

UNCLASSIFIED

PE NUMBER: 0207423F

PE TITLE: Advanced Communications Systems

Exhibit R-2, RDT&E Budget Item Justification

DATE

February 2005

BUDGET ACTIVITY

03 Advanced Technology Development (ATD)

PE NUMBER AND TITLE

0207423F Advanced Communications Systems

Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	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	11.264	13.709	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
5084 AJCN	11.264	13.709	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

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

The Adaptive Joint Command, Control, Communications and Computing, Intelligence, Surveillance and Reconnaissance (C4ISR) Node (AJCN), Advanced Concept Technology Demonstration (ACTD) is developing software programmable Radio Frequency (RF) payloads designed to support Information Superiority. AJCN is an open, Commercial-Off-The-Shelf (COTS) based system that can be remotely programmed on the fly to perform a variety of functions simultaneously: assure air-to-air communication interoperability, electronic warfare (EW), signals intelligence (SIGINT), and Information Operations (IO). AJCN addresses numerous Mission Needs Statements (MNS), Operational Requirements Documents (ORD), and the Combatant Commanders Integrated Priority Lists (IPL) related to communications, intelligence and Information Operations (IO).

This program is in Budget Activity 3, Advanced Technology Development, since it develops and demonstrates technologies to enhance Air Force operational systems.

(U) **B. Program Change Summary (\$ in Millions)**

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Previous President's Budget	11.951	13.917		
(U) Current PBR/President's Budget	11.264	13.709		
(U) Total Adjustments	-0.687	-0.208		
(U) Congressional Program Reductions		-0.208		
Congressional Rescissions				
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer	-0.687			

(U) **Significant Program Changes:**

The funding decrease between FY05 and FY06 due to AJCN ACTD completion

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Exhibit R-2a, RDT&E Project Justification

DATE

February 2005

BUDGET ACTIVITY

03 Advanced Technology Development (ATD)

PE NUMBER AND TITLE

0207423F Advanced Communications Systems

PROJECT NUMBER AND TITLE

5084 AJCN

Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5084 AJCN	11.264	13.709	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

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

The Adaptive Joint Command, Control, Communications and Computing, Intelligence, Surveillance and Reconnaissance (C4ISR) Node (AJCN), Advanced Concept Technology Demonstration (ACTD) is developing software programmable Radio Frequency (RF) payloads designed to support Information Superiority. AJCN is an open, Commercial-Off-The-Shelf (COTS) based system that can be remotely programmed on the fly to perform a variety of functions simultaneously: assure air-to-air communication interoperability, electronic warfare (EW), signals intelligence (SIGINT), and Information Operations (IO). AJCN addresses numerous Mission Needs Statements (MNS), Operational Requirements Documents (ORD), and the Combatant Commanders Integrated Priority Lists (IPL) related to communications, intelligence and Information Operations (IO).

This program is in Budget Activity 3, Advanced Technology Development, since it develops and demonstrates technologies to enhance Air Force operational systems.

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) System Engineering and Integration	10.585	10.443		
(U) Field Evaluation/Military Utility Assessment	0.586	2.693		
(U) Concept of Operations (CONOPS)/TTP Development and Test	0.093	0.573		
(U) Total Cost	11.264	13.709	0.000	0.000

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

	<u>FY 2004</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>Estimate</u>	<u>Complete</u>	
(U) N/A										

(U) **D. Acquisition Strategy**

All major contracts within this Program Element and programs were awarded after full and open competition.

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PE NUMBER: 0207423F

PE TITLE: Advanced Communications Systems

Exhibit R-2, RDT&E Budget Item Justification

DATE

February 2005

BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE

0207423F Advanced Communications Systems

Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	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	0.000	0.000	0.969	0.987	0.000	0.000	0.000	0.000	0.000	0.000
5084 AJCN	0.000	0.000	0.969	0.987	0.000	0.000	0.000	0.000	0.000	0.000

(U) A. Mission Description and Budget Item Justification(U) B. Program Change Summary (\$ in Millions)

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Previous President's Budget				
(U) Current PBR/President's Budget	0.000	0.000		
(U) Total Adjustments	0.000	0.000		
(U) Congressional Program Reductions				
Congressional Rescissions				
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				
(U) <u>Significant Program Changes:</u>				

Exhibit R-2a, RDT&E Project Justification

DATE

February 2005

BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE

0207423F Advanced Communications
Systems

PROJECT NUMBER AND TITLE

5084 AJCN

Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5084 AJCN	0.000	0.000	0.969	0.987	0.000	0.000	0.000	0.000	0.000	0.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification(U) B. Accomplishments/Planned Program (\$ in Millions)FY 2004FY 2005FY 2006FY 2007

