	Serial interface demonstration planned in FY 2012	Compatibility with legacy EHF baseband functions associated with individual AEHF service/ networks, SCIS, NPES, IEMATS, DIRECT and the Red

	Switch	Switch	Switch		Switch
CPT Existing Terminal Coexistence	Inter-operable with existing EHF terminals	Inter-operable with existing EHF terminals	Inter-operable with existing EHF terminals	Block 6 interoperabil-ity testing with legacy EHF CPT terminals has been completed using Milstar	Inter-operable with existing EHF terminals
CPT Satellite Constellation Coexistences	Inter-operable with the AEHF, APS, Milstar, and UFO-E/EE	Inter-operable with the AEHF, APS, Milstar, and UFO-E/EE	Inter-operable with the AEHF, APS, Milstar, and UFO-E/EE	Milstar connectivity has been extensively tested; partial AEHF on-orbit testing has been conducted	Interoperable with the AEHF, EPS and Milstar

Requirements Source

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

Memo

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 Compatability: 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 Operational Requirements Document (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 occured; two LDR tests with the AEHF payload (prior to launch) have been completed; AEHF satellite is now on-orbit and when available for testing we will conduct interoperability testing.

Acronyms and Abbreviations

AEHF - Advanced Extremely High Frequency
AF - Air Force
APS - Advanced Polar System
ASMCS - AEHF Satellite Mission Control Subsystem
AWT - Advanced Wideband Terminal
BC - Backward Compatible
C&A - Certification & Accreditation
CPT - Command Post Terminal
DAA - Designated Approving Authority
DIACAP - DoD Information Assurance Certification & Accreditation Process
DIRECT - Defense IEMATS Replacement Command and Control Terminal
DITSCAP - Defense Information Technology Security Certification and Accreditation Process
DoD - Department of Defense
DoDI - Department of Defense Instruction
EAM - Emergency Action Message
EHF - Extremely High Frequency
EPS - Enhanced Polar System
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
MPSS - Mission Planning Support System
NPES - Nuclear Planning and Execution System
NSA - National Security Agency
PCMR - Probability of Correct Message Receipt
SCIS - Secure Communications Integrated System
TPO - Terminal Program Office
TS/SCI - Top Secret/Special Compartmented Information
UFO-E/EE - UHF Follow On - EHF/EHF Enhanced
w/o - without

Track to Budget

General Memo

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.

RDT&E

Appn	BA	PE		
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)		

Procurement

Appn	BA	PE		
Air Force 3010	06	0303601F		
Line Item		**Name**		
000999		Initial Spares/Repair Parts	(Shared)	
Air Force 3010	05	0303601F		
Line Item		**Name**		
FBLOST		FBLOST		
OTHACF		Other Aircraft	(Shared)	
Air Force 3080	03	0303601F		
Line Item		**Name**		
836700		Family of Beyond Line-of-Sight Terminals		
836780		MILSATCOM Space	(Shared)	(Sunk)
Air Force 3080	05	0303601F		
Line Item		**Name**		
861900		Spares and Repair Parts	(Shared)	

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

Appropriation	BY2002 $M			BY2002 $M	TY $M		
	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Dev Est	Current APB Development Objective	Current Estimate
RDT&E	1273.8	1283.2	1411.5	**1933.8** [1]	1431.1	1456.1	2252.9
Procurement	1368.5	1677.3	1845.0	1788.6	1736.3	2166.1	2567.0
Flyaway	--	--	--	1374.5	--	--	1978.7
Recurring	--	--	--	1374.5	--	--	1978.7
Non Recurring	--	--	--	0.0	--	--	0.0
Support	--	--	--	414.1	--	--	588.3
Other Support	--	--	--	110.8	--	--	151.0
Initial Spares	--	--	--	303.3	--	--	437.3
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	3722.4	3167.4	3622.2	4819.9

[1] ***APB Breach***

Estimate will be updated based on result of Production competition and Independent Cost Estimate. Distribution of funds will be adjusted based on terminal schedules and priorities.

Quantity	SAR Baseline Dev Est	Current APB Development	Current Estimate
RDT&E	25	25	37
Procurement	191	197	222
Total	216	222	259

Increase in total Procurement quantity from 216 to 222 is based on addition of six terminals for the President of the United States aircraft.

