

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)									DATE June 2001	
BUDGET ACTIVITY 07 - Operational System Development				PE NUMBER AND TITLE 0207581F JOINT STARS						
COST (\$ in Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	135,578	147,750	147,859	176,720	321,467	374,559	300,309	151,660	Continuing	TBD
0003 JSTARS	135,578	147,750	68,859	37,720	117,467	136,559	133,309	65,660	Continuing	TBD
4995 Multi-Platform RTIP	0	0	79,000	139,000	204,000	238,000	167,000	86,000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0

FY03-FY07 budget numbers do not reflect the DoD strategic review results.

(U) **A. Mission Description**
 This program element funds two related but distinct Air Force efforts: the Joint Surveillance Target Attack Radar System (Joint STARS) and the Multi-Platform Radar Technology Insertion Program (MP-RTIP).

There is an Air Force and Army need to provide, from airborne platforms, near-real time surveillance and targeting information on moving and stationary ground targets (growth to maritime operations), slow moving rotary and fixed wing aircraft, and rotating antennas. This information enables operational and tactical commanders to make and execute battle decisions. To meet these needs, the Air Force and Army initiated the Joint Surveillance Target Attack Radar System (Joint STARS) program with the Air Force as lead service. Joint STARS provides target information for pairing direct attack aircraft and standoff weapons against selected targets.

The Multi-Platform Radar Technology Insertion Program (MP-RTIP) program is the result of a restructuring of the Joint STARS Radar Technology Insertion Program (RTIP), formerly a Pre-Planned Product Improvement to Joint STARS. MP-RTIP will deliver enhanced Wide Area Surveillance (WAS) system capabilities to the warfighter, provide for a robust Global Hawk reconnaissance capability, and enable NATO's Alliance Ground Surveillance (AGS) program.

(U) **B. Budget Activity Justification**
 These funds are required to meet the requirements, capabilities and efforts further defined in the 'Mission Description' section of the two following R-2s.

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BUDGET ACTIVITY		PE NUMBER AND TITLE			
07 - Operational System Development		0207581F JOINT STARS			
(U) C. Program Change Summary (\$ in Thousands)					
		<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Total Cost</u>
(U)	Previous President's Budget (FY 2001 PBR)	147,582	144,118	132,993	424,693
(U)	Appropriated Value	148,488	149,118		297,606
(U)	Adjustments to Appropriated Value				
	a. Congressional/General Reductions	-95			
	b. Small Business Innovative Research	-4,436			
	c. Omnibus or Other Above Threshold Reprogram				
	d. Below Threshold Reprogram	-7,204			
	e. Rescissions	-1,175	-1,368		
(U)	Adjustments to Budget Years Since FY 2001 PBR			14,866	TBD
(U)	Current Budget Submit/FY 2002 PBR	135,578	147,750	147,859	TBD
(U)	<u>Significant Program Changes:</u>				
	The \$14,866K increase since the FY2001 PBR resulted primarily from the addition of funds to the Block 20 effort to upgrade Joint STARS trainer/simulator capability.				

