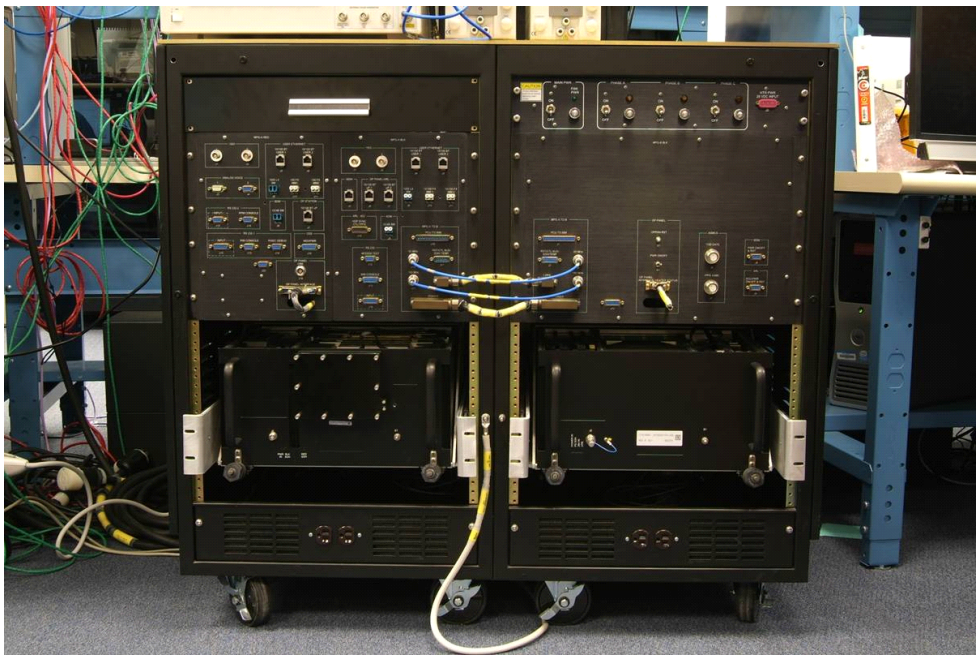
Selected Acquisition Report (SAR)

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



FAB-T

As of December 31, 2010

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Program Information

Designation And Nomenclature (Popular Name)

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

DoD Component

Air Force

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

Mission and Description

FAB-T will develop terminals capable of providing air and ground communications using the Milstar Extremely High Frequency (EHF) and Advanced Extremely High Frequency (AEHF) waveforms. These terminals will be an essential component of the strategic nuclear execution system. FAB-T terminals are planned for the B-2, B-52, and RC-135 aircraft and to upgrade the existing Command Post Terminals (CPTs) located on the ground (fixed and transportable) and airborne on the E-4 and E-6 aircraft.

Executive Summary

In December 2009, the FAB-T program manager announced software integration complexities and hardware qualification challenges were driving a 23-month System Development Design (SDD) contract extension which would require the Low-Rate Production start to move from FY 2010 to FY 2013. This caused a re-phasing of terminal buys and pushed deliveries to FY 2015 and beyond. The Program Office is closely tracking to ensure platform delivery schedules are maintained. Extended development and a stretch-out of production buys from five years to seven years caused significant cost growth and inefficiencies.

Production affordability became a serious concern during 2010, and aggressive actions were taken by both the government and industry teams to address this concern. This included eliminating redundant systems engineering and program management support; adopting commercial manufacturing processes; consolidating proposed supply chains; and implementing critical metrics to track performance on the System Development Design (SDD) contract. Further, the program office is applying lessons learned from Block 6 Advanced Extremely High Frequency (AEHF) Low Data Rate (LDR) Advanced Wideband Terminal (AWT), which includes adding additional satellite simulators, test strings, and development assets, as well as sending Extended Data Rate (XDR)-experienced personnel from Massachusetts Institute of Technology/Lincoln Labs to assist in waveform development.

