

UNCLASSIFIED

PE NUMBER: 0207423F

PE TITLE: Advanced Communications Systems

Exhibit R-2, RDT&E Budget Item Justification

DATE

February 2006

BUDGET ACTIVITY

03 Advanced Technology Development (ATD)

PE NUMBER AND TITLE

0207423F Advanced Communications Systems

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	14.767	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
5084 AJCN	13.767	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
5227 STEEL EAGLE	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

(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: air-to-air communications 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.

Steel Eagle will replace the aging Silver Bullet capability that provides a transportable command, control and communications capability to the Secretary and Deputy Secretary of Defense, Chairman of the Joint Chiefs of Staff, Combatant Commanders, and other Senior Leaders aboard modified USAF cargo aircraft (KC-10s and C-17s, which have already been configured to accept the modules and are not part of this supplemental). FY05 supplemental funding will be used to pay for the design and fabrication of two (2) complete sets of Steel Eagle modules (a communications module and a conferencing module); a small system integration lab (SIL); procurement, installation, integration and testing of all C3 equipment (secure and non-secure voice, data, and video teleconferencing); support/office equipment and environmental equipment to operate the modules in the aircraft or as stand-alone C3 centers for initial support of the Senior Leader in theater. The aging, existing modules are commercial AirStream trailers, which consist of an executive suite and a communications suite.

This program is in Budget Activity 3, Advanced Component Development and Prototypes, because it involves demonstrating and evaluating integrated technologies in a realistic operating environment to assess the performance and/or cost reduction potential of advanced technology.

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BUDGET ACTIVITY

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PE NUMBER AND TITLE

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

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Previous President's Budget	11.860	0.000	0.000
(U) Current PBR/President's Budget	14.767	0.000	0.000
(U) Total Adjustments	2.907	0.000	
(U) Congressional Program Reductions			
Congressional Rescissions			
Congressional Increases	1.000		
Reprogrammings	1.907		
SBIR/STTR Transfer			
(U) <u>Significant Program Changes:</u>			
FY05 Supplemental for Global War on Terrorism increased Steel Eagle by \$1M			

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Exhibit R-2a, RDT&E Project Justification

DATE

February 2006

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 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5084 AJCN	13.767	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		

(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. FY06 funding has been moved to BPAC 645084 to complete is ACTD project

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

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) System Engineering and Integration	10.443		
(U) Field Evaluation/Military Utility Assessment	2.693		0.000
(U) Concept of Operations (CONOPS)/TTP Development and Test	0.631		
(U) Total Cost	13.767	0.000	0.000

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

	<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) 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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Exhibit R-2a, RDT&E Project Justification								DATE February 2006	
BUDGET ACTIVITY 03 Advanced Technology Development (ATD)				PE NUMBER AND TITLE 0207423F Advanced Communications Systems			PROJECT NUMBER AND TITLE 5227 STEEL EAGLE		
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
5227 STEEL EAGLE	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0		
<p>(U) <u>A. Mission Description and Budget Item Justification</u></p> <p>Steel Eagle will replace the aging Silver Bullet capability that provides a transportable command, control and communications capability to the Secretary and Deputy Secretary of Defense, Chairman of the Joint Chiefs of Staff, Combatant Commanders, and other Senior Leaders aboard modified USAF cargo aircraft (KC-10s and C-17s, which have already been configured to accept the modules and are not part of this supplemental). FY05 supplemental funding will be used to pay for the design and fabrication of two (2) complete sets of Steel Eagle modules (a communications module and a conferencing module); a small system integration lab (SIL); procurement, installation, integration and testing of all C3 equipment (secure and non-secure voice, data, and video teleconferencing); support/office equipment and environmental equipment to operate the modules in the aircraft or as stand-alone C3 centers for initial support of the Senior Leader in theater. The aging, existing modules are commercial AirStream trailers, which consist of an executive suite and a communications suite.</p> <p>The advent of the Global War of Terrorism, OIF and OEF has necessitated a substantial increase in the frequency and duration of overseas travel by Senior Leaders in general and in particular to/from and within the CENTCOM AOR. In addition, these events have simultaneously necessitated a substantial increase in C3 capabilities required for Senior Leaders to execute their duties while in transit to and from the CENTCOM AOR and other overseas locations and while at trip sites within the CENTCOM AOR and other locations. When Senior Leaders, including the Secretary and Deputy Secretary of Defense, Chairman of the Joint Chiefs of Staff, Senior White House and Defense Department officials, various Unified Combatant Commanders, and others travel to or within the CENTCOM AOR (high risk areas or other areas where it is inappropriate or inadvisable to be highly visible in an official USAF Special Air Mission (SAM) aircraft (e.g., C-32A, C-40B)), they will travel in one of the specially modified KC-10s or C-17s with a Silver Bullet module onboard to provide C3 support while in transit and while on the ground at trip sites. The Silver Bullet modules are beyond their expected useful life and are physically wearing out.</p>									
(U) <u>B. Accomplishments/Planned Program (\$ in Millions)</u>						<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	
(U) Silver Bullet development						0.650			
(U) System integration						0.250			
(U) Interoperational test planning						0.100			
(U) Total Cost						1.000	0.000	0.000	
(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) N/A									
(U) <u>D. Acquisition Strategy</u>									
All major contracts within this Program Element and programs were awarded after full and open competition.									

Project 5227

R-1 Shopping List - Item No. 37-5 of 37-5

Exhibit R-2a (PE 0207423F)