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)									DATE June 2001			
BUDGET ACTIVITY 07 - Operational System Development					PE NUMBER AND TITLE 0207581F JOINT STARS					PROJECT 0003		
COST (\$ in Thousands)			FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
0003	JSTARS		135,578	147,750	68,859	37,720	117,467	136,559	133,309	65,660	Continuing	TBD
<p>FY03-FY07 budget numbers do not reflect the DoD strategic review results.</p> <p>(U) <u>A. Mission Description</u> There is an Air Force and Army need to provide, from airborne platforms, near-real time surveillance and targeting information on moving and stationary ground targets (growth to maritime operations), slow moving rotary and fixed wing aircraft, and rotating antennas. This information enables operational and tactical commanders to make and execute battle decisions. To meet these needs, the Air Force and Army initiated the Joint Surveillance Target Attack Radar System (Joint STARS) program with the Air Force as lead service. Joint STARS provides target information for pairing direct attack aircraft and standoff weapons against selected targets. The system is capable of being cued by other reconnaissance, surveillance, and target acquisition systems and is able to respond rapidly to worldwide contingencies. In addition, we are providing a flight crew training system which supports initial qualification training, update, and continuation training for JSTARS pilots, copilots and flight engineers at a rate that meets ACC operational needs. The operational utility of the system was effectively demonstrated by the two developmental aircraft in support of combat operations during Desert Storm. We are also determining the means to enhance the warfighter's battle management command, control & communications (C3) capability to achieve the Global Strike Task Force (GSTF) vision. We are developing advanced battle management decision aids and information fusion to enable commanders to make more timely decisions in tracking and killing time critical targets (TCTs) and achieving a Predictive Battle-Space Awareness (PBA) environment (see Spiral Implementation line). The Joint STARS Program Office has been designated as the Air Force acquisition lead for the Joint Service Work Station (JSWS) and is currently servicing the Combat Air Forces JSWS needs. Joint STARS aircraft were deployed in support of Operation Joint Endeavor in Dec 95 and again from Nov to Dec 96. Joint STARS also successfully supported Operation Allied Force from Feb to June 99. As a result of these Joint STARS successes, NATO has expressed interest in the Joint STARS radar system. In Sep 96 the Defense Acquisition Board (DAB) Milestone III Review approved full rate production of a 19 E-8C program. The 93d Air Control Wing, Robins AFB, GA, declared Joint STARS Initial Operational Capability (IOC) in Dec 97 and the system is now participating in operational and training exercises. After the 1996 Quadrennial Defense Review recommended a revision of the Joint STARS production profile, the Air Force reduced Joint STARS production from 19 to 13 E-8Cs. Full funding for the 14th, 15th and 16th E-8C was provided by OSD and the Congress during the FY00, FY01 and FY02 budget cycles respectively. Long lead funding for the 17th E-8C is included in FY02 PB.</p> <p>(U) <u>FY 2000 (\$ in Thousands)</u></p> <p>(U) \$3,762 Complete Block 10 Joint Integrated Maintenance Information System (JIMIS) Efforts</p> <p>(U) \$17,350 Continue Block 20 Computer Replacement Program (CRP) and Support Training System (STS) Efforts</p> <p>(U) \$14,625 Continue Block 30 Satellite Communications (SATCOM) and Link 16 Efforts</p> <p>(U) \$63,491 Continue Block 40 Multi-Platform Radar Technology Insertion Program (RTIP) Efforts</p>												
Project 0003			Page 3 of 14 Pages					Exhibit R-2A (PE 0207581F)				

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)		DATE June 2001
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
07 - Operational System Development	0207581F JOINT STARS	0003
(U) <u>A. Mission Description Continued</u>		
(U) <u>FY 2000 (\$ in Thousands) Continued</u>		
(U) \$27,138	Continue Test Efforts (Joint Test Force (JTF), Follow-On Test Support (FOTS)/JSTARS Extended Test Support (JETS), Range Support, Support T-3 and Test Labs)	
(U) \$6,590	Continue Flight Crew Training System (FCTS) Development	
(U) \$2,622	Continues R&M/International Cooperation/Standardization/Interoperability Activities (Diminishing Manufacturing Sources (DMS), Defense Information Infrastructure Common Operating Environment (DII COE) NATO Consultation, Command & Control (NC3A) Support)	
(U) \$135,578	Total	
(U) <u>FY 2001 (\$ in Thousands)</u>		
(U) \$25,786	Continue Block 20 Training Systems (examples include Support Training System (STS) & Distributed Mission Training (DMT) and complete CRP Development) Efforts	
(U) \$19,691	Continue Block 30 (such as: SATCOM, Connectivity, Link 16) Efforts	
(U) \$56,337	Continue Block 40 (Multi-Platform RTIP) Efforts. Beginning in FY02 funding moves to BPAC 674995.	
(U) \$30,955	Continue Test Efforts (for example: JTF, FOTS/JETS, Range Support, Support of T-3 and Test Labs)	
(U) \$6,500	Continue Flight Crew Training System (FCTS) Development	
(U) \$100	Continues R&M/International Cooperation/Standardization/Interoperability Activities (for example: DMS, DII COE, NC3A, ABCCC Divestiture, Multi-Mission Command & Control (MC2C) Constellation Studies/Analysis, Network Centric Collaborative Targeting (NCCT) Studies/Implementation, Improved Data Modem, etc.)	
(U) \$3,534	Indirect SPO OPS Support	
(U) \$4,847	Begin Global Air Traffic Management (GATM) Pre EMD Risk Reduction Activities (Congressional Add)	
(U) \$147,750	Total	
	The following net transaction is not reflected in the FY01 program total: BTR -\$0.066. This transaction is not reflected in other sections of the R-docs where an FY01 total is shown.	
(U) <u>FY 2002 (\$ in Thousands)</u>		
(U) \$17,708	Continue Block 20 (Continue Training Systems and Support Systems Development)	
(U) \$16,467	Continue Block 30 (such as: SATCOM, Connectivity, Link 16) Efforts	
(U) \$27,383	Continue Test Efforts (for example: JTF, JETS, Range Support, Support of T-3 & Test Labs)	
(U) \$643	Complete FCTS Development	
(U) \$500	Continues R&M/International Cooperation/Standardization/Interoperability Activities (for example: DII COE, NATO Consultation, Command	
Project 0003	Page 4 of 14 Pages	Exhibit R-2A (PE 0207581F)