In addition to these actions, an Integrated Baseline Review was completed in August 2010, and a revised baseline was incorporated into the development contract. An independent team of experts reviewed the baseline in October 2010 and provided recommendations. These included improved risk identification and mitigation processes; streamlined decision making processes; and improved metrics. The industry team is incorporating the recommendations through changes to program organization, technical staffing, processes, and metrics tracking. The independent team of experts reconvened in April 2011 and is assessing progress.

Threshold Breaches

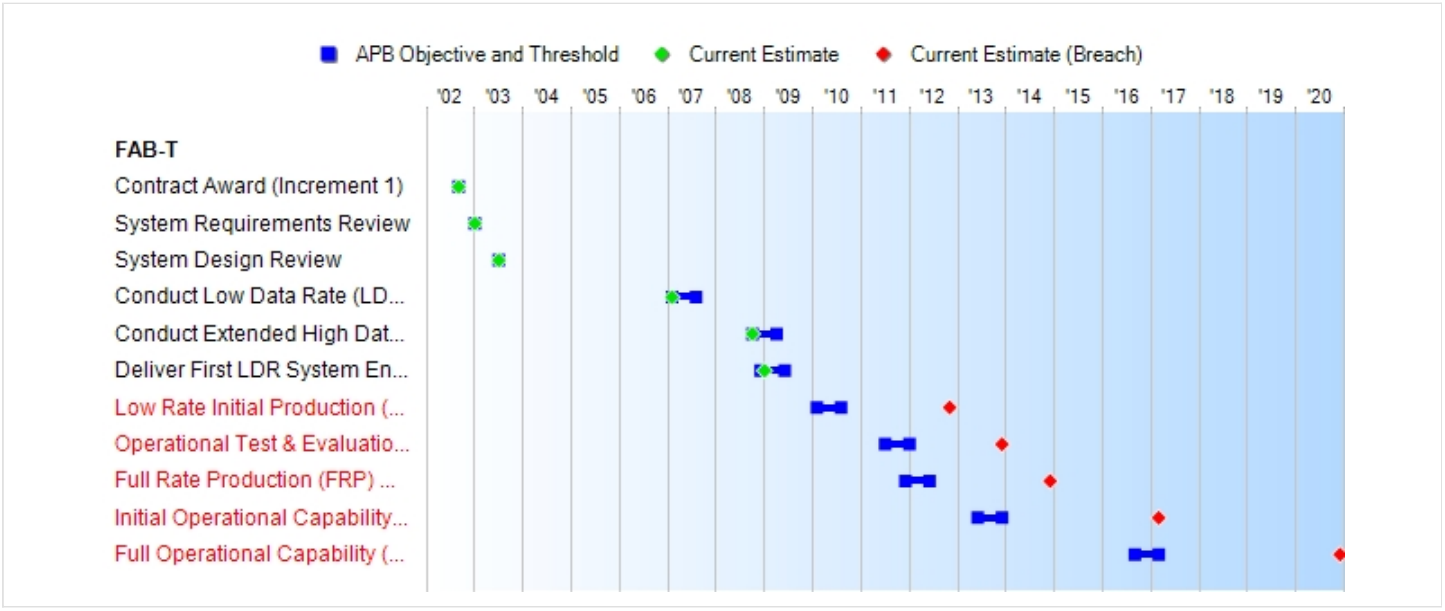
APB Breaches		
Schedule		☑
Performance		☐
Cost	RDT&E	☑
	Procurement	☑
	MILCON	☐
	Acq O&M	☐
Unit Cost	PAUC	☑
	APUC	☑

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

Explanation of Breach

Cost growth was driven by hardware qualification failures and integration and test complexitiesthat resulted in a schedule extension of the Development contract to FY 2014. Extending the Development program forced a slip in Production start from FY 2010 to FY 2013 and stretches the buy schedule from five to seven years. Additional costs are attributable to the two-year stretch.

