

UNCLASSIFIED

PE NUMBER: 0207581F
PE TITLE: JOINT STARS

Exhibit R-2, RDT&E Budget Item Justification								DATE February 2006		
BUDGET ACTIVITY 07 Operational System Development				PE NUMBER AND TITLE 0207581F JOINT STARS						
Cost (\$ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost		98.394	104.321	152.696	100.538	57.048	57.667	59.037	Continuing	TBD
0003	JSTARS	98.394	104.321	152.696	100.538	57.048	57.667	59.037	Continuing	TBD

(U) **A. Mission Description and Budget Item Justification**

The Joint Surveillance Target Attack Radar System (Joint STARS) program produces the world's premier airborne ground surveillance platform, meeting joint combat capability requirements. The 707-based E-8C Joint STARS aircraft provides radar-derived all-weather surveillance and targeting information on moving and stationary ground targets, slowly moving rotary and fixed wing aircraft, and rotating antennas. Joint STARS provides target information for matching direct attack aircraft, standoff weapons, and ground-based attack assets against selected targets, and can be cued by other intelligence, surveillance, and reconnaissance (ISR) and target acquisition systems. This capability enables air and ground commanders to effectively make and execute battle decisions, and helps achieve predictive battlespace awareness.

This program element enhances the warfighter's ability to achieve the joint vision of combat operations. It develops advanced battle management aids and information fusion technologies to enable rapid decisions in tracking and killing time-critical targets. Concept exploration, program definition/risk reduction efforts, and studies support continuous improvements in Command/Control and ISR (C2ISR), Network Centric Operations Capabilities, and interoperability with Joint Service, allied, and coalition systems. These efforts include, but are not limited to, Re-Engining, manned and unmanned platforms, space data links, advanced Battle-Management Command, Control and Communications (BMC3) concepts, ISR Constellation, Air Moving Target Indicator (AMTI), Ground Moving Target Indicator (GMTI), Advanced Radar Modes (ARM), Enhanced Synthetic Aperture Radar (ESAR), Mode 5/S, Network Centric Collaborative Targeting (NCCT), Interim Capability for Airborne Networking (ICAN), Enhanced Land/Maritime Mode (ELMM), Blue Force Tracker/Force XXI Battle Command Brigade and Below (FBCB2) and other large airborne platform integration efforts including Affordable Moving Surface Target Engagement (AMSTE), weapons guidance capabilities, self defense capabilities, radar, SAR, and aircraft performance improvements. These efforts include the use of a dedicated test aircraft, laboratories, and test support facilities. The result is greater mission capability, higher mission reliability, and maximum weapon system availability. The Joint STARS program will coordinate with and participate in projects developing international standards (including NATO standards) to ensure joint, allied, and coalition interoperability.

Items listed on R-2a are representative of items to be developed.

This program is in Budget Activity 7, Operational Systems Development, due to efforts supporting a post-Milestone III operational weapon system.

Re-Engining - System Design and Development (SDD) is projected to be complete in FY09.

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0207581F JOINT STARS(U) **B. Program Change Summary (\$ in Millions)**

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Previous President's Budget	88.238	78.084	79.836
(U) Current PBR/President's Budget	98.394	104.321	152.696
(U) Total Adjustments	10.156	26.237	
(U) Congressional Program Reductions		-0.153	
Congressional Rescissions	-0.112	-1.510	
Congressional Increases		27.900	
Reprogrammings	12.201		
SBIR/STTR Transfer	-1.933		

(U) **Significant Program Changes:**

- FY05 received funding for Enhanced Land/Maritime Mode (ELMM) \$6.9M, Communication, Navigation and Surveillance/Air Traffic Management (CNS/ATM) \$4.7M and Interim Capability for Airborne Networking (ICAN) \$0.601M.
- FY06 received congressional adds for Re-Engining \$12.5M and Advanced Radar Modes (ARM) \$12.9M, Blue Force Tracker/Force XXI Battle Command Brigade and Below (FBCB2) \$1.7M and Interim Capability for Airborne Networking (ICAN) \$0.800M .
- FY07 added funding for Affordable Moving Surface Target Engagement (AMSTE) \$40.788M and Re-Engining \$31.412M.