UNCLASSIFIED

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BUDGET ACTIVITY				PE NUMBER AND TITLE			PROJECT				
07 - Operational System Development				0207581F JOINT STARS			0003				
(U) <u>A. Mission Description Continued</u>											
(U) <u>FY 2002 (\$ in Thousands) Continued</u>											
and Control Agency (NC3A) Support, Coalition Aerial Surveillance And Reconnaissance (CAESAR) and Joint Service Work Stations (JSWS)), etc.											
(U)	\$3,189	Indirect SPO OPS Support									
(U)	\$2,969	Spiral Development Activities. Examples: Advanced Studies, Interoperability, Integration, S/W Integrated Release, RTOC upgrades, and various exercises to rapidly field capability in response to emerging warfighter requirements. Includes Command and Control (C2) Enterprise initiatives such as CREWS 2000, ABCCC Divestiture, Improved Data Modem (IDM), Battle Management Command, Control, and Communications (BMC3), Ground Moving Target Indicator (GMTI), Predictive Battlespace Awareness (PBA), Sim Based Acquisition (SBA), Aircraft Re-engining Studies, Battle Management Decision Aids, Security Protection Systems and Joint Service Work Stations (JSWS). The Command & Control, Intelligence, Surveillance, and Reconnaissance (C2ISR) System Architecture Improvements include concept exploration and program definition/risk reduction efforts that support continuous improvements and implementation of C2ISR capabilities to enable a joint global strike task force. This effort includes but is not limited to manned and unmanned platforms, space, data links and advanced BMC3 concepts. These efforts could include but are not limited to the ISR constellation, UAV, data links, Space, AMTI, GMTI and large airborne platform integration efforts.									
(U)	\$68,859	Total									
(U) <u>B. Project Change Summary</u>											
This program is in Budget Activity 7 - Operational System Development. Initial operational capability was achieved in Dec 97. Developmental work continues on advanced planning activities and systems upgrades, as well as systems integration and interoperability efforts.											
(U) <u>C. Other Program Funding Summary (\$ in Thousands)</u>											
		<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</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>Estimate</u>	<u>Complete</u>	
(U)	Aircraft Procurement, AF, BP10 (PE 27581F)	250,804	293,900	332,183	0	0	0	0	0	0	4,570,591
(U)	Modifications, BP11 (PE 27581F)	24,152	33,585	80,960	37,309	26,296	45,685	31,487	34,022		
(U)	Spares, BP16 (PE 27581F)	61,270	28,021	28,419	1,839	3,187	3,887	625	1,180		390,425
(U)	Quantity, Joint STARS E-8C Aircraft Proc.	1	1	1							
Project 0003		Page 5 of 14 Pages							Exhibit R-2A (PE 0207581F)		