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	
Low Rate Initial Production (LRIP) Decision System LDR	FEB 2010	FEB 2010	AUG 2010	**NOV 2012**[1]	(Ch-1)
Operational Test & Evaluation (OT&E) Complete	JUL 2011	JUL 2011	JAN 2012	**DEC 2013**[1]	(Ch-1)
Full Rate Production (FRP) Decision	JUL 2011	DEC 2011	JUN 2012	**DEC 2014**[1]	(Ch-1)
Initial Operational Capability (IOC)	JUN 2013	JUN 2013	DEC 2013	**MAR 2017**[1]	(Ch-1)
Full Operational Capability (FOC)	SEP 2016	SEP 2016	MAR 2017	**DEC 2020**[1]	(Ch-1)

[1] *APB Breach*

Change Explanations

(Ch-1) Delays in hardware qualification and complexities with software integration drove an extension of the Development contract to FY 2014. These challenges forced a slip in the LRIP Decision from N/A to November 2012,

the OT&E Complete from N/A to December 2013, the FRP Decision from N/A to December 2014, the IOC from N/A to March 2017, and the FOC from N/A to December 2020 .

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	Engineering demo commu-nication (text and voice) between FAB-T and legacy AF CPT terminal through operational Milstar Satellite (December 2008 and August 2009).	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	Completed DITSCAP Phase I. Authorized to proceed to Phase II. Transition planning to DIACAP in progress	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	FMC w/o damage/degradation, throughout the nuclear environment that the aircraft is expected to survive, while	FMC w/o damage/degradation, throughout the nuclear environment that the aircraft is expected to survive, while	Tested parts for radiation hardness, analysis will validate terminal level probability of survivability Engineering demo	FMC w/o damage / degradation, throughout the nuclear environment that the air craft is expected to survive, while

	meeting PCMR requirements	meeting PCMR requirements	meeting PCMR requirements		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 8 terminal went Over-the-Air with legacy terminal (Milstar) and ESC Block 6 FAB-T.	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	LDR AWT received text and voice over operational Milstar satellite from legacy AF CPT December 2008. Receipt of EAMs in flight demon-strated August 2009.	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	IATT approved for terminal test. Certification for MPG expected in FY 2013. IATT for platform EDMs beginning December 2008, NSA Block 6 evaluation	Protect all transmitted and received Information

				completed June 2009.	
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 disseminatio n and FE report back	Enable EAM disseminatio n and FE report back	Enable EAM disseminatio n and FE report back	TBD	Enable EAM dissemina-tion and FE report back
CPT Control Interface	Support use of ASMCS and MPSS satellite / network / terminal control equipment	Support use of ASMCS and MPSS satellite/netw ork/terminal control equipment	Support use of ASMCS and MPSS satellite/netw ork/terminal control equipment	ASMCS/MP SS to Boeing SIL in FY 2011.	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, I EMATS, DIRECT and the Red Switch	Compatibility with legacy EHF baseband functions associated with individual AEHF service/netw orks, SCIS, NPES, I EMATS, DIRECT and the Red Switch	Compatibility with legacy EHF baseband functions associated with individual AEHF service/netw orks, SCIS, NPES, I EMATS, DIRECT and the Red Switch	TBD	Compatibility with legacy EHF baseband functions associated with individual AEHF service / networks, SCIS, NPES, IEMATS, DIRECT and the Red Switch
CPT Existing Terminal Coexistence	Inter-operable with existing EHF terminals	Inter-operable with existing EHF terminals	Inter-operable with existing EHF terminals	TBD	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	Will not exist with APS. UFO E/EE removed from requirements	Inter-operable with the AEHF, and Milstar.

				.	