(U)

(U)

(U)

(U) Total Cost

0.000

0.000

0.000

0.000

(U) C. Other Program Funding Summary (\$ in Millions)FY 2004FY 2005FY 2006FY 2007FY 2008FY 2009FY 2010FY 2011Cost toTotal CostActualEstimateEstimateEstimateEstimateEstimateEstimateEstimateComplete

(U)

(U) D. Acquisition Strategy

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Exhibit R-3, RDT&E Project Cost Analysis

DATE

February 2005

BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE

0207423F Advanced Communications
Systems

PROJECT NUMBER AND TITLE

5084 AJCN

(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract</u> <u>Method &</u> <u>Type</u>	<u>Performing</u> <u>Activity &</u> <u>Location</u>	<u>Total</u> <u>Prior to FY</u> <u>2004</u> <u>Cost</u>	<u>FY 2004</u> <u>Cost</u>	<u>FY 2004</u> <u>Award</u> <u>Date</u>	<u>FY 2005</u> <u>Cost</u>	<u>FY 2005</u> <u>Award</u> <u>Date</u>	<u>FY 2006</u> <u>Cost</u>	<u>FY 2006</u> <u>Award</u> <u>Date</u>	<u>FY 2007</u> <u>Cost</u>	<u>FY 2007</u> <u>Award</u> <u>Date</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>	<u>Target</u> <u>Value of</u> <u>Contract</u>
(U) <u>Product Development</u>														
Subtotal Product Development			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) <u>Support</u>														
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) <u>Test & Evaluation</u>														
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) <u>Management</u>														
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000

Exhibit R-4, RDT&E Schedule Profile

DATE

February 2005

BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE

0207423F Advanced Communications
Systems

PROJECT NUMBER AND TITLE

5084 AJCN

Exhibit R-4a, RDT&E Schedule Detail

DATE

February 2005

BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE

0207423F Advanced Communications
Systems

PROJECT NUMBER AND TITLE

5084 AJCN

(U) Schedule ProfileFY 2004FY 2005FY 2006FY 2007

(U)

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PE NUMBER: 0207423F

PE TITLE: Advanced Communications Systems

Exhibit R-2, RDT&E Budget Item Justification

DATE

February 2005

BUDGET ACTIVITY

03 Advanced Technology Development (ATD)

PE NUMBER AND TITLE

0207423F Advanced Communications Systems

Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	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	11.264	13.709	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
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(U) **A. Mission Description and Budget Item Justification**

The Adaptive Joint Command, Control, Communications and Computing, Intelligence, Surveillance and Reconnaissance (C4ISR) Node (AJCN), Advanced Concept Technology Demonstration (ACTD) is developing software programmable Radio Frequency (RF) payloads designed to support Information Superiority. AJCN is an open, Commercial-Off-The-Shelf (COTS) based system that can be remotely programmed on the fly to perform a variety of functions simultaneously: assure air-to-air communication interoperability, electronic warfare (EW), signals intelligence (SIGINT), and Information Operations (IO). AJCN addresses numerous Mission Needs Statements (MNS), Operational Requirements Documents (ORD), and the Combatant Commanders Integrated Priority Lists (IPL) related to communications, intelligence and Information Operations (IO).

This program is in Budget Activity 3, Advanced Technology Development, since it develops and demonstrates technologies to enhance Air Force operational systems.

(U) **B. Program Change Summary (\$ in Millions)**

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Previous President's Budget	11.951	13.917		
(U) Current PBR/President's Budget	11.264	13.709		
(U) Total Adjustments	-0.687	-0.208		
(U) Congressional Program Reductions		-0.208		
Congressional Rescissions				
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer	-0.687			

(U) **Significant Program Changes:**

The funding decrease between FY05 and FY06 due to AJCN ACTD completion

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Exhibit R-2a, RDT&E Project Justification

DATE

February 2005

BUDGET ACTIVITY

03 Advanced Technology Development (ATD)

PE NUMBER AND TITLE

0207423F Advanced Communications Systems

PROJECT NUMBER AND TITLE

5084 AJCN

Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5084 AJCN	11.264	13.709	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

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

The Adaptive Joint Command, Control, Communications and Computing, Intelligence, Surveillance and Reconnaissance (C4ISR) Node (AJCN), Advanced Concept Technology Demonstration (ACTD) is developing software programmable Radio Frequency (RF) payloads designed to support Information Superiority. AJCN is an open, Commercial-Off-The-Shelf (COTS) based system that can be remotely programmed on the fly to perform a variety of functions simultaneously: assure air-to-air communication interoperability, electronic warfare (EW), signals intelligence (SIGINT), and Information Operations (IO). AJCN addresses numerous Mission Needs Statements (MNS), Operational Requirements Documents (ORD), and the Combatant Commanders Integrated Priority Lists (IPL) related to communications, intelligence and Information Operations (IO).