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<p>(U) <u>D. Acquisition Strategy</u> Joint STARS Low Rate Initial Production (LRIP) was approved by the Defense Acquisition Board (DAB) in FY93. Acquisition began with the procurement of 2 E-8Cs in FY93, and continued at 2 E-8Cs per year through FY97. Procurement funding continued with 1 E-8C in FY98, 2 E-8Cs in FY99, 1 E-8C in FY00, 1 E-8C in FY01 and 1 E-8C in FY02. Long lead funding for the 17th E-8C is included in the FY 02 PB.</p>																																																																																																																																																																		
<p>(U) <u>E. Schedule Profile</u></p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th colspan="3" style="text-align: center;"><u>FY 2000</u></th> <th colspan="3" style="text-align: center;"><u>FY 2001</u></th> <th colspan="3" style="text-align: center;"><u>FY 2002</u></th> </tr> <tr> <th></th> <th style="text-align: center;">1</th> <th style="text-align: center;">2</th> <th style="text-align: center;">3</th> <th style="text-align: center;">4</th> <th style="text-align: center;">1</th> <th style="text-align: center;">2</th> <th style="text-align: center;">3</th> <th style="text-align: center;">4</th> <th style="text-align: center;">1</th> <th style="text-align: center;">2</th> <th style="text-align: center;">3</th> <th style="text-align: center;">4</th> </tr> </thead> <tbody> <tr> <td>(U) CRP EMD First Flight</td> <td></td> </tr> <tr> <td>(U) RTIP MS II</td> <td></td> <td style="text-align: center;">*</td> <td></td> </tr> <tr> <td>(U) RTIP EMD Contract Award</td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">*</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) NATAR Sensor Development Start</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) JIMIS Formalization (Block 10)</td> <td></td> <td></td> <td></td> <td style="text-align: center;">*</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) STS Development Start</td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">*</td> <td></td> <td></td> <td></td> <td style="text-align: center;">X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) SATCOM Development Complete</td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td>(U) FCTS Delivered</td> <td></td> <td style="text-align: center;">X</td> </tr> <tr> <td colspan="12"> * Denotes completed event X Denotes planned event </td> </tr> <tr> <td colspan="12"> Note: Beginning in FY02 MP- RTIP funding moves to BPAC 674995, same PE 27581F. </td> </tr> </tbody> </table>													<u>FY 2000</u>			<u>FY 2001</u>			<u>FY 2002</u>				1	2	3	4	1	2	3	4	1	2	3	4	(U) CRP EMD First Flight													(U) RTIP MS II		*											(U) RTIP EMD Contract Award					*								(U) NATAR Sensor Development Start									X				(U) JIMIS Formalization (Block 10)				*									(U) STS Development Start					*				X				(U) SATCOM Development Complete												X	(U) FCTS Delivered												X	* Denotes completed event X Denotes planned event												Note: Beginning in FY02 MP- RTIP funding moves to BPAC 674995, same PE 27581F.											
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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE June 2001			
BUDGET ACTIVITY 07 - Operational System Development					PE NUMBER AND TITLE 0207581F JOINT STARS			PROJECT 0003		
(U) A. Project Cost Breakdown (\$ in Thousands)										
					<u>FY 2000</u>		<u>FY 2001</u>			<u>FY 2002</u>
(U)	Block 10 (JIMIS) Efforts				3,762		0			0
(U)	Block 20 (CRP, Training & Support Systems) Efforts				17,350		25,786			17,708
(U)	Block 30 (SATCOM, Connectivity, Link 16) Efforts				14,625		19,691			16,467
(U)	Block 40 Multi-Platform RTIP Efforts (funds realigned to BPAC 674995 in FY02 and out, same PE.)				63,491		56,337			0
(U)	Test Efforts				27,138		30,955			27,383
(U)	FCTS Development				6,590		6,500			643
(U)	GATM PreEMD Risk Reduction (Congressional Add)				0		4,847			0
(U)	Indirect SPO Support				0		3,534			3,189
(U)	R&M Enhancements/International Activities (NC3A, CAESAR, etc.)				2,622		100			500
(U)	Spiral Development Activities (for example; Integrated Release, RTOC Upgrades, Various Exercises, DMS, DII COE, Combat Readiness Exploitation Workstation (CREWS 2000), ABCCC Divestiture, IDM, Cyclic Upgrades, etc.)				0		0			2,969
(U)	Total				135,578		147,750			68,859
(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)										
(U) Performing Organizations:										
<u>Contractor or Government</u>	<u>Contract Method/Type</u>	<u>Award or Obligation</u>	<u>Performing Activity</u>	<u>Project Office</u>	<u>Total Prior to FY 2000</u>	<u>Budget FY 2000</u>	<u>Budget FY 2001</u>	<u>Budget FY 2002</u>	<u>Budget to Complete</u>	<u>Total Program</u>
<u>Performing Activity</u>	<u>or Funding Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>						
<u>Product Development Organizations</u>										
NG**	CPFF	May 97	166,491	166,491	123,518	17,350	0	0	0	140,868
Computer Replacement Program										
NG - STS Phase I	FFP	Dec 00	42,100	42,100	0	0	25,786	17,708	0	43,494
NG - SATCOM EMD	CPFF	May 97	35,074	37,950	8,370	14,625	19,691	16,467		59,153
NG - GATM	Various	Mar 01	4,847	4,847	0	0	4,847	0	157,400	162,247