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

Acronyms And Abbreviations

AEHF - Advanced Extremely High Frequency
AF - Air Force
AFRB - Air Force Report Back
ANDVT - Advanced Narrowband Digital Voice Terminal
APS - Advanced Polar System
ASMCS - Advanced EHF Satellite Mission Control Sub-Segment
AWT - Advanced Wideband Terminal
BC - Backwards Compatibility
COMSEC - Communications Security
CPT - Command Post Terminal
DIACAP - Defense Information Assurance Certification and Accreditation Process
DIRECT - Defense IEMATS Replacement Command and Control Terminal
DITSCAP - Department of Defense Information Technology Security Certification and Accreditation Process
DoD - Department of Defense
EAM - Emergency Action Message
EDM - Engineering Development Model
EHF - Extremely High Frequency
ESC - Electronic Systems Center
FAB-T - Family of Beyond Line-of-Sight Terminals
FE - Force Element
FMC - Fully Mission Capable
FY - Fiscal Year
IA - Information Assurance
IATT - Interim Authority to Test
IAW - In Accordance With
IEMATS - Improved Emergency Action Message Automatic Transmission System
IER - Information Exchange Requirements
JCS - Joint Chiefs of Staff
LDR - Low Data Rate
MPG - Modem Processor Group
MPSS - Mission Planning Sub-System
NPES - Nuclear Planning and Execution System
NSA - National Security Agency
ORD - Operational Requirements Document
PCMR - Probability of Correct Message Receipt
SCAMP - Single Channel Anti-Jam Man-Portable
SCI - Sensitive Compartmented Information
SCIS - Survivable Communications Integration System
TRANSEC - Transmission Security
TS - Top Secret
TT&C - Telemetry, Tracking and Commanding
UFO/E - UHF Follow-On EHF
UFO/EE - UHF Follow-On Enhanced EHF
W/O - Without
XDR - Extended High Data Rate

Change Explanations

None

Memo

The following footnotes 1 through 9 apply to the above sections as listed:
Sections:
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
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 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 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 Assigned 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
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 XDR System must meet all the Performance parameters in Section A.

NOTE: Advanced Polar System (APS) is now Enhanced Polar System (EPS).

Track To Budget

General Memo

FAB-T shares PE 030601F Project 672487 with GBS and non-MDAP funding. FAB-T shares the OTHACF line item with other modification programs, shares the 000999 Initial Spares line item with other programs, and shares 836780 with other MILSATCOM programs.

RDT&E

APPN 3600	BA 07	PE 0303601F	(Air Force)
	Project 672487	MILSATCOM Terminals	(Shared)

Procurement

APPN 3010	BA 06	PE 0303601F	(Air Force)
	ICN 000999	(USAF)	(Shared)
APPN 3010	BA 05	PE 0303601F	(Air Force)
	ICN OTHACF	(USAF)	(Shared)
APPN 3080	BA 03	PE 0303601F	(Air Force)
	ICN 836780	(USAF)	(Shared)

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

	BY2002 $M			BY2002 $M	TY $M		
Appropriation	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	**1682.6** [1]	1431.1	1456.1	1933.2
Procurement	1368.5	1677.3	1845.0	**2048.8** [1]	1736.3	2166.1	2679.6
Flyaway	1097.8	--	--	1394.6	1393.0	--	1829.4
Recurring	1069.1	--	--	1394.6	1357.6	--	1829.4
Non Recurring	28.7	--	--	0.0	35.4	--	0.0
Support	270.7	--	--	654.2	343.3	--	850.2
Other Support	0.0	--	--	307.6	0.0	--	396.4
Initial Spares	270.7	--	--	346.6	343.3	--	453.8
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	3731.4	3167.4	3622.2	4612.8

[1] ***APB Breach***

Quantity	SAR Baseline Dev Est	Current APB Development	Current Estimate
RDT&E	25	25	30
Procurement	191	197	216
Total	216	222	246

Cost and Funding

Funding Summary

Appropriation and Quantity Summary
FY2012 President's Budget / December 2010 SAR (TY$ M)

Appropriation	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
RDT&E	1421.3	136.3	229.6	127.4	8.3	5.1	5.2	0.0	1933.2
Procurement	49.0	160.1	119.1	427.9	312.5	124.4	126.5	1360.1	2679.6
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 2012 Total	1470.3	296.4	348.7	555.3	320.8	129.5	131.7	1360.1	4612.8
PB 2011 Total	1548.2	296.4	679.6	581.6	324.6	131.3	404.3	15.9	3981.9
Delta	-77.9	0.0	-330.9	-26.3	-3.8	-1.8	-272.6	1344.2	630.9

Quantity	Undistributed	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
Development	30	0	0	0	0	0	0	0	0	30
Production	0	0	0	0	28	25	11	12	140	216
PB 2012 Total	30	0	0	0	28	25	11	12	140	246
PB 2011 Total	27	7	17	57	55	31	17	32	0	243
Delta	3	-7	-17	-57	-27	-6	-6	-20	140	3