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
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(U) Field Evaluation/Military Utility Assessment	0.586	2.693		
(U) Concept of Operations (CONOPS)/TTP Development and Test	0.093	0.573		
(U) Total Cost	11.264	13.709	0.000	0.000

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

	<u>FY 2004</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>Estimate</u>	<u>Complete</u>	
(U) N/A										

(U) **D. Acquisition Strategy**

All major contracts within this Program Element and programs were awarded after full and open competition.

UNCLASSIFIED

PE NUMBER: 0207423F

PE TITLE: Advanced Communications Systems

Exhibit R-2, RDT&E Budget Item Justification

DATE

February 2005

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0207423F Advanced Communications Systems

Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	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	11.724	18.040	28.938	52.420	61.336	60.071	56.335	60.492	Continuing	TBD
4934 Tactical Air Control Party (TACP)	11.724	18.040	11.746	8.975	9.304	6.421	6.690	6.797	Continuing	TBD
5189 C2ISR JTRS Integration	0.000	0.000	17.192	43.445	52.032	53.650	49.645	53.695	Continuing	TBD

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

TACPs deploy with Army maneuver units and provide a Command and Control (C2) link for Close Air Support (CAS), airlift and reconnaissance missions. TACPs are equipped with various targeting and communications equipment needed to interface with ground maneuver forces, aircraft conducting air operations, aerospace C2 aircraft/agencies and Intelligence, Surveillance and Reconnaissance (ISR) aircraft/agencies. The TACP-Modernization (TACP-M) Program is intended to reduce reliance on voice transmission and replace analog equipment with the latest digital, data link and video technology available to improve the system's Situational Awareness (SA), increase targeting accuracy, reduce kill chain decision time, provide more mobility and flexibility, improve data flows/information exchange and increase joint and multinational interoperability and reduce fratricide. TACP-M is divided into two segments: Dismounted and Vehicular. The dismounted TACP provides a modernized capability via a streamlined acquisition using non-developmental, Commercial off-the-shelf (COTS) Manpack Radios (MPR) and Handheld Radios (HHR), Laser Target Devices (LTD), and ruggedized mission computers combined with TACP SA software. The Vehicular Communications System (VCS) provides a vehicular-mounted capability through the Army's Cluster 1 Joint Tactical Radio System (JTRS) program which consists of the JTRS radio, computer, sunlight readable display and some ancillary equipment.

The integration of capability via JTRS sets will provide C2 and ISR platforms with required legacy communications capability and enabling growth opportunity to a net enabled capability providing dynamic connectivity throughout the battle space. The funding provides such capabilities on various C2 and ISR platforms to include and not limited to Global Hawk, Predator, AWACS, Rivet Joint, and JSTARS. The Global Hawk and Predator platforms with a multi-channel Very High Frequency (VHF)/Ultra High Frequency (UHF) capability while resolving critical Size, Weight, and Power (SWaP) issues. Additionally, opportunities to integrate additional capability to include Link 16 via the JTRS are being investigated. The AWACS and JSTARS platform are integrating an Integrated Broadcast Service (IBS) capability to replace the current stand-alone Satellite Communications (SATCOM) connectivity with an integrated implementation. IBS is intended to help achieve global connectivity, assured delivery of critical information, common track numbering and sensor-to-shooter information flow. Opportunities to upgrade current legacy capability to include Link 16 will also be considered for these platforms. The Rivet Joint program will integrate a Link 16 capability via the JTRS to enhance its airborne situational awareness.

This is a budget activity 7, Operational System Development RDT&E, since it examines appropriate emerging technologies for the continuing spiral development of commercial (COTS) equipment; provides software development, and determines and resolves integration issues pertaining to COTS.