Cost and Funding

Funding Summary

Appropriation and Quantity Summary
FY2015 President's Budget / December 2013 SAR (TY$ M)

Appropriation	Prior	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	To Complete	Total
RDT&E	2064.0	129.8	55.2	3.9	0.0	0.0	0.0	0.0	2252.9
Procurement	20.8	64.8	131.7	236.0	210.0	191.8	166.8	1545.1	2567.0
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 2015 Total	2084.8	194.6	186.9	239.9	210.0	191.8	166.8	1545.1	4819.9
PB 2014 Total	2031.3	215.1	175.9	303.6	267.0	271.8	614.9	795.0	4674.6
Delta	53.5	-20.5	11.0	-63.7	-57.0	-80.0	-448.1	750.1	145.3

The 3010 appropriation includes FY 2015 PB adjustment for procurement of six terminals for the President of the United States aircraft.

Quantity	Undistributed	Prior	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	To Complete	Total
Development	37	0	0	0	0	0	0	0	0	37
Production	0	0	4	9	14	10	10	7	168	222
PB 2015 Total	37	0	4	9	14	10	10	7	168	259
PB 2014 Total	30	0	4	9	19	16	16	52	100	246
Delta	7	0	0	0	-5	-6	-6	-45	68	13

Cost and Funding

Annual Funding By Appropriation

Annual Funding TY$
3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
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	--	--	--	--	--	--	55.2
2016	--	--	--	--	--	--	3.9
Subtotal	**37**	**--**	**--**	**--**	**--**	**--**	**2252.9**

Annual Funding BY$
3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2002 $M	Non End Item Recurring Flyaway BY 2002 $M	Non Recurring Flyaway BY 2002 $M	Total Flyaway BY 2002 $M	Total Support BY 2002 $M	Total Program BY 2002 $M
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	--	--	--	--	--	--	227.5
2013	--	--	--	--	--	--	78.0
2014	--	--	--	--	--	--	101.8
2015	--	--	--	--	--	--	42.5
2016	--	--	--	--	--	--	2.9
Subtotal	**37**	**--**	**--**	**--**	**--**	**--**	**1933.8**

Annual Funding TY$
3010 | Procurement | Aircraft Procurement, Air Force

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
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	46.9	--	--	46.9	12.5	59.4
2016	5	48.6	--	--	48.6	10.7	59.3
2017	2	22.5	--	--	22.5	7.2	29.7
2018	3	31.5	--	--	31.5	7.4	38.9
2019	1	11.8	--	--	11.8	7.5	19.3
2020	16	104.0	--	--	104.0	34.0	138.0
2021	30	179.8	--	--	179.8	55.0	234.8
2022	45	284.6	--	--	284.6	67.5	352.1
2023	43	272.0	--	--	272.0	64.5	336.5
Subtotal	**150**	**1017.6**	**--**	**--**	**1017.6**	**266.3**	**1283.9**

Annual Funding BY$
3010 | Procurement | Aircraft Procurement, Air Force

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2002 $M	Non End Item Recurring Flyaway BY 2002 $M	Non Recurring Flyaway BY 2002 $M	Total Flyaway BY 2002 $M	Total Support BY 2002 $M	Total Program BY 2002 $M
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	--	1.4	--	--	1.4	--	1.4
2015	5	35.1	--	--	35.1	9.3	44.4
2016	5	35.6	--	--	35.6	7.9	43.5
2017	2	16.2	--	--	16.2	5.2	21.4
2018	3	22.2	--	--	22.2	5.2	27.4
2019	1	8.2	--	--	8.2	5.1	13.3
2020	16	70.5	--	--	70.5	23.0	93.5
2021	30	119.4	--	--	119.4	36.5	155.9
2022	45	185.3	--	--	185.3	44.0	229.3
2023	43	173.6	--	--	173.6	41.2	214.8
Subtotal	**150**	**678.9**	**--**	**--**	**678.9**	**177.4**	**856.3**

Includes funding for President of the United States aircraft added in FY 2015 PB with associated quantity of six terminals.

