PE NUMBER: 0207423F

PE TITLE: Advanced Communications Systems

	RDT&E BUDGET ITEM	JUSTI	FICATI	ON SH	EET (R	-2 Exhi	bit)		DATE	June	2001		
•	T ACTIVITY Operational System Development				UMBER AND 7423F		d Comn	nunicatio	ons Syst	ns Systems			
	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	0	2,840	9,324	8,512	4,777	2,862	2,625	58,327	Continuing	TBD		
4934	Tactical Air Control Party (TACP)	0	0	9,324	8,512	4,777	2,862	2,625	2,628	Continuing	TBD		
1013	Theater Deployable Communications (TDC)	0	2,624	0	0	0	0	0	0	0	23,139		
4935	Joint Tactical Radio System (JTRS)	0	0	0	0	0	0	0	55,699	0	19,221		
2982	Anti-Jam Radio Communications	0	216	0	0	0	0	0	0	Continuing	TBD		
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0		

'FY03-FY07 budget number do not reflect the DoD strategic review results'

(U) A. Mission Description

The Advanced Communication Systems program procures commercially available ground communications equipment for deployment to theaters of operation; and develops and procures jam-resistant, ultra high frequency (UHF) and very high frequency (VHF) frequency-hopping tactical radios. The Theater Deployable Communications (TDC) program provides funding for research, development, test and evaluation for the modernization of operational deployable communications, and integration of commercial off the shelf (COT) equipment that support tactical air operations in a combat environment. The integration of deployable communications equipment for active duty, guard and reserve forces. TDC equipment will be fielded at wings, combat communications squadrons, Air Force Special Operations Command and Air Mobility Command communication units, and Theater Air Control System units. This funding also provides System Program Office (SPO) internal management, engineering, and technical support for the continuing spiral development of (COTS) equipment and will examine appropriate emerging technologies. TDC equipment is composed of three components Lightweight Multi band Satellite Terminal equipment, the Integrated Communications Access Packages (ICAP), and Network Management System/Base Information Protection (NMS/BIP).

TACPs advise the ground commander and staff on the capabilities and use of aerospace power and assist them in planning for air support operations. TACPs provide United States Air Force (USAF) Tactics, Techniques and Procedures (TTP) expertise and a focal point for detailed integration of Close Air Support (CAS) with the fire and maneuver of ground forces. TACP tasks include requesting/coordinating aerospace missions, integrating aerospace and ground force plans, target marking and

Page 1 of 11 Pages

Exhibit R-2 (PE 0207423F)

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

DATE

June 2001

BUDGET ACTIVITY

PE NUMBER AND TITLE

07 - Operational System Development

0207423F Advanced Communications Systems

(U) A. Mission Description Continued

Suppression of Enemy Air Defenses (SEAD) control. To accomplish this, a mix of vehicle mounted communications pallets, Manpack Radios (MPRs), Laser Range Finders (LRFs) and digital communications devices. Together these three systems provide communications infrastructure in deployed bare base environments. FY99 funding was provided for Expeditionary Force Experimentatin (EFX) 99 it is part of an annual war fighter experiment to demonstrate emerging Air Force capabilities to deploy and employ decisive air and space power for the Joint Force Commander through a Rapid Response Air Expeditionary Force (RAEF). The experiment is designed to meet Chief of Staff of the Air Force (CSAF) requirement to explore how advanced command and control capabilities and new operational processes enable modern aerospace forces to decisively halt an invading force anywhere in the world. It is a continuous spiral development process for the C2 Weapon System.

(U) B. Budget Activity Justification

This program is in budget activity 7, Operational System Development RDT&E, AF because it examines appropriate emerging technologies for the continuing spiral development of commercial off-the-shelf (COTS) equipment; provide software development, determines and resolves integration issues pertaining to COTS equipment

(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)	2,864	2,867	2,907	TBD
(U)	Appropriated Value	0	2,867		
(U)	Adjustments to Appropriated Value				
	a. Congressional/General Reductions		0		
	b. Small Business Innovative Research		0		
	c. Omnibus or Other Above Threshold Reprogram		0		
	d. Below Threshold Reprogram		0		
	e. Rescissions		-27		
(U)	Adjustments to Budget Years Since FY 2001 PBR		0	6,417	
(U)	Current Budget Submit/FY 2002 PBR	0	2,840	9,324	TBD

(U) Significant Program Changes:

+ 6.417M was reprogrammed by CCN during the FY02 BES budget cycle from OPAF funding to RDTE