Exhibit R-2, RDT&E Budget Item Justification

DATE

February 2005

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0207423F Advanced Communications Systems

(U) **B. Program Change Summary (\$ in Millions)**

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Previous President's Budget	12.208	18.200	5.479	0.000
(U) Current PBR/President's Budget	11.724	18.040	28.938	52.420
(U) Total Adjustments	-0.484	-0.160		
(U) Congressional Program Reductions		-0.175		
Congressional Rescissions				
Congressional Increases		0.015		
Reprogrammings	-0.126			
SBIR/STTR Transfer	-0.358			

(U) **Significant Program Changes:**

TACP FY06-08 funds were increased due to Air force lessons learned from GWOT to integrate ROVER (video capabilities) into TACP Close Air Support System (TACP-CASS) mission software to improve targeting accuracy, kill chain decision time and reduce risk of fratricide.

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Exhibit R-2a, RDT&E Project Justification

DATE

February 2005

BUDGET ACTIVITY					PE NUMBER AND TITLE			PROJECT NUMBER AND TITLE		
07 Operational System Development					0207423F Advanced Communications Systems			4934 Tactical Air Control Party (TACP)		
Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4934 Tactical Air Control Party (TACP)	11.724	18.040	11.746	8.975	9.304	6.421	6.690	6.797	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

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

TACPs deploy with Army maneuver units and provide a Command and Control (C2) link for Close Air Support (CAS), airlift and reconnaissance missions. TACPs are equipped with various targeting and communications equipment needed to interface with ground maneuver forces, aircraft conducting air operations, aerospace C2 aircraft/agencies and Intelligence, Surveillance and Reconnaissance (ISR) aircraft/agencies. The TACP-Modernization (TACP-M) Program is intended to reduce reliance on voice transmission and replace the current analog equipment with the latest digital, data link and video technology available to improve the system's Situational Awareness (SA), increase targeting accuracy, reduce kill chain decision time, provide more mobility and flexibility, improve data flows/information exchange and increase joint and multinational interoperability and reduce fratricide. TACP is divided into two segments: Dismounted and Vehicular. The dismounted TACP provides a modernized capability via a streamlined acquisition using non-developmental, Commercial Off-the-Shelf (COTS) Manpack Radios (MPR) and Handheld Radios (HHR), Laser Target Devices (LTD), and ruggedized mission computers combined with TACP SA software. The Vehicular Communications System (VCS) provides a vehicular-mounted capability through the Army's Cluster 1 Joint Tactical Radio System (JTRS) program which consists of the JTRS radio, computer, sunlight readable display and some ancillary equipment.

This is a budget activity 7, Operational System Development RDT&E, since it examines appropriate emerging technologies for the continuing spiral development of commercial (COTS) equipment; provides software development, and determines and resolves integration issues pertaining to COTS.

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Continue JTRS TACP Vehicular Communication System (VCS) hardware development	5.521	12.516	5.926	4.991
(U) Software development and System integration	4.935	4.523	5.511	1.890
(U) Operational and interoperability test planning	1.268	1.001	0.309	2.094
(U) Total Cost	11.724	18.040	11.746	8.975

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

	<u>FY 2004</u> <u>Actual</u>	<u>FY 2005</u> <u>Estimate</u>	<u>FY 2006</u> <u>Estimate</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY 2008</u> <u>Estimate</u>	<u>FY 2009</u> <u>Estimate</u>	<u>FY 2010</u> <u>Estimate</u>	<u>FY 2011</u> <u>Estimate</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>
Advanced Communications										
(U) System Other Procurement, AF PE 0207423F	2.595	18.868	16.698	17.263	107.137	119.474	77.685	72.250	Continuing	TBD

(U) **D. Acquisition Strategy**

All major contracts within this Program Element and program have been awarded after full and open competition.