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	22.6
2016	5	22.6
2017	2	9.1
2018	3	13.6
2019	1	4.5
2020	16	72.4
2021	30	135.8
2022	45	203.7
2023	43	194.6
Subtotal	**150**	**678.9**

Annual Funding TY$
3080 | Procurement | Other Procurement, Air Force

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
2010	--	1.8	--	--	1.8	--	1.8
2011	--	--	--	--	--	--	--
2012	--	--	--	--	--	--	--
2013	--	5.0	--	--	5.0	--	5.0
2014	4	57.3	--	--	57.3	5.6	62.9
2015	4	43.2	--	--	43.2	29.1	72.3
2016	9	106.1	--	--	106.1	70.6	176.7
2017	8	113.6	--	--	113.6	66.7	180.3
2018	7	104.3	--	--	104.3	48.6	152.9
2019	6	97.1	--	--	97.1	50.4	147.5
2020	20	288.3	--	--	288.3	30.0	318.3
2021	14	144.4	--	--	144.4	21.0	165.4
Subtotal	**72**	**961.1**	**--**	**--**	**961.1**	**322.0**	**1283.1**

Annual Funding BY$
3080 | Procurement | Other Procurement, Air Force

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2002 $M	Non End Item Recurring Flyaway BY 2002 $M	Non Recurring Flyaway BY 2002 $M	Total Flyaway BY 2002 $M	Total Support BY 2002 $M	Total Program BY 2002 $M
2010	--	1.5	--	--	1.5	--	1.5
2011	--	--	--	--	--	--	--
2012	--	--	--	--	--	--	--
2013	--	4.0	--	--	4.0	--	4.0
2014	4	45.1	--	--	45.1	4.4	49.5
2015	4	33.4	--	--	33.4	22.5	55.9
2016	9	80.5	--	--	80.5	53.5	134.0
2017	8	84.5	--	--	84.5	49.5	134.0
2018	7	76.0	--	--	76.0	35.4	111.4
2019	6	69.4	--	--	69.4	36.0	105.4
2020	20	202.0	--	--	202.0	21.0	223.0
2021	14	99.2	--	--	99.2	14.4	113.6
Subtotal	**72**	**695.6**	**--**	**--**	**695.6**	**236.7**	**932.3**

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	4	38.6
2015	4	38.6
2016	9	86.9
2017	8	77.3
2018	7	67.6
2019	6	58.0
2020	20	193.3
2021	14	135.3
Subtotal	**72**	**695.6**

Low Rate Initial Production

	Initial LRIP Decision	Current Total LRIP
Approval Date	7/5/2009	4/5/2012
Approved Quantity	101	24
Reference	Acquistion 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 Under Secretary of Defense for Acquisition, Technology & Logistics Acquisition Decision Memorandum,dated August 23, 2012, directed a new APB be developed prior to the Production pre-award In-Process Review Defense Acquisition Board (DAB). To support this DAB, an Independent Cost Estimate will be developed to support an updated APB. The APB will include updated LRIP quantities.

Foreign Military Sales

None

Nuclear Costs

None

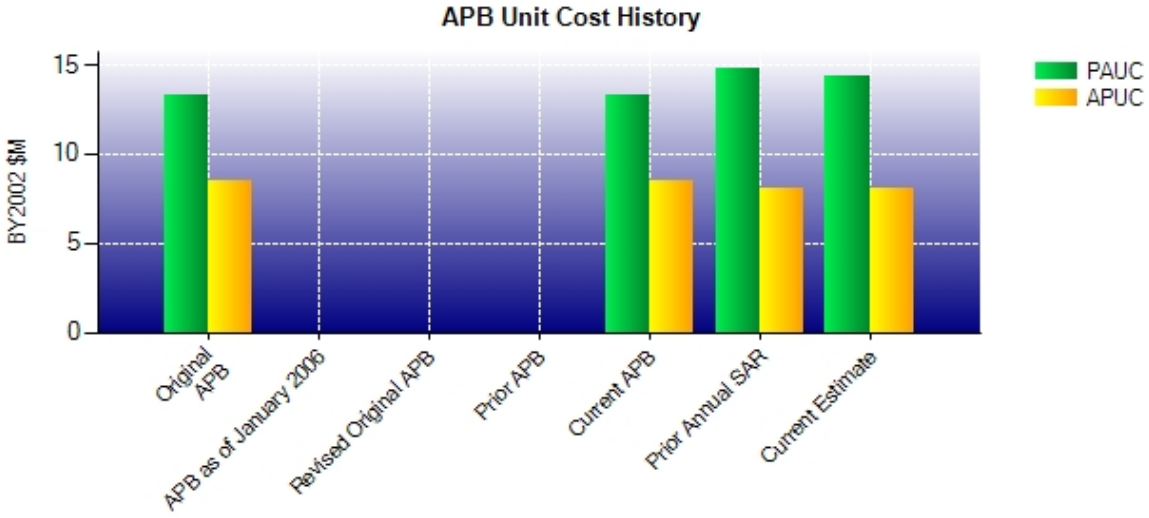
Unit Cost

Unit Cost Report

	BY2002 $M	BY2002 $M	
Unit Cost	**Current UCR Baseline (DEC 2007 APB)**	**Current Estimate (DEC 2013 SAR)**	**BY % Change**
Program Acquisition Unit Cost (PAUC)			
Cost	2960.5	3722.4	
Quantity	222	259	
Unit Cost	13.336	14.372	+7.77
Average Procurement Unit Cost (APUC)			
Cost	1677.3	1788.6	
Quantity	197	222	
Unit Cost	8.514	8.057	-5.37