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Cost (\$ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
0003 JSTARS	98.394	104.321	152.696	100.538	57.048	57.667	59.037	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) **A. Mission Description and Budget Item Justification**

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(U) **B. Accomplishments/Planned Program (\$ in Millions)**

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Spiral Development, Kill Chain and Integration/Analysis, Interoperability (including but not limited to Weapons Guidance, Wide Area Tracker, Automatic Target Recognition, NCCT, ICAN, ELMM, FBCB2, AFMTT, Find-Fix-Target-Track-Engage-Assess (F2T2EA), SPO operations, International, Knowledge Aided Sensor Signal Processing Expert Reason (KASSPER), Communications & Network Upgrade (CNU) previously JABM etc.)	24.232	9.169	7.190
(U) Affordable Moving Surface Target Engagement (AMSTE/ELMM)			40.788

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R-1 Shopping List - Item No. 156-3 of 156-8

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(U)	<u>B. Accomplishments/Planned Program (\$ in Millions)</u>						<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	
(U)	Communication, Navigation, and Surveillance/Air Traffic Management (CNS/ATM) formerly Global Air Traffic Mgmt (GATM) (i.e.; TCAS, Mode S, etc.)						42.034	29.385	34.583	
(U)	Training & Support Systems development (including but not limited to Weapon System Trainer Motion/Visual, Navigation Trainer, etc.)						0.316	0.000	0.000	
(U)	Link 16 ASU support, connectivity efforts, etc.						1.508	16.255	9.635	
(U)	Test Effort (including but not limited to Joint Test Force, JSTARS Extended Test Support contract, Information Assurance, range support, PL-2 security, support of T-3 test aircraft, test labs, etc.)						30.304	24.700	29.088	
(U)	Re-Engining						0.000	12.500	31.412	
(U)	Advanced Radar Modes (ARM) (previously under Spiral Development) - Phase I (including but not limited to Swath SAR, Intelligent Band Width Compression (IBC) and Enhanced Synthetic Aperture Radar (ESAR)).							12.312		
(U)	Total Cost						98.394	104.321	152.696	
(U)	<u>C. Other Program Funding Summary (\$ in Millions)</u>									
		<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>Cost to</u>	<u>Total Cost</u>
		<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U)	Modifications, BP11 (PE 0207581F)	61.023	15.283	138.162	150.932	147.426	120.071	273.706	Continuing	TBD
(U)	Spares, BP16 (PE 0207581F)	8.024	0.584	1.139	1.311	1.424	1.460	1.479	Continuing	TBD
(U)	<u>D. Acquisition Strategy</u>									
	The AF will continue development for various fleetwide modifications throughout the life of the Joint STARS weapon system.									

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Exhibit R-3, RDT&E Project Cost Analysis