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Exhibit R-3, RDT&E Project Cost Analysis												DATE February 2005		
BUDGET ACTIVITY 07 Operational System Development						PE NUMBER AND TITLE 0207423F Advanced Communications Systems						PROJECT NUMBER AND TITLE 4934 Tactical Air Control Party (TACP)		
(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Prior to FY 2004 Cost</u>	<u>FY 2004 Cost</u>	<u>FY 2004 Award Date</u>	<u>FY 2005 Cost</u>	<u>FY 2005 Award Date</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
(U) <u>Product Development</u> Boeing Company	C/PAF	Army Tactical Command & Control Sys, Ft Monmouth, NJ	22.440	3.702	May-04	10.558	Nov-04	1.889	Nov-05	3.281		Continuing	TBD	TBD
ESC Sys Int Software Dev't	T&M	MultiMax, Inc. Largo, Maryland	7.997	3.607	Oct-03	4.009	Nov-04	6.332	Nov-05	2.515	Nov-06	Continuing	TBD	TBD
Subtotal Product Development Remarks:			30.437	7.309		14.567		8.221		5.796		Continuing	TBD	TBD
(U) <u>Support</u> ESC	C/FFP	Various	5.043	2.630	Oct-03	2.472	Oct-04	3.216	Oct-05	2.106	Oct-06	Continuing	TBD	TBD
Subtotal Support Remarks:			5.043	2.630		2.472		3.216		2.106		Continuing	TBD	TBD
(U) <u>Test & Evaluation</u> Test Agency Support	MIPR	Various	1.231	1.785	Oct-03	1.001	Nov-04	0.309	Nov-05	1.073	Nov-06	Continuing	TBD	TBD
Subtotal Test & Evaluation Remarks:			1.231	1.785		1.001		0.309		1.073		Continuing	TBD	TBD
(U) <u>Management</u> Subtotal Management Remarks:			0.000	0.000		0.000		0.000		0.000		0.000	0.000	TBD
(U) Total Cost			36.711	11.724		18.040		11.746		8.975		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

DATE

February 2005

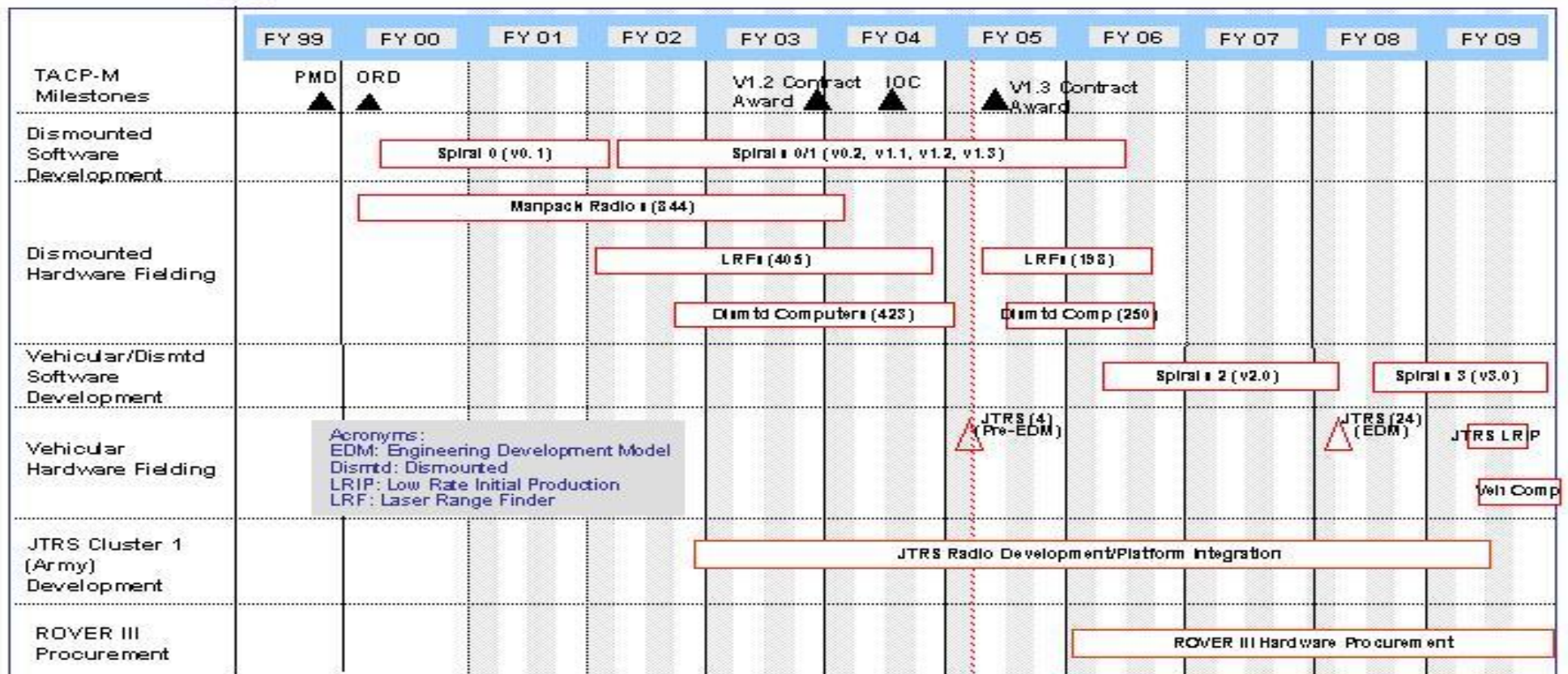
BUDGET ACTIVITY
07 Operational System Development