Page 2 of 11 Pages Ex

1	RDT&E BUDGET ITEM	JUSTIF	ICATIO	N SHE	ET (R-2	2A Exh	ibit)		DATE	June 2	2001		
	GET ACTIVITY Operational System Development				UMBER AND 7423F		d Comn	nunicatio	ons Sys	tems	PROJECT 4934		
	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		
4934	Tactical Air Control Party (TACP)	0	0	9,324	8,512	4,777	2,862	2,625	2,628	Continuing	ТВІ		
'FY0	3-FY07 budget numbers do not reflect the DoD str	ategic revie	w results'										
	Factical Air Control Party (TACP) provide numerous critical functions across the battlespace. They advise the warfighter on aircraft employment; coordinate and control aerospace operations and participate in battle planning. TACPs are equipped with various communications and support gear needed to interface with both ground forces and aircraft conducting air operations, aerospace command and control (C2) agencies; including AWACS and Intelligence, Surveillance and Reconnaissance (ISR) agencies. TACPs advise the ground commander and staff on the capabilities and use of aerospace power and assist them in planning for air support operations. TACPs provide United States Air Force (USAF) Tactics, Techniques and Procedures (TTP) expertise and a focal point for detailed integration of Close Air Support (CAS) with the fire and maneuver of ground forces. TACP tasks include requesting/coordinating aerospace missions, integrating aerospace and ground force plans, target marking and Suppression of Enemy Air Defenses (SEAD) control. To accomplish this, they use a mix of vehicle mounted communications coallets, Manpack Radios (MPRs), Laser Range Finders (LRF) and computers with associated informational software.												
(U) (U) (U)	FY 2000 (\$ in Thousands) \$0 No Activity \$0 Total	·											
(U)	FY 2001 (\$ in Thousands) \$0 No Activity												
(U) (U)	\$0 Total												

(U) B. Project Change Summary

Project 4934

Exhibit R-2A (PE 0207423F)

	RDT&E BU	DGET IT	EM JUS	TIFICAT	ION SH	EET (R-	2A Exhi	bit)		June	2001
	GET ACTIVITY - Operational System I	Developmo	ent			NUMBER AND 07423F		nications	Systems	PROJECT 4934	
(U)	C. Other Program Funding AF RDT&E Other APPN	Summary (\$ 5 FY 2000 Actual	in Thousand FY 2001 Estimate 17,195	Estimate 18,188	FY 2003 Estimate	FY 2004 Estimate 9,590	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete Continuing	<u>Total Cost</u> TBD
	OPAF D. Acquisition Strategy All major contracts within this										
(U) (U) (U) (U)	E. Schedule Profile VCS JTRS Compliant Radio Integration activities Start operational field testing 'X' Activity has not been com	•			1 2	FY 2000 2 3	4 1	<u>FY 2</u> 2	001 3 4		<u>7 2002</u> 3 4
F	Project 4934				Page 4 of	11 Pages				Exhibit R-2A (PE 0207423F)

	RDT&E PROC	RAM ELE	MENT/P	ROJECT C	OST BE	REAKDO	WN (R-3))	DATE	June 200)1
	GET ACTIVITY Operational System	Developme	nt			ER AND TITLE 23F Advan	ced Comr	nunicatio	ns Syste	ms	PROJECT 4934
(U)	A. Project Cost Breakdown	ı (\$ in Thousand	<u>ls</u>)				EV ⁽	2000	FY 20	n01	FY 2002
(U) (U) (U) (U) (U)	Engineering Support VCS JTRS Compliant Radio Travel Miscellaneous Total	Development					<u>F1.</u>	2000	<u>F1 20</u>	<u>101</u>	1,538 7,646 130 10 9,324
(U)	B. Budget Acquisition History	ory and Plannin	g Informatio	n (\$ in Thousand	<u>(s)</u>						
(U)	Performing Organizations: Contractor or	<u>Contract</u>	A1	D. C	Desired						
	Government Performing Activity	Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY 2000	Budget FY 2000	Budget FY 2001	Budget FY 2002	Budget to Complete	
	Product Development Organi ESC / CECOM Cluster I Support and Management Or	TBD	TBD	TBD	TBD	0	0	0	7,581	Continuing	TBD
	ESC Test and Evaluation Organiza	FFP	Varies			0	0	0	1,538	Continuing	TBD
	JITC / 605th TS / 46th TS					0 <u>Total Prior</u>	0 <u>Budget</u>	0 <u>Budget</u>	205 <u>Budget</u>	Continuing Budget to	TBD <u>Total</u>
	Subtotals Subtotal Product Developmes Subtotal Support and Manage Subtotal Test and Evaluation Total Project	ement				to FY 2000 0 0 0	FY 2000 0 0 0 0	FY 2001 0 0 0 0	FY 2002 7,581 1,538 205 9,324	Complete TBD TBD TBD TBD	Program TBD TBD TBD TBD
	·							·			
Р	roject 4934			Page	e 5 of 11 Pag	ges			Exhil	oit R-3 (PE 0)207423F)