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(U)	<u>Cost Categories</u>	<u>Contract</u>	<u>Performing</u>	<u>Total</u>	<u>FY 2005</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2007</u>	<u>Cost to</u>	<u>Total Cost</u>	<u>Target Value</u>
	(Tailor to WBS, or System/Item Requirements)	<u>Method &</u>	<u>Activity &</u>	<u>Prior to FY</u>	<u>Cost</u>	<u>Award</u>	<u>Cost</u>	<u>Award</u>	<u>Cost</u>	<u>Award</u>	<u>Complete</u>		<u>of Contract</u>
	(\$ in Millions)	<u>Type</u>	<u>Location</u>	<u>2005</u>		<u>Date</u>		<u>Date</u>		<u>Date</u>			
				<u>Cost</u>									
(U)	<u>Product Development</u>												
	Weapon System Trainer (WST)	Various	Various		0.000		0.000		0.000		Continuing	TBD	TBD
	ASU	SS/CPAF	HAFB, MA		1.395	Jan-05	16.255	Nov-05	9.635	Nov-06	Continuing	TBD	39.644
	CNS/ATM (GATM)	Various	HAFB, MA		38.874	Jan-05	28.045	Nov-05	33.006	Nov-06	Continuing	TBD	TBD
	Spiral Development	Various	Various		19.144	Nov-04	2.293	Nov-05	2.813	Nov-06	Continuing	TBD	TBD
	AMSTE (ELMM)	TBD	TBD						36.734	Jul-07	Continuing	TBD	
	ACI Migration (formally ABCCC)	SS/CPAF	HAFB, MA		0.000		0.000		0.000		Continuing	TBD	TBD
	Advanced Radar Modes (ARM) - Phase I	Various	Various				12.312	Jul-06			Continuing	TBD	
	Subtotal Product Development			0.000	59.413		58.905		82.188		Continuing	TBD	TBD
	Remarks:	Where Various Contract Method & Types take place, earliest date funds will be obligated is noted.											
(U)	<u>Support</u>												
	SPO Ops Support	Various	HAFB, MA		10.838	Oct-04	8.676	Oct-05	10.112	Oct-06	Continuing	TBD	TBD
	Subtotal Support			0.000	10.838		8.676		10.112		Continuing	TBD	TBD
	Remarks:	Where Various Contract Method & Types take place, earliest date funds will be obligated is noted.											
(U)	<u>Test & Evaluation</u>												
	E-8C JSTARS Ext. Test Spt (JETS)	Various	Various		19.403	Nov-04	16.987	Nov-05	21.342	Nov-06	Continuing	TBD	TBD
	JTF Range/Support	Various	Various		7.449	Nov-04	7.159	Nov-05	7.168	Nov-06	Continuing	TBD	TBD
	PL-2	Various	Various		1.174	Nov-04	0.554	Nov-05	0.578	Nov-06	Continuing	TBD	TBD
	Subtotal Test & Evaluation			0.000	28.026		24.700		29.088		Continuing	TBD	TBD
	Remarks:	Where Various Contract Method & Types take place, earliest date funds will be obligated is noted.											
(U)	<u>Management</u>												
	Integration & Analysis				0.117		1.540		0.696		Continuing	TBD	TBD
	Subtotal Management			0.000	0.117		1.540		0.696		Continuing	TBD	TBD
	Remarks:												
(U)	<u>Re-Engining</u>												
	Re-Engining	TBD	TBD				10.500	Jan-07	30.612	Jan-07	Continuing	TBD	TBD
	Subtotal Re-Engining			0.000	0.000		10.500		30.612		Continuing	TBD	TBD
	Remarks:	Where Various Contract Method & Types take place, earliest date funds will be obligated is noted.											
(U)	Total Cost			0.000	98.394		104.321		152.696		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

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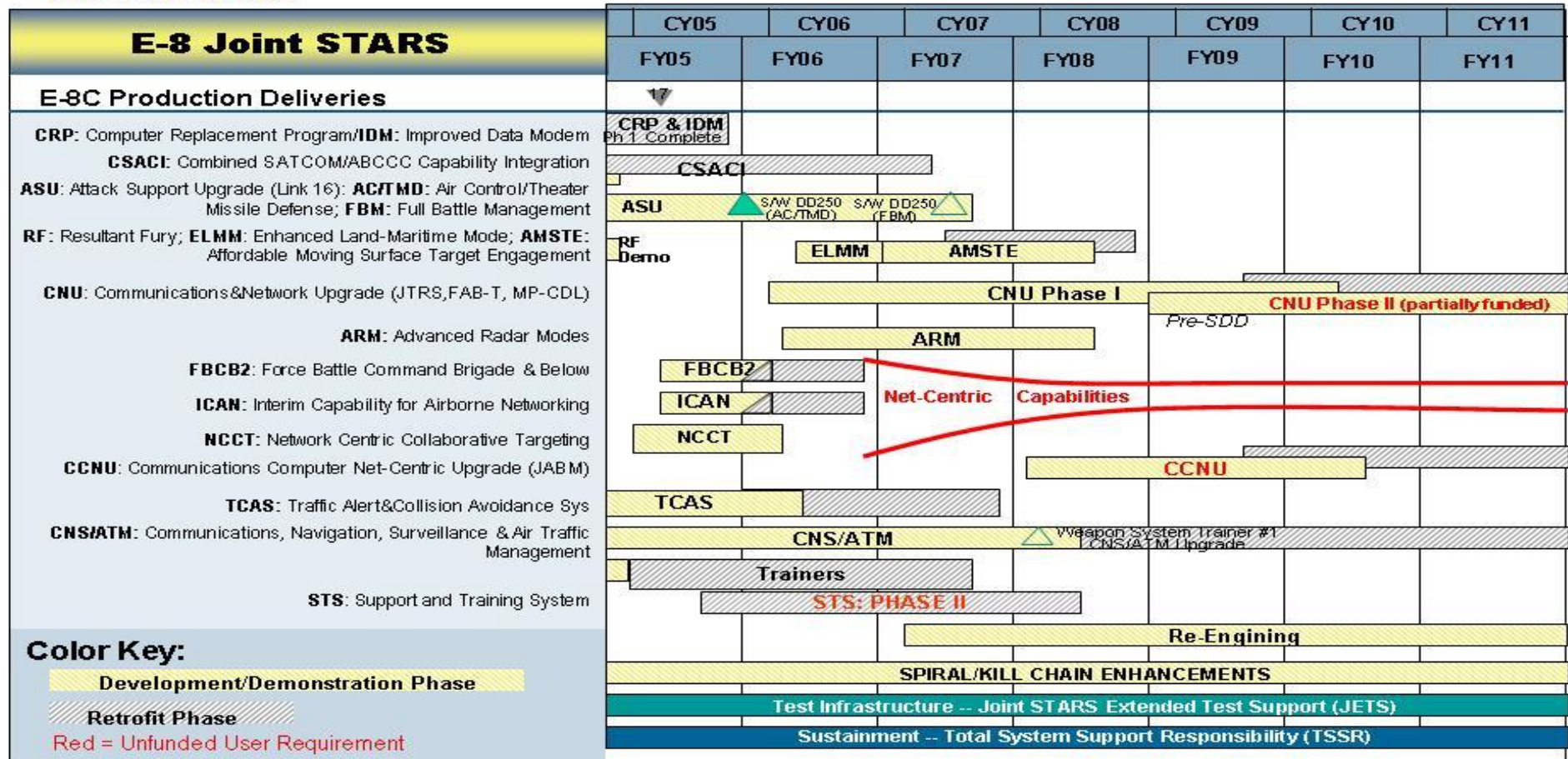
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U.S. AIR FORCE