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	--	--	--	--	--	--	188.8
2011	--	--	--	--	--	--	136.3
2012	--	--	--	--	--	--	229.6
2013	--	--	--	--	--	--	127.4
2014	--	--	--	--	--	--	8.3
2015	--	--	--	--	--	--	5.1
2016	--	--	--	--	--	--	5.2
Subtotal	**30**	**--**	**--**	**--**	**--**	**--**	**1933.2**

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	--	--	--	--	--	--	239.8
2009	--	--	--	--	--	--	179.3
2010	--	--	--	--	--	--	159.4
2011	--	--	--	--	--	--	113.5
2012	--	--	--	--	--	--	188.4
2013	--	--	--	--	--	--	102.9
2014	--	--	--	--	--	--	6.6
2015	--	--	--	--	--	--	4.0
2016	--	--	--	--	--	--	4.0
Subtotal	**30**	**--**	**--**	**--**	**--**	**--**	**1682.6**

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	--	10.5	--	--	10.5	--	10.5
2011	--	152.6	--	--	152.6	--	152.6
2012	--	50.9	--	--	50.9	--	50.9
2013	7	34.9	--	--	34.9	54.3	89.2
2014	14	69.3	--	--	69.3	58.4	127.7
2015	8	55.5	--	--	55.5	27.6	83.1
2016	9	57.7	--	--	57.7	26.9	84.6
2017	24	156.2	--	--	156.2	47.8	204.0
2018	37	278.0	--	--	278.0	62.0	340.0
2019	45	288.8	--	--	288.8	68.3	357.1
Subtotal	**144**	**1158.7**	**--**	**--**	**1158.7**	**345.3**	**1504.0**

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	--	8.7	--	--	8.7	--	8.7
2011	--	124.7	--	--	124.7	--	124.7
2012	--	40.9	--	--	40.9	--	40.9
2013	7	27.6	--	--	27.6	42.9	70.5
2014	14	53.9	--	--	53.9	45.4	99.3
2015	8	42.4	--	--	42.4	21.1	63.5
2016	9	43.4	--	--	43.4	20.2	63.6
2017	24	115.5	--	--	115.5	35.3	150.8
2018	37	202.1	--	--	202.1	45.0	247.1
2019	45	206.4	--	--	206.4	48.8	255.2
Subtotal	**144**	**869.3**	**--**	**--**	**869.3**	**258.7**	**1128.0**

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	7	42.3
2014	14	84.5
2015	8	48.3
2016	9	54.3
2017	24	144.9
2018	37	223.4
2019	45	271.6
Subtotal	**144**	**869.3**

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	--	--	--	--	--	34.2	34.2
2011	--	--	--	--	--	7.5	7.5
2012	--	61.6	--	--	61.6	6.6	68.2
2013	21	202.6	--	--	202.6	136.1	338.7
2014	11	106.6	--	--	106.6	78.2	184.8
2015	3	17.3	--	--	17.3	24.0	41.3
2016	3	17.8	--	--	17.8	24.1	41.9
2017	22	215.3	--	--	215.3	122.2	337.5
2018	12	49.5	--	--	49.5	72.0	121.5
Subtotal	**72**	**670.7**	**--**	**--**	**670.7**	**504.9**	**1175.6**

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	--	--	--	--	--	28.9	28.9
2011	--	--	--	--	--	6.2	6.2
2012	--	50.6	--	--	50.6	5.4	56.0
2013	21	163.6	--	--	163.6	109.9	273.5
2014	11	84.7	--	--	84.7	62.1	146.8
2015	3	13.5	--	--	13.5	18.7	32.2
2016	3	13.7	--	--	13.7	18.5	32.2
2017	22	162.5	--	--	162.5	92.3	254.8
2018	12	36.7	--	--	36.7	53.5	90.2
Subtotal	**72**	**525.3**	**--**	**--**	**525.3**	**395.5**	**920.8**

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	21	153.2
2014	11	80.3
2015	3	21.9
2016	3	21.9
2017	22	160.5
2018	12	87.5
Subtotal	**72**	**525.3**

Low Rate Initial Production

	Initial LRIP Decision	Current Total LRIP
Approval Date	12/22/2007	1/13/2009
Approved Quantity	40	101
Reference	Acquisition Program Baseline	Acquisition Strategy Addendum
Start Year	2010	2010
End Year	2011	2012

The Program is developing a revised Acquisition Strategy with approval expected in spring 2011. The approved Acquisition Strategy will include revised estimates for Low Rate Initial Production (LRIP) and future milestones. The target date for an LRIP Decision is November 2012.