DATE RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit) June 2001 PE NUMBER AND TITLE BUDGET ACTIVITY **PROJECT** 0207423F Advanced Communications Systems 07 - Operational System Development 1013 FY 2003 FY 2004 FY 2005 FY 2000 FY 2001 FY 2002 FY 2006 FY 2007 Cost to **Total Cost** COST (\$ in Thousands) Estimate Estimate **Estimate** Estimate Actual Estimate Estimate Estimate Complete 1013 Theater Deployable Communications (TDC) 0 2,624 0 0 0 0 0 0 0 23,139

'FY03-FY07 budget number do not reflect the DoD strategic review results'

(U) A. Mission Description

As clearly demonstared during Desert Shield/Desert Storm (DS/DS), 70's generation of deployable communications equipment is bulky, inflexible in design and does not meet todays's projected airlift avaiability or interoperability standards. TDC packages have reduced airlift requirements and is designed to support a wide range of operational scenarios during deployment/employment and sustainment operations. Combat communications units are equipped with TDC Integrated Communication Access Packages (ICAP), Lightweight Mulitband Satellite Terminals (LMST) and Network Management System /Base Information Protection (NMS/BIP)were deployed to Bosnia and Kosovo is support of theater air operations and deployed tactical air and mobility wings. LMST provided the reach back from the forward battle area back to the National Command Center and backbone theater communication required to operate in an austere environment to expedite dissemination of crittical war fighter information. TDC performance during these operations exceeded Air Force and CINC expectations

(U) FY 2000 (\$ in Thousands)

(U) \$0 No Activity

(U) \$0 Total

(U) <u>FY 2001 (\$ in Thousands)</u>

(U) \$680 Prepare TDC roadmap and acquisition 'way ahead'
 (U) \$1,838 Continue field interoperability and integration activities
 (U) \$106 Program Management Activity (travel, supplies, etc)

(U) \$2,624 Total

The following net transactions are not reflected in the FY01 program total: BTR = -929K and SBIR = -107K. These transactions are not reflected in other sections of the R-docs where an FY01 total is shown

(U) <u>FY 2002 (\$ in Thousands)</u>

(U) \$0 No Activity

(U) \$0 Total

(U) B. Project Change Summary

Project 1013 Page 6 of 11 Pages Exhibit R-2A (PE 0207423F)

	RDT&E BUI	OGET IT	EM JUS	TIFICAT	ION SH	EET (R-	2A Exhil	oit)		DATE	June 20	01
	GET ACTIVITY - Operational System D	evelopmo	ent			NUMBER AND 07423F		l Commu	nication	s System	ıs	PROJECT 1013
(U)	C. Other Program Funding S AF RDT&E Other APPN OPAF	FY 2000 Actual 68,033	in Thousand FY 2001 Estimate 74,664	S) FY 2002 Estimate 76,908	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate 97,290	FY 2007 Estimate 74,172	Cos Comp Continu	<u>olete</u>	<u>Total Cost</u> TBD
(U)	D. Acquisition Strategy The TDC contracts were award	led after full a	and open com	npetions. (Wh	nen restricted	l technologies	s are involved	l, foreign cor	mpetition is	not allowed))	
(U) (U) (U) (U)	E. Schedule Profile Complete Roadmap Complete 3600 integration acti Complete TDC "Way-ahead" * Denotes completed event	vities			1 2	FY 2000 2 3	4 1	FY 2/2		4 1 k	FY 20 2	<u>02</u> 3 4
L	Project 1013				Page 7 of	11 Pages				Exhibit F	R-2A (PE	0207423F)

	RDT&E PRO	GRAM ELE	MENT/P	ROJECT C	OST B	REAKDO	WN (R-3))	DATE	June 200	1
	ET ACTIVITY Operational System	n Developme	nt			er and title 2 3F Advan	iced Comi	municatio	ns Syster		PROJECT 1013
(U)	A. Project Cost Breakdow	vn (\$ in Thousand	ds)								
							<u>FY</u>	<u>2000</u>	FY 20		FY 2002
(U)	Software Support							0	80	2	0
(U)	Engineering Support							0	62	6	0
(U)	Integration Activities							0	1,09	00	0
(U)	Travel							0	10	0	0
(U)	Miscellaneous							0		6	0
(U)	Total							0	2,62	24	0
(U)	B. Budget Acquisition His	tory and Plannin	g Informatio	n (\$ in Thousand	<u>ls)</u>						
(U)	Performing Organizations	S:									
` '	Contractor or	Contract									
	Government	Method/Type	Award or	Performing	Project						
	Performing	or Funding	Obligation	Activity	Office	Total Prior	Budget	Budget	Budget	Budget to	<u>Total</u>
	Activity	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	to FY 2000	FY 2000	FY 2001	FY 2002	Complete	Progran
	Product Development Orga	nizations								_	
	Various					14,497	0	813		0	15,310
	Support and Management C	<u>Organizations</u>									
	MITRE	FFP	Oct 97	5,517	0	4,559	0	958		0	5,517
	In house contractor Spt	FFP	Varies	2,317	0	1,459	0	853		0	2,312
	Test and Evaluation Organi	zations									
						Total Prior	Budget	Budget	Budget	Budget to	<u>Total</u>
	Subtotals					to FY 2000	FY 2000	FY 2001	FY 2002	Complete	<u>Progran</u>
	Subtotal Product Developm	ent				14,497	0	813		0	15,310
	Subtotal Support and Manag	gement				6,018	0	1,811		0	7,829
	Subtotal Test and Evaluatio	n									
	Total Project					20,515	0	2,624		0	23,139
Pı	roject 1013			Page	e 8 of 11 Pa	ges			Exhib	it R-3 (PE 02	207423F)