Joint STARS Program Schedule

As of 19 Jan 2006



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Exhibit R-4a, RDT&E Schedule Detail			DATE February 2006	
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207581F JOINT STARS	PROJECT NUMBER AND TITLE 0003 JSTARS		
(U) <u>Schedule Profile</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	
(U) WST #1 Flight Crew Training System Visual Upgrade	1Q			
(U) CNS/ATM Contract Award	2Q			
(U) CNS/ATM WST Development Contract Award	3Q			
(U) CNS/ATM Initial System Design Review		1Q		
(U) CNS/ATM System Design Definition Complete		3Q		
(U) CNS/ATM Critical Design Review			3Q	
(U) CNS/ATM Initial Flight/Ground Readiness Review			4Q	
(U) ACI Development Complete (formally ABCCC)	1Q			
(U) ASU Air Control/Theater Missile Defense, S/W DD250		1Q		
(U) ASU Full Battle Management, S/W DD250			4Q	
(U) Sys Test - JETS Wing Structural Integrity Program Complete/Delivered		1Q		
(U) Sys Test - ACI Capability Insertion Flight Test	1Q			
(U) Sys Test - ASU Phase I Flight Test	3Q			
(U) Sys Test - CNS/ATM (Weather Radar & TCAS) Flight Test	4Q			
(U) Sys Test - JETS II Contract Award		1Q	1Q	
(U) Sys Test - ASU Phase II Flight Test		2Q		
(U) Sys Test - CNS/ATM Flight Test			2Q	
(U) Sys Test - Blue Force Situational Awareness Flight Test			3Q	
(U) Spiral Development - ICAN Proof of Concept @ Red Flag	1Q	4Q	4Q	
(U) Spiral Development - Track Mgt By Area (TMBA) Award	2Q			
(U) Spiral Development - TMBA Integrated S/W Release			3Q	
(U) Spiral Development - ELMM Risk Reduction Contract Award		1Q		
(U) Spiral Development - ELMM SDD RFP Release		2Q		
(U) Spiral Development - ELMM SDD Contract Award		4Q		
(U) Re-Engining Proposal Preparation			2Q	
(U) Re-Engining NRE Contract Award			2Q	
(U) JETS I D.O. (Year 5) Periodic Inspection		1Q		
(U) JETS II D.O. (Year 1) Minor Inspections			1Q	
(U) FBCB2			1Q	
(U) AMSTE RFP Release			2Q	
(U) AMSTE SDD Contract Award			4Q	
(U) ARM Phase I RFP Release		2Q		
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(U) ARM Phase I Contract Award

4Q