	BY2002 $M	BY2002 $M	
Unit Cost	**Original UCR Baseline (DEC 2007 APB)**	**Current Estimate (DEC 2013 SAR)**	**BY % Change**
Program Acquisition Unit Cost (PAUC)			
Cost	2960.5	3722.4	
Quantity	222	259	
Unit Cost	13.336	14.372	+7.77
Average Procurement Unit Cost (APUC)			
Cost	1677.3	1788.6	
Quantity	197	222	
Unit Cost	8.514	8.057	-5.37

Unit Cost History



		BY2002 $M		TY $M	
	Date	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 2012	14.791	8.069	19.002	11.407
Current Estimate	DEC 2013	14.372	8.057	18.610	11.563

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY $M)

Initial PAUC Dev Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
14.664	0.076	-1.469	0.884	0.675	2.860	0.000	0.920	3.946	18.610

Current SAR Baseline to Current Estimate (TY $M)

Initial APUC Dev Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
9.091	0.043	-0.238	1.032	0.000	0.562	0.000	1.073	2.472	11.563

SAR Baseline History

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	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	JUL 2014
IOC	N/A	JUN 2013	N/A	SEP 2019
Total Cost (TY $M)	N/A	3167.4	N/A	4819.9
Total Quantity	N/A	216	N/A	259
Prog. Acq. Unit Cost (PAUC)	N/A	14.664	N/A	18.610

Cost Variance

Summary Then Year $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	1431.1	1736.3	--	3167.4
Previous Changes				
Economic	+14.5	+28.0	--	+42.5
Quantity	+14.1	+179.5	--	+193.6
Schedule	--	+180.1	--	+180.1
Engineering	+174.7	--	--	+174.7
Estimating	+576.2	+58.4	--	+634.6
Other	--	--	--	--
Support	--	+281.7	--	+281.7
Subtotal	+779.5	+727.7	--	+1507.2
Current Changes				
Economic	-4.3	-18.4	--	-22.7
Quantity	+6.9	+49.5	--	+56.4
Schedule	--	+48.9	--	+48.9
Engineering	--	--	--	--
Estimating	+39.7	+66.4	--	+106.1
Other	--	--	--	--
Support	--	-43.4	--	-43.4
Subtotal	+42.3	+103.0	--	+145.3
Total Changes	+821.8	+830.7	--	+1652.5
CE - Cost Variance	2252.9	2567.0	--	4819.9
CE - Cost & Funding	2252.9	2567.0	--	4819.9

Summary Base Year 2002 $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	1273.8	1368.5	--	2642.3
Previous Changes				
Economic	--	--	--	--
Quantity	+11.9	+135.3	--	+147.2
Schedule	--	+0.6	--	+0.6
Engineering	+145.8	--	--	+145.8
Estimating	+464.2	+56.4	--	+520.6
Other	--	--	--	--
Support	--	+182.0	--	+182.0
Subtotal	+621.9	+374.3	--	+996.2
Current Changes				
Economic	--	--	--	--
Quantity	+5.6	+31.6	--	+37.2
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+32.5	+52.8	--	+85.3
Other	--	--	--	--
Support	--	-38.6	--	-38.6
Subtotal	+38.1	+45.8	--	+83.9
Total Changes	+660.0	+420.1	--	+1080.1
CE - Cost Variance	1933.8	1788.6	--	3722.4
CE - Cost & Funding	1933.8	1788.6	--	3722.4

Previous Estimate: December 2012

RDT&E	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	-4.3
Increased quantity of Engineering Development Models from 30 to 37 for Raytheon development. (Quantity)	+5.6	+6.9
Adjustment for current and prior escalation. (Estimating)	+3.0	+3.8
Funding increased to support competition by continuing Raytheon development. (Estimating)	+29.5	+35.9
RDT&E Subtotal	+38.1	+42.3