	RDT&E BUDGET ITEM	JUSTIF	ICATIO	N SHE	ET (R-	2A Exh	ibit)		DATE	June :	2001
-	GET ACTIVITY Operational System Development				10MBER AND 17423F 1		d Comm	nunicatio	ons Sys	tems	PROJECT 2982
	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
2982	Anti-Jam Radio Communications	0	216	0	0	0	0	0	0	0	19,221
'FY0	3-FY07 budget number do not reflect the DoD stra	tegic reviev	v results'						•		
(U)	A. Mission Description The SINCGARS (Single Channel Ground and Adam is the primary mode of ECCM communication battlefield operations.		•								
(U) (U) (U)	FY 2000 (\$ in Thousands) \$0 No Activity \$0 Total										
(U) (U) (U) (U) (U)	FY 2001 (\$ in Thousands) \$116 Software update for resolution states and software update for resolution states are software update for resolution states and software update for resolution states are	ding	-	•	ARC 204 ur	its					
(U) (U) (U)	FY 2002 (\$ in Thousands) \$0 No Activity \$0 Total										
(U)	B. Project Change Summary										
(U)	Actual Est	2001 FY		FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2000 Estimat			Cost to Complete	<u>Total Cost</u>
(U) (U)	AF RDT&E Other APPN 0	0	0	0	0	0	()	0	0	0
Р	roject 2982			Page 9 of 1	1 Pages				Exh	ibit R-2A (F	PE 0207423F)

	RDT&E BUDGET ITEM JUSTIFICATION	FICATION SHEET (R-2A Exhibit)									DATE June 2001			
	GET ACTIVITY - Operational System Development				ND TITLE Advan	ced C	ommı	ınicatio	ns S	ystems		PROJ 298 2		
(U)	D. Acquisition Strategy The Anti-Jame (SINCGARS) is an Army lead program that was awarded	ed afte	r full and	open c	ompetion.									
(U)	E. Schedule Profile	1	<u>FY 2</u> 2	2000 3	4	1	<u>FY 2</u> 2	2 <u>001</u> 3	4	1	<u>FY 2</u> 2	2 <u>002</u> 3	4	
(U) (U) (U)	Investigate Anti-Jam Improvements Software Updates Support Fielding * Denotes completed event					*	* *							
P	Project 2982	Page	10 of 11	Pages					E	xhibit R-	2A (PE	02074	23F)_	

	RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3) DATE June 200												
	GET ACTIVITY Operational System	Developme	nt			er and title 2 3F Advan	ced Comr	nunicatio	ns Syster	ns	PROJECT 2982		
(U)	A. Project Cost Breakdown	ı (\$ in Thousand	<u>ls)</u>				FY 2	2000	FY 20	_	FY 2002		
(U) (U) (U) (U)	Software Support Engineering Support Miscellaneous Total							0 0 0 0	8	8 0 8	0 0 0		
(U)	B. Budget Acquisition Histor	ory and Plannin	g Information	ı (\$ in Thousand	<u>ls)</u>			U	21	O	U		
(U)	Performing Organizations: Contractor or Government Performing Activity Product Development Organi Support and Management Or	Contract Method/Type or Funding Vehicle izations	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY 2000	Budget FY 2000	Budget FY 2001	Budget FY 2002	Budget to Complete			
	MITRE ITSP	FFP FFP	Oct 97 Varies	401	0	0 19,005	0	160 56		0	160 19,061		
	Test and Evaluation Organiza <u>Subtotals</u> Subtotal Product Developme					Total Prior to FY 2000	Budget FY 2000	Budget FY 2001	Budget FY 2002	Budget to Complete			
	Subtotal Trodact Bevelopine Subtotal Support and Manage Subtotal Test and Evaluation	ement				19,005	0	216		0	19,221		
	Total Project					19,005	0	216		0	19,221		
D	roject 2982			Dogo	: 11 of 11 Pa	arres			Evhih	it R-3 (PE (0207423F\		