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)									DATE June 2001	
BUDGET ACTIVITY					PE NUMBER AND TITLE				PROJECT	
07 - Operational System Development					0207581F JOINT STARS				0003	
(U) <u>Performing Organizations Continued:</u>										
<u>Product Development Organizations</u>										
NG - Spiral Dev. Activities	Various	Various	N/A	N/A	0	0	0	2,969		2,969
NG - Multi-Platform Radar	CPFF	May 97	146,384	146,384	22,372	63,491	56,337	0	0	142,200
Tech. Insertion Prog. (Starting in FY02 funding moves to BPAC 674995, same PE.										
NG - Other Dev. Efforts	Various	Various	N/A	N/A	2,339,634	6,384	100	500		2,346,618
NLX Corp - Flight Crew	FFP	SEP 00	11,914	11,914	0	6,590	6,500	643	0	13,733
Training Sys ** Northrop Grumman										
<u>Support and Management Organizations</u>										
Joint Program Office -		N/A	N/A	N/A	0	0	3,534	3,189		6,723
Indirect SPO Ops Support										
<u>Test and Evaluation Organizations</u>										
NG - E-8C Follow-On Test	SS/FFP/CPFF	Aug 96	156,230	156,230	30,625	16,898	17,841	15,400		80,764
Support										
NG - Aircraft Over &	AboveSS/FFP/CPFF	Aug 96	30,596	30,596	5,480	2,308	4,070	3,316		15,174
Tests										
NG - Follow- On Test Support	SS/FFP/CPFF	Aug 96	3,737	3,737	1,259	358	333	338		2,288
- MILSTRIP										
Range Support	Allotment	N/A	N/A	N/A	26,696	1,108	1,165	1,200		30,169
Horizons Tech.	Time and	Various	N/A	N/A	36,136	5,145	5,525	4,708		51,514
(SETA)										
Joint Test Force Support	Allotment	N/A	N/A	N/A	25,863	1,321	2,021	2,421		31,626

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE June 2001		
BUDGET ACTIVITY 07 - Operational System Development				PE NUMBER AND TITLE 0207581F JOINT STARS			PROJECT 0003		
(U) Government Furnished Property:									
	<u>Contract</u>								
	<u>Method/Type</u>	<u>Award or</u>							
<u>Item</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Delivery</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>	<u>to FY 2000</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Property</u>									
N/A									
<u>Support and Management Property</u>									
N/A									
<u>Test and Evaluation Property</u>									
N/A									
				<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Subtotals</u>				<u>to FY 2000</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Complete</u>	<u>Program</u>
Subtotal Product Development				2,493,894	108,440	113,261	38,287	157,400	2,911,282
Subtotal Support and Management				0	0	3,534	3,189		6,723
Subtotal Test and Evaluation				126,059	27,138	30,955	27,383		211,535
Total Project				2,619,953	135,578	147,750	68,859	157,400	3,129,540