Procurement	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	-18.4
Increased quantity from 144 to 150 resulting from an increase of six terminals for POTUS aircraft (APPN 3010). (Quantity)	+31.6	+49.5
Rephasing of procurement buy schedule from FY 2015 - FY 2023. (APPN 3010) (Schedule)	0.0	+32.1
Rephasing of procurement buy schedule from FY 2014 - FY 2021. (APPN 3080) (Schedule)	0.0	+16.8
Revised estimate based on revised buy profile, deferral of Advanced Wideband Terminal beyond Future Years Defense Program and addition of terminals for POTUS aircraft. (APPN 3010) (Estimating)	+29.8	+30.2
Rephasing of procurement buy profile. (APPN 3080) (Estimating)	+22.4	+35.3
Adjustment for current and prior escalation. (Estimating)	+0.6	+0.9
Adjustment for current and prior escalation. (Support)	+0.1	0.0
Revised estimate for Interim Contractor Support and Depot Activation costs allocated to airborne platforms based on rephasing of buy profile and quantity of airborne terminals fielded prior to Depot stand-up. (APPN 3010) (Support)	-2.4	-3.8
Revised estimate for Interim Contractor Support and Depot Activation costs allocated to ground sites based on rephasing of buy profile and quantity of ground terminals fielded prior to Depot Stand-up. (APPN 3080) (Support)	-24.8	-32.7
Revised phasing for airborne platform spares based on buy profile. (APPN 3010) (Support)	-4.3	+0.7
Revised phasing for ground site spares based on buy profile. (APPN 3080) (Support)	-7.2	-7.6
Procurement Subtotal	+45.8	+103.0

Contracts

Appropriation: RDT&E

Contract Name	**Boeing FAB-T Development**
Contractor	Boeing
Contractor Location	Huntington Beach, CA 92647-2099
Contract Number, Type	F19628-02-C-0048, FFP
Award Date	September 20, 2002
Definitization Date	September 20, 2002

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price at Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
266.8	N/A	18	1773.1	N/A	30	1773.1	1773.1

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to cost overruns and design and requirements changes.

Cost and Schedule Variance Explanations

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

Contract Comments

This contract is more than 90% complete; therefore, this is the final report for this contract.

The Boeing Development contract was converted to Firm Fixed Price in April 2012.

Appropriation: RDT&E

Contract Name	**Raytheon CPT Development**
Contractor	Raytheon
Contractor Location	1001 Boston Post Road E Marlborough, MA 01752-2377
Contract Number, Type	FA8307-12-C-0013, FFP/FPIF
Award Date	September 07, 2012
Definitization Date	April 10, 2013

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price at Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
70.0	N/A	N/A	144.8	N/A	7	144.8	144.8

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.

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this FFP/FPIF contract.

Contract Comments

Current contract authorizes seven Engineering Development Models to date.

Deliveries and Expenditures

Delivered to Date	Plan to Date	Actual to Date	Total Quantity	Percent Delivered
Development	12	12	37	32.43%
Production	0	0	222	0.00%
Total Program Quantity Delivered	12	12	259	4.63%

Expended and Appropriated (TY $M)			
Total Acquisition Cost	4819.9	Years Appropriated	14
Expended to Date	1943.4	Percent Years Appropriated	60.87%
Percent Expended	40.32%	Appropriated to Date	2279.4
Total Funding Years	23	Percent Appropriated	47.29%

The above data is current as of 2/28/2014.

Total quantities reflect the Engineering Development Models (EDMs) required by the contract. Total Development quantity include seven Raytheon EDMs. Production quantities include six terminals for President of the United States aircraft.

Operating and Support Cost

FAB-T

Assumptions and Ground Rules

Cost Estimate Reference:
O&S costs are based on the 2009 Independent Cost Estimate conducted by the Office of the Secretary of Defense's Cost Analysis Improvement Group (now the office of Cost Assessment & Program Evaluation).

Sustainment Strategy:
FAB-T consists of 216 ground and airborne terminals with an assumed 20-year life per terminal after installation. Interim Contractor Support 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.

Antecedent Information:
FAB-T consists of Command Post Terminals (CPT) 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.

Unitized O&S Costs BY2002 $K		
Cost Element	**FAB-T Average Annual Cost per Terminal**	**MILSTAR (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

Unitized Cost Comments:
FAB-T unitized costs are calculated as BY 2002 Total O&S Cost of $4,318M/216 terminals/20 years per terminal = $999.537K annual terminal cost.

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

Total O&S Costs Comments:
None

Disposal Costs:

The O&S estimate did not include disposal costs.