The number of terminals procured in the LRIP years will exceed ten percent of the total number of terminals and were included in the approved Acquisition Strategy signed in December 2008. Per the January 2009 Acquisition Strategy Addendum, the increased LRIP quantity is the result of the program meeting DOT&E direction to conduct Initial Operational Test and Evaluation (IOT&E) with production representative hardware including integration of the new cryptographic module.

Foreign Military Sales

None

Nuclear Cost

None

Unit Cost

Unit Cost Report

Unit Cost	BY2002 $M Current UCR Baseline (DEC 2007 APB)	BY2002 $M Current Estimate (DEC 2010 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	2960.5	3731.4	
Quantity	222	246	
Unit Cost	13.336	15.168	+13.74
Average Procurement Unit Cost (APUC)			
Cost	1677.3	2048.8	
Quantity	197	216	
Unit Cost	8.514	9.485	+11.40

Unit Cost	BY2002 $M Original UCR Baseline (DEC 2007 APB)	BY2002 $M Current Estimate (DEC 2010 SAR)	BY % Change
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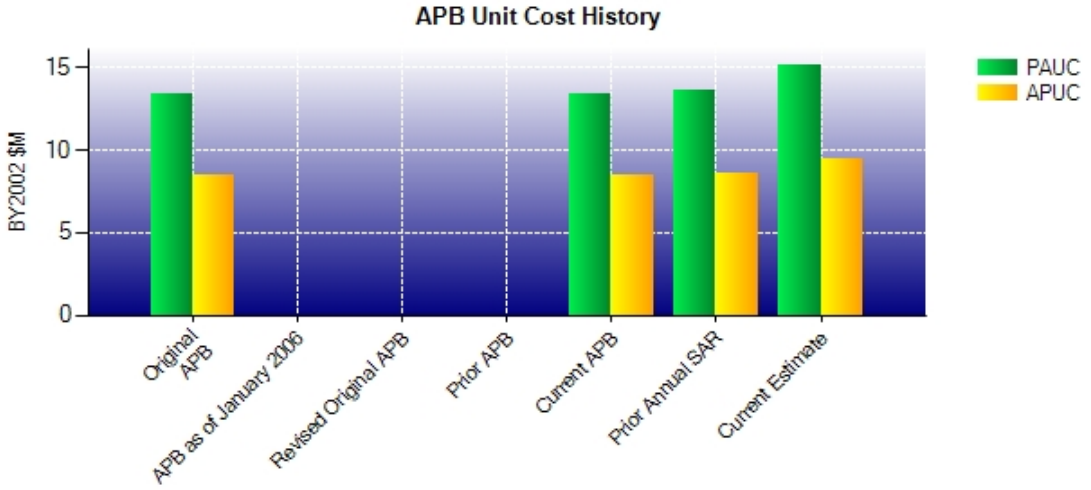
Unit Cost History



		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 2009	13.602	8.546	16.386	10.753
Current Estimate	DEC 2010	15.168	9.485	18.751	12.406

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	-0.191	-1.002	0.408	0.710	2.056	0.000	2.106	4.087	18.751

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	-0.237	-0.221	0.465	0.000	0.910	0.000	2.398	3.315	12.406

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	NOV 2012
IOC	N/A	JUN 2013	N/A	MAR 2017
Total Cost (TY $M)	N/A	3167.4	N/A	4612.8
Total Quantity	N/A	216	N/A	246
Prog. Acq. Unit Cost (PAUC)	N/A	14.664	N/A	18.751