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COST (\$ in Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
4995 Multi-Platform RTIP	0	0	79,000	139,000	204,000	238,000	167,000	86,000	Continuing	TBD
FY03-FY07 budget numbers do not reflect the DoD strategic review results.										
<p>(U) <u>A. Mission Description</u></p> <p>The Multi-Platform Radar Technology Insertion Program (MP-RTIP) program is the result of a restructuring of the Joint STARS Radar Technology Insertion Program (RTIP), formerly a Pre-Planned Product Improvement to Joint STARS. MP-RTIP will deliver enhanced Wide Area Surveillance (WAS) system capabilities to the warfighter, provide for a robust Global Hawk reconnaissance capability, and enable NATO's Alliance Ground Surveillance (AGS) program. This WAS system capability will allow commanders to conduct wide area surveillance to detect, locate, classify, track, and monitor moving targets and provide target information to assigned direct aerospace and ground weapons systems. Wide-Area surveillance is required to monitor the movement and disposition of enemy forces and for use in resource prioritization, force allocation and Intelligence Preparation of the Battlefield at Army, Navy and Air Force Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) elements. To that end, MP-RTIP will include design of a modular, scalable two-dimensional active electronically scanned array (2D-AESA) radar, and development, fabrication, and test of MP-RTIP radars suitable for future integration on various airborne platforms. Specifically, this modular, scalable radar, when integrated on a suitable WAS airborne platform, must deliver mission capability as reflected in the validated RTIP Operational Requirements Document (ORD) by 2012. Although the users' need date for an RTIP capability remains 2010; the user has accepted the 2012 delivery date. The radar must meet the US sensor commitment to NATO in 2007, and when integrated on an unmanned air vehicle, provide enhanced Global Hawk (GH) capability. The MP-RTIP program includes concept exploration, technology development, system development/demonstration, and spiral development efforts supporting continuous improvements and implementation of Command & Control, Intelligence, Surveillance, and Reconnaissance (C2ISR) capabilities to enable a joint global strike task force. These efforts include but are not limited to manned and unmanned platforms, space, data links, combat identification, and advanced battle management command, control, and communications (BMC3) concepts.</p> <p>(U) <u>FY 2000 (\$ in Thousands)</u></p> <p>(U) \$0 RTIP funding prior to FY02 reported in BPAC 670003, same PE.</p> <p>(U) \$0 Total</p> <p>(U) <u>FY 2001 (\$ in Thousands)</u></p> <p>(U) \$0 RTIP funding prior to FY02 reported in BPAC 670003, same PE.</p> <p>(U) \$0 Total</p>										
Project 4995			Page 10 of 14 Pages				Exhibit R-2A (PE 0207581F)			

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE
June 2001

BUDGET ACTIVITY 07 - Operational System Development	PE NUMBER AND TITLE 0207581F JOINT STARS	PROJECT 4995
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(U) **A. Mission Description Continued**

(U) FY 2002 (\$ in Thousands)

- (U) \$75,340 Multi-Platform RTIP radar design and development for Wide Area Surveillance (WAS), Global Hawk target platforms, and NATO AGS.
- (U) \$1,760 Test Efforts (includes Operator-In-The-Loop [OITL]; Joint Test Force Support; AFOTEC Support)
- (U) \$1,300 SPO Operations
- (U) \$600 Future Studies/Spiral Development--includes concept exploration, program definition/risk reduction, and spiral development efforts supporting continuous improvements and implementation of Command & Control, Intelligence, Surveillance, and Reconnaissance (C2ISR) capabilities to enable a joint global strike task force. These efforts include but are not limited to manned and unmanned platforms, space, data links, combat identification, and advanced battle management command, control, and communications (BMC3) concepts.
- (U) \$79,000 Total

(U) **B. Project Change Summary**

In an Acquisition Decision Memorandum dated 11 Dec 00, the Multi Platform-Radar Technology Insertion Program (MP-RTIP) was created from the Radar Technology Insertion Program (RTIP) to explore alternative platforms for the RTIP Wide Area Surveillance radar. The MP-RTIP program is the result of a restructuring of the Joint Stars RTIP program, formerly a Pre-Planned Product Improvement to Joint Stars.

(U) **C. Other Program Funding Summary (\$ in Thousands)**

	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Complete</u>							
(U) AF RDT&E										
(U) PE 35206F/BPAC 674819			9,000	10,000	7,000	2,000				TBD
(U) PE 35205F/BPAC 674799				17,000	40,000	13,000	1,000			TBD
(U) Other APPN										
Multi Platform-Common Data Link (PE 0305206F)										
GLOBAL HAWK (PE 0305205F)										