PE NUMBER AND TITLE
0207423F Advanced Communications
Systems

PROJECT NUMBER AND TITLE
4934 Tactical Air Control Party
(TACP)



TACP-M Schedule



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Exhibit R-4a, RDT&E Schedule Detail

DATE

February 2005

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0207423F Advanced Communications
Systems

PROJECT NUMBER AND TITLE

4934 Tactical Air Control Party
(TACP)(U) Schedule ProfileFY 2004FY 2005FY 2006FY 2007

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UNCLASSIFIED

Exhibit R-2a, RDT&E Project Justification

DATE

February 2005

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0207423F Advanced Communications Systems

PROJECT NUMBER AND TITLE

5189 C2ISR JTRS Integration

Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5189 C2ISR JTRS Integration	0.000	0.000	17.192	43.445	52.032	53.650	49.645	53.695	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

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

The integration of capability via Joint Tactical Radio System (JTRS) will provide C2 and ISR platforms with a common family of software programmable radios for reliable multi-channel voice, data, imagery, and video communications. JTRS radios will be modular, scalable, backwards-compatible and network capable, and will mitigate communications problems caused by unique "stovepiped" legacy systems. The funding provides such capabilities on various C2 and ISR platforms to include Global Hawk, Predator, AWACS, Rivet Joint, and JSTARS. The Global Hawk and Predator platforms will use a multi-channel VHF/UHF capability while resolving critical Size, Weight, and Power (SWAP) issues. Additionally, opportunities to integrate additional capability to include Link 16 via JTRS is being investigated. The AWACS and JSTARS platform are integrating an Integrated Broadcast Service (IBS) capability to replace the current stand-alone SATCOM connectivity with an integrated implementation. IBS is intended to replace the stovepipe intelligence systems of Tactical and Related Applications (TRAP), Tactical Data Information Exchange System-Broadcast (TADIXS-B), Tactical Information Broadcast Service (TIBS), etc., with a single broadcast service providing interoperability, commonality and standardization via a variety of distribution methods (including Ultra High Frequency (UHF), Super High Frequency (SHF), Extremely High Frequency (EHF), Satellite Communications (SATCOM) and Global Broadcast Service (GBS). IBS is also intended to help achieve global connectivity, assured delivery of critical information, common track numbering and sensor-to-shooter information flow. Opportunities to upgrade current legacy capability to include Link 16 will also be considered for these platforms. The Rivet Joint program will integrate a Link 16 capability via JTRS to enhance its airborne situational awareness.

C2ISR JTRS program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) System Integration Engineering and Integration			7.500	18.815
(U) Software development			5.300	15.730
(U) Operational and interoperability test planning			4.392	8.900
(U) Total Cost	0.000	0.000	17.192	43.445

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

	<u>FY 2004</u> <u>Actual</u>	<u>FY 2005</u> <u>Estimate</u>	<u>FY 2006</u> <u>Estimate</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY 2008</u> <u>Estimate</u>	<u>FY 2009</u> <u>Estimate</u>	<u>FY 2010</u> <u>Estimate</u>	<u>FY 2011</u> <u>Estimate</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>
PE 0207423 Advanced										
(U) Communication						29.997	16.113	17.221		63.331
System-Aircraft Procurement										

(U) **D. Acquisition Strategy**

All major contracts within this Program Element and program will be awarded through a full and open competition.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis

DATE

February 2005

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0207423F Advanced Communications
Systems

PROJECT NUMBER AND TITLE

5189 C2ISR JTRS Integration

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Prior to FY 2004 Cost</u>	<u>FY 2004 Cost</u>	<u>FY 2004 Award Date</u>	<u>FY 2005 Cost</u>	<u>FY 2005 Award Date</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
(U) <u>Product Development</u> E-8 JSTARS	CPIF	Pre-SDD Northrup Grumman, Melbourne FL	0.000	0.000		0.000		5.429	Dec-05	16.034		66.372	87.835	TBD
RQ-4 Global Hawk	CPIF	Northrup Grumman, Rancho Bernardo						5.429	Mar-06	15.998		70.298	91.725	TBD
E-3 AWACS	CPIF	TBD										25.508	25.508	TBD
RC-135 Rivet Joint	CPIF	TBD						2.011	Dec-05	2.038		8.145	12.194	TBD
RQ-1 Predator	CPIF	TBD						4.323	Aug-06	9.375		38.699	52.397	TBD
Subtotal Product Development			0.000	0.000		0.000		17.192		43.445		209.022	269.659	TBD
Remarks:														
(U) Total Cost			0.000	0.000		0.000		17.192		43.445		209.022	269.659	TBD