Cost Variance

Cost Variance Summary

Summary Then Year $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	1431.1	1736.3	--	3167.4
Previous Changes				
Economic	+4.6	-47.0	--	-42.4
Quantity	--	+179.5	--	+179.5
Schedule	--	+18.7	--	+18.7
Engineering	+174.7	--	--	+174.7
Estimating	+48.8	-88.3	--	-39.5
Other	--	--	--	--
Support	--	+523.5	--	+523.5
Subtotal	+228.1	+586.4	--	+814.5
Current Changes				
Economic	-0.4	-4.2	--	-4.6
Quantity	+14.1	--	--	+14.1
Schedule	--	+81.7	--	+81.7
Engineering	--	--	--	--
Estimating	+260.3	+284.9	--	+545.2
Other	--	--	--	--
Support	--	-5.5	--	-5.5
Subtotal	+274.0	+356.9	--	+630.9
Total Changes	+502.1	+943.3	--	+1445.4
CE - Cost Variance	1933.2	2679.6	--	4612.8
CE - Cost & Funding	1933.2	2679.6	--	4612.8

Summary Base Year 2002 $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	1273.8	1368.5	--	2642.3
Previous Changes				
Economic	--	--	--	--
Quantity	--	+135.3	--	+135.3
Schedule	--	+0.6	--	+0.6
Engineering	+145.8	--	--	+145.8
Estimating	+39.9	-69.6	--	-29.7
Other	--	--	--	--
Support	--	+411.1	--	+411.1
Subtotal	+185.7	+477.4	--	+663.1
Current Changes				
Economic	--	--	--	--
Quantity	+11.9	--	--	+11.9
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+211.2	+230.5	--	+441.7
Other	--	--	--	--
Support	--	-27.6	--	-27.6
Subtotal	+223.1	+202.9	--	+426.0
Total Changes	+408.8	+680.3	--	+1089.1
CE - Cost Variance	1682.6	2048.8	--	3731.4
CE - Cost & Funding	1682.6	2048.8	--	3731.4

Previous Estimate: December 2009

RDT&E	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	-0.4
Incremental hardware cost for addition of three Engineering Development Models (from 27 to 30) for Reliability Growth Testing. (Quantity)	+11.9	+14.1
Revised estimate due to complexities with software integration and challenges with hardware qualification. (Estimating)	+211.0	+260.1
Adjustment for current and prior escalation. (Estimating)	+0.2	+0.2
RDT&E Subtotal	+223.1	+274.0

Procurement	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	-4.2
Production start slip from FY 2010 to FY 2013 and corresponding stretch-out of production buy profile from five to seven years (Air Force Space 3010). (Schedule)	0.0	+66.7
Production start slip from FY 2010 to FY 2013 and corresponding stretch-out of production buy profile from five to seven years (Air Force Space 3080). (Schedule)	0.0	+15.0
Adjustment for current and prior escalation. (Estimating)	+0.2	+0.2
Revised estimate for higher manufacturing costs due to loss of learning and production inefficiencies as a result of schedule stretch-out (Air Force Space 3010). (Estimating)	+211.6	+258.9
Revised estimate associated with reordering of buy profile and reallocation of costs between appropriations (Air Force Space 3080). (Estimating)	-36.0	-46.7
Revised estimate associated with reordering of buy profile and reallocation of costs between appropriations (Air Force Space 3010). (Estimating)	+35.9	+46.7
Revised estimate for additional program management and other staffing costs associated with schedule slip and stretch-out (Air Force Space 3010). (Estimating)	+18.8	+25.8
Decrease in Other Support due to revised estimate for support equipment (Air Force Space 3010). (Support)	-20.0	-18.1
Decrease in Other Support due to revised estimate for support equipment (Air Force Space 3080). (Support)	-12.1	-14.6
Increase in Initial Spares as a result of higher production costs due to schedule stretch-out (Air Force Space 3010). (Support)	+1.2	+11.9
Increase in Initial Spares as a result of higher production costs due to schedule stretch-out (Air Force Space 3080). (Support)	+3.3	+15.3
Procurement Subtotal	+202.9	+356.9