(U) **D. Acquisition Strategy**

The MP-RTIP program is currently planning for five manned WAS aircraft as well as 35 Global Hawk air vehicles to receive the 2D-AESA radars. Low Rate Initial Production (LRIP) quantity, if E-8C is retrofit, is one sensor kit and seven sensors for Global Hawk. Exit criteria will be established at MS B that must be satisfied prior to proceeding with LRIP. All other procurement activities for all platforms will be formally updated at MS B in FY03.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)										DATE June 2001		
BUDGET ACTIVITY 07 - Operational System Development					PE NUMBER AND TITLE 0207581F JOINT STARS					PROJECT 4995		
(U) E. Schedule Profile												
		<u>FY 2000</u>				<u>FY 2001</u>				<u>FY 2002</u>		
	1	2	3	4	1	2	3	4	1	2	3	4
(U)	MP-RTIP PHASE 1 AWARD				*							
(U)	MP-RTIP PHASE 1 DEFINITIZED						*					
(U)	MP-RTIP INTEGRATED BASELINE REVIEW						X					
(U)	RADAR REQUIREMENTS REVIEW								X			
(U)	RADAR FUNCTIONAL REVIEW									X		
(U)	MP-RTIP PLATFORM DECISION										X	
	* Denotes completed event											
	X Denotes planned event											
<p>Note: Platform Decision scheduled for April 02 will determine which Wide Area Surveillance airframe MP-RTIP will go on</p>												

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)						DATE June 2001					
BUDGET ACTIVITY 07 - Operational System Development				PE NUMBER AND TITLE 0207581F JOINT STARS			PROJECT 4995				
(U) A. Project Cost Breakdown (\$ in Thousands)						<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>			
(U) MP-RTIP								75,340			
(U) Test Efforts (OITL, JTF, AFOTEC)								1,760			
(U) SPO Operations								1,300			
(U) Future Studies/Spiral Development								600			
(U) Total								79,000			
<p>MP-RTIP's funding was a part of Joint Stars BPAC 674995 until FY02, PE remains the same 27581F. NATO AGS Radar within the restructured MP-RTIP program continues effort previously begun under JSTARS RTIP program. NATO AGS Radar is not a New Start.</p>											
(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)											
(U) Performing Organizations:											
<u>Contractor or Government Performing Activity</u>	<u>Contract Method/Type or Funding Vehicle</u>	<u>Award or Obligation Date</u>	<u>Performing Activity EAC</u>	<u>Project Office EAC</u>	<u>Total Prior to FY 2000</u>	<u>Budget FY 2000</u>	<u>Budget FY 2001</u>	<u>Budget FY 2002</u>	<u>Budget to Complete</u>	<u>Total Program</u>	
<u>Product Development Organizations</u>											
Northrop Grumman-Multi Platform-Radar Technology Insertion Program (RTIP funding prior to FY02 reported in BPAC 670003, same PE)	CPAF	DEC 00						75,340	Continuing	TBD	
MIT/Lincoln Labs	Various	Various	N/A	N/A				600	Continuing	TBD	
<u>Support and Management Organizations</u>											
Program Office Support	N/A	N/A	N/A	N/A				1,300	Continuing	TBD	
<u>Test and Evaluation Organizations</u>											
OITL	Allotment	N/A	N/A	N/A				1,000	Continuing	TBD	
JTF Support	Allotment	N/A	N/A	N/A				60	Continuing	TBD	
AFOTEC Support	Allotment	N/A	N/A	N/A				700	Continuing	TBD	
Project 4995						Page 13 of 14 Pages			Exhibit R-3 (PE 0207581F)		

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE June 2001		
BUDGET ACTIVITY 07 - Operational System Development				PE NUMBER AND TITLE 0207581F JOINT STARS			PROJECT 4995		
(U) Government Furnished Property:									
	<u>Contract</u>								
	<u>Method/Type</u>	<u>Award or</u>							
<u>Item</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Delivery</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>	<u>to FY 2000</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Property</u>									
N/A									
<u>Support and Management Property</u>									
N/A									
<u>Test and Evaluation Property</u>									
N/A									
				<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Subtotals</u>				<u>to FY 2000</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Complete</u>	<u>Program</u>
Subtotal Product Development							75,940	TBD	TBD
Subtotal Support and Management							1,300	TBD	TBD
Subtotal Test and Evaluation							1,760	TBD	TBD
Total Project							79,000	TBD	TBD