Exhibit R-4, RDT&E Schedule Profile

DATE

February 2005

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0207423F Advanced Communications
Systems

PROJECT NUMBER AND TITLE

5189 C2ISR JTRS Integration

C2ISR JTRS Integration Schedule

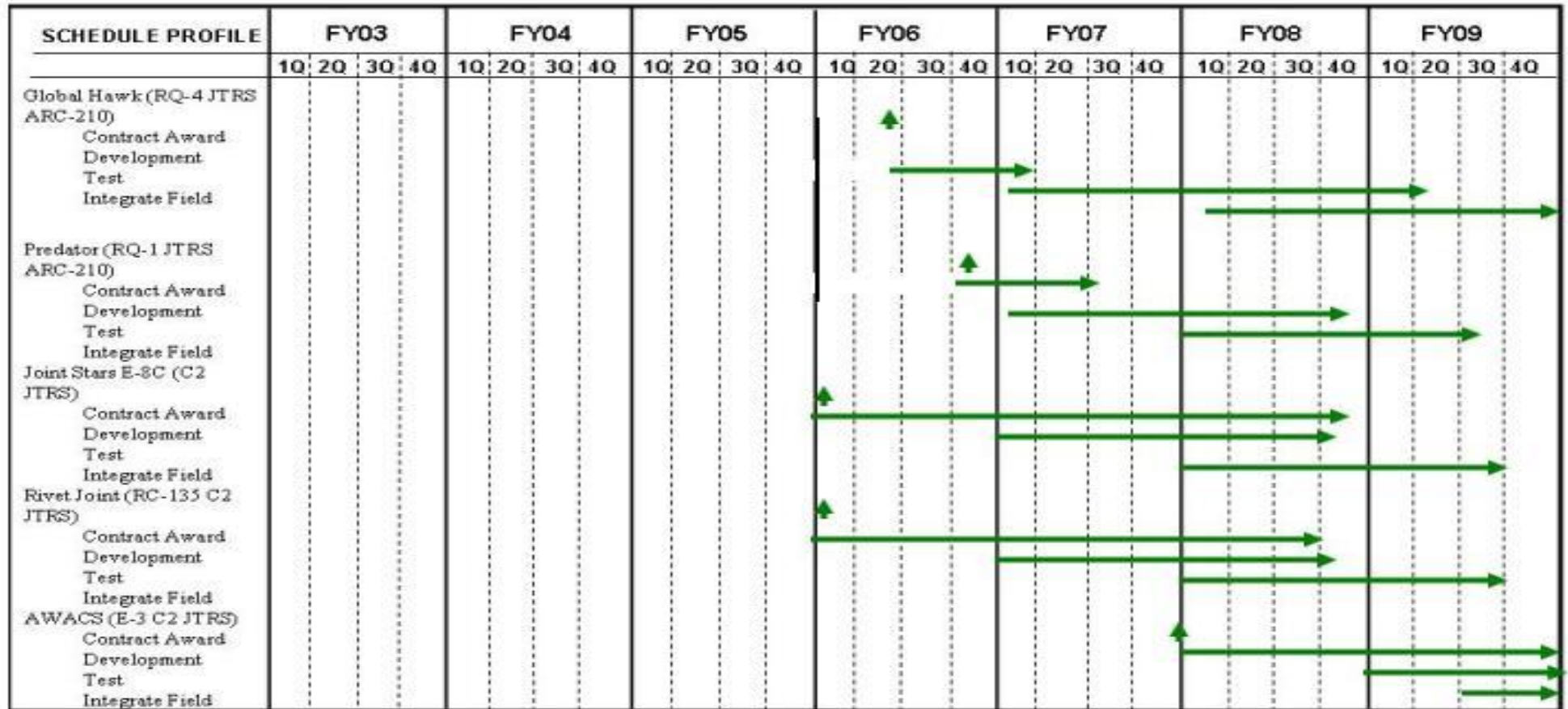


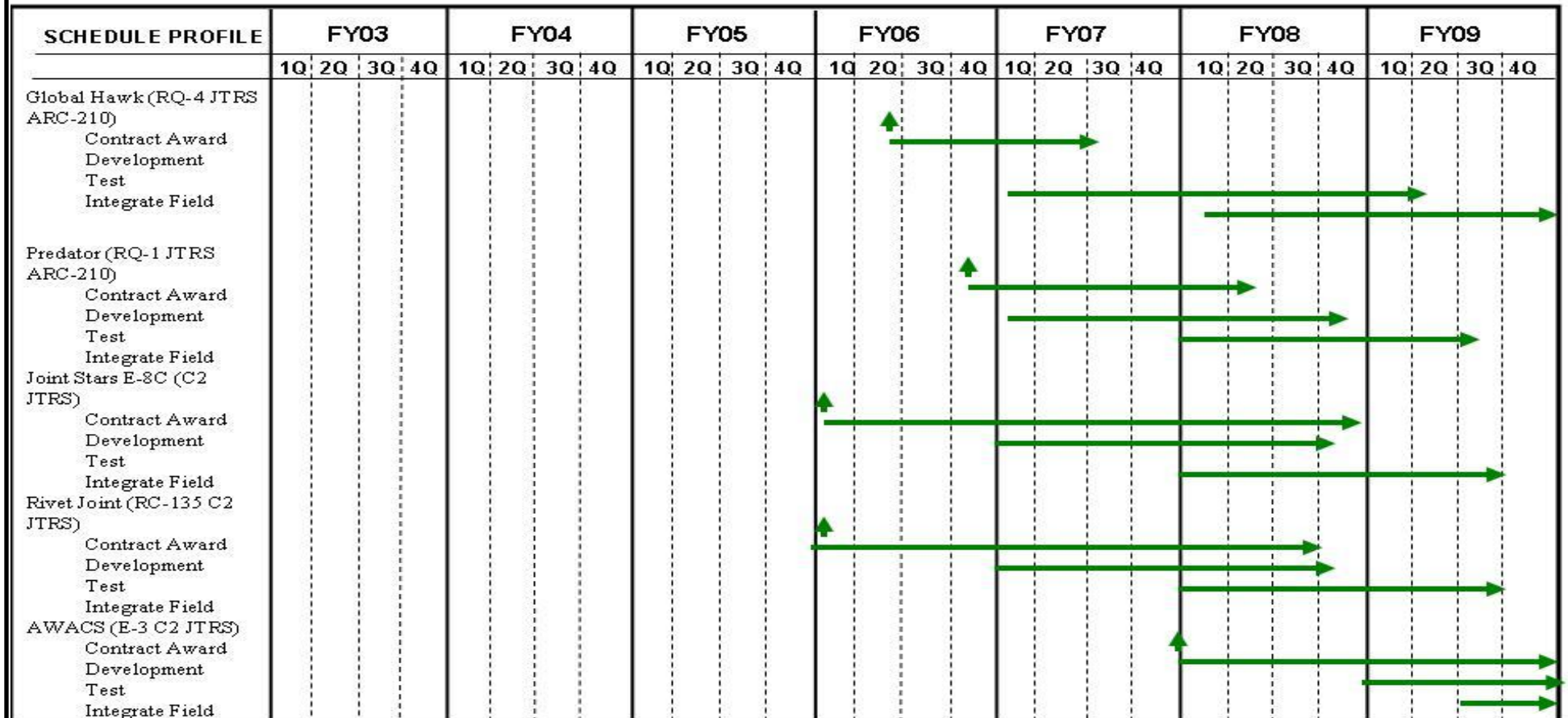
Exhibit R-4, RDT&E Schedule Profile

DATE

February 2005

BUDGET ACTIVITY
07 Operational System DevelopmentPE NUMBER AND TITLE
0207423F Advanced Communications
SystemsPROJECT NUMBER AND TITLE
5189 C2ISR JTRS Integration

C2ISR JTRS Integration Schedule



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Exhibit R-4a, RDT&E Schedule Detail

DATE

February 2005

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0207423F Advanced Communications
Systems

PROJECT NUMBER AND TITLE

5189 C2ISR JTRS Integration

(U) Schedule ProfileFY 2004FY 2005FY 2006FY 2007

(U) Global Hawk (RQ-4JTRS ARC-210) Contract Award

2Q

(U) Global Hawk (RQ-4JTRS ARC-210) Development

2-4Q

1-2Q

(U) Predator Contract Award

1Q

(U) Predator Development

1-4Q

1-2Q

(U) Joint Stars Contract Award

1Q

(U) Joint Stars Development

1-4Q

1-2Q

(U) Rivet Joint Contract Award

1Q

(U) Rivet Joint Development

1-4Q

1-2Q