Contracts

Appropriation: RDT&E	
Contract Name	**FAB-T**
Contractor	Boeing
Contractor Location	Huntington Beach, CA 92647-2099
Contract Number, Type	F19628-02-C-0048, CPAF/FFP/CR/LH/CPFF
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	1362.8	N/A	30	1483.1	1503.1

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (11/25/2010)	-0.3	-6.7
Previous Cumulative Variances	-109.5	-15.1
Net Change	+109.2	+8.4

Cost And Schedule Variance Explanations

Cumulative unfavorable Cost and Schedule changes are due to hardware failures, integration & test complexity, schedule extension, and Block 8 upgrades. The continued poor cost performance made it necessary for Boeing to implement an Over Target Baseline (OTB) since the existing baseline no longer adequately provided valid performance measurement information relative to the remaining work using fundamental earned value management practices. The new OTB captured approximately $474M in cost growth above the negotiated contract cost. Cost and Schedule variances were reset to zero as part of the OTB replan. The OTB was implemented in the reporting month of April 2010. Since that time, the cost variance has been held to 0.3.

Contract Comments

Cost growth since 2002 contract inception can be primarily attributed to cost overrun and design and requirements changes.

The FAB-T contract price, which changed from $266.8M to $1,362.8M, includes work effort on all Contract Line Items (CLINs) and reflects multiple contract types. The contract performance section reflects only CLIN 0001 (FAB-T Increment 1 Development) data reported on the Cost Performance Report (CPR) for the month of November 2010.

Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	9	7	30	23.33%
Production	0	0	216	0.00%
Total Program Quantities Delivered	9	7	246	2.85%

Expenditures and Appropriations (TY $M)			
Total Acquisition Cost	4612.8	Years Appropriated	11
Expenditures To Date	1405.3	Percent Years Appropriated	57.89%
Percent Expended	30.47%	Appropriated to Date	1766.7
Total Funding Years	19	Percent Appropriated	38.30%

Operating and Support Cost

Assumptions And Ground Rules

FAB-T consists of Advance Wideband Terminals (AWT) and Command Post Terminals (CPT). For CPTs, FAB-T is a replacement of existing Milstar CPTs at ground sites and on E-4 and E-6 airborne platforms. The AWT terminal will also be a replacement system for UHF capability on B-2, B-52 and RC-135 platforms.

Operating and Support costs include all costs for operating, maintaining and supporting FAB-T assets for an assumed 20-year life per FAB-T terminal after installation. The costs include all Depot Level Repairables (DLR) for FAB-T assets as well as operating and logistics costs associated with 216 terminals. Because FAB-T is a replacement for antecedent systems, no additional manpower requirements are assumed and no increase to existing Indirect Support. These costs are not included in this estimate because they are spread across numerous programs.

Sustaining Support consists of sustaining engineering and software maintenance.

Hardware maintenance for FY 2015 and FY 2016 will be handled via Interim Contractor Support (ICS). Software maintenance for FY 2014-FY 2017 will be handled via Interim Contractor Support. ICS costs are included in the Procurement estimate and are not included under Operating and Support (O&S).

Costs BY2002 $M		
Cost Element	**FAB-T Terminals**	**No Antecedent**
Unit-Level Manpower	0.0	0.0
Unit Operations	3908.3	0.0
Maintenance	0.0	0.0
Sustaining Support	409.8	0.0
Continuing System Improvements	0.0	0.0
Indirect Support	0.0	0.0
Other	0.0	0.0
Total Unitized Cost (Base Year 2002 $)	4318.1	--

Total O&S Costs $M	FAB-T	No Antecedent
Base Year	4318.1	0.0
Then Year	7181.0	0.0

O&S costs are based on the January 2009 Independent Cost Estimate by the Office of the Secretary of Defense Cost Analysis Improvement Group.

Because FAB-T is a replacement for antecedent systems to include legacy Milstar Airborne/Ground Command Post Terminals, and Ultra High Frequency Demand Assignment Multiple Access Terminals (UHF DAMA), no additional manpower requirements are planned and no increase to existing Indirect Support.