PE NUMBER: 0207423F

PE TITLE: Advanced Communications Systems 02/14/2002 13:52 - FY 2003 PBR (HQ USAF) Draft

	RDT&E BUDGET ITEM J	USTIFIC	CATION	SHEET	(R-2 E)	(hibit)		DATE		ry 2002			
	T ACTIVITY Operational System Development				R AND TITLE 3F Adva		l Communications Systems						
	COST (\$ in Thousands)	FY 2001 Actual	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	533	9,126	29,133	4,641	2,732	2,491	2,489	Continuing	TBD			
1013	Theater Deployable Communications (TDC)	317	0	0	0	0	0	0	0	20,832			
2982	Anti-Jam Radio Communications	216	0	0	0	0	0	0	0	23,139			
4934	Tactical Air Control Party (TACP)	0	9,126	29,133	4,641	2,732	2,491	2,489	Continuing	TBD			
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	Continuing	TBD			

All Joint Tactical Radio System (JTRS) RDT&E funds have been transferred to PE 0604280F, JTRS.

(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).

Page 1 of 13 Pages

Exhibit R-2 (PE 0207423F

02/14/2002 13:52 - FY 2003 PBR (HQ USAF) Draft

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

DATE

February 2002

Exhibit R-2 (PE 0207423F

BUDGET ACTIVITY

PE NUMBER AND TITLE

07 - Operational System Development

0207423F Advanced Communications Systems

(U) A. Mission Description Continued

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, 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. The increase FY03 can be attributed to an internal re-programming of Other Procurement, Air Force (OPAF) to RDTE funds required for cluster 1 TACP-M link-16 development

Joint Tactical Radio System (JTRS) is the Department of Defense family of software-defined radios, DOD anticipates this radio's technology will support the warfighter's information and transmission requirements reflected in Joint Vision 2020. JTRS's technology is essential to the Air Force's Tactical Data Link implementation. The Air Force is establishing an acquisition program office and pursuing the Service lead for the JTRS Airborne Cluster.

(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 2001</u>	FY 2002	FY 2003	Total Cost
(U)	Previous President's Budget	2,867	2,907	8,512	TBD
(U)	Appropriated Value	2,867	9,324		
(U)	Adjustments to Appropriated Value				
	a. Congressional/General Reductions	0			
	b. Small Business Innovative Research	-107			
	c. Omnibus or Other Above Threshold Reprogram	0			
	d. Below Threshold Reprogram	-2,200			
	e. Rescissions	-27			
(U)	Adjustments to Budget Years Since FY 2002 PBR		-198	20,621	
(U)	Current Budget Submit/FY 2003 PBR	533	9,126	29,133	TBD

RDT&E BUDGET ITEM JUSTIFICATION	-	DATE February 2002
BUDGET ACTIVITY 07 - Operational System Development	PE NUMBER AND TITLE 0207423F Advanced Communication	s Systems
(U) <u>C. Program Change Summary (\$ in Thousands) Continued</u>		
(U) <u>Significant Program Changes:</u> FY03 \$20.6 million increase is required for Cluster 1 TACP-M link-16 deve	elopment and system integration.	
	•	
Pag	ge 3 of 13 Pages	Exhibit R-2 (PE 0207423F)

DATE RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit) February 2002 BUDGET ACTIVITY PE NUMBER AND TITLE **PROJECT** 07 - Operational System Development 0207423F Advanced Communications Systems 1013 FY 2001 FY 2002 FY 2003 FY 2004 FY 2005 FY 2006 FY 2007 Cost to **Total Cost** COST (\$ in Thousands) Actual Estimate Estimate Estimate **Estimate** Estimate Estimate Complete Theater Deployable Communications (TDC) 1013 317 0 0 0 0 0 0 0 20,832

(U) A. Mission Description

As clearly demonstrated during Desert Shield/Desert Storm (DS/DS),' 70s generation of deployable communications equipment is bulky, inflexible in design and does not meet today's projected airlift availability or interoperability standards. Theater Deployable Communications (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 2001 (\$ in Thousands)

(U) \$100 Prepared TDC roadmap and acquisition 'way ahead'
 (U) \$111 Completed field interoperability and integration activities
 (U) \$106 Completed Program Management Activity (travel, supplies, etc)

(U) \$317 Total

(U) FY 2002 (\$ in Thousands)

(U) \$0 No Activity (U) \$0 Total

(U) FY 2003 (\$ in Thousands)

(U) \$0 No Activity (U) \$0 Total

(U) B. Project Change Summary

Project 1013 Page 4 of 13 Pages Exhibit R-2A (PE 0207423F)

	RDT&E BUDG	SET ITEN	I JUSTIFI	CATION	SHEET (F	R-2A Ext	nibit)		DATE Februar	y 2002
	GET ACTIVITY - Operational System De	velopmen	t		PE NUMBER 0207423		ed Commi	unications	s Systems	PROJECT 1013
	C. Other Program Funding Sur	mmary (\$ in 7 FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cos
` /	AF RDT&E Other APPN OPAF	74,664	76,373	122,377	165,554	122,764	96,329	73,295	Continuing	TBD
(U)	D. Acquisition Strategy The TDC contracts were awarded	l after full and	open competit	ions. (When re	estricted techno	logies are inv	olved, foreign	competition i	s not allowed)	
(U)	E. Schedule Profile			1	FY 2002	<u>1</u> 3 4	<u>FY</u> 1 2	2002 3	<u>FY</u> 1 1 2	2003 3 4
(U) (U) (U)	Complete 3600 integration activit Complete TDC "Way-ahead" * Denotes completed event	ties				* *				
F	Project 1013			Pag	e 5 of 13 Pages				Exhibit R-2A (P	E 0207423F)

	RDT&E PRO	GRAM EL	EMENT/PF	ROJECT C	OST BR	EAKDO	WN (R-3)	DATE F e	002		
	GET ACTIVITY Operational System	n Developm	nent			R AND TITLE 3F Advan	ced Comi	ns Syster	ns	PROJECT 1013	
(U)	A. Project Cost Breakdov	vn (\$ in Thous	ands)								
							FY 2		FY 200		FY 2003
(U)	Software Support							110		0	0
(U)	Engineering Support							111		0	0
(U)	Travel							96		0	0
(U)	Total							317	(0	0
(U)	B. Budget Acquisition His	tory and Plan	ning Information	n (\$ in Thousand	<u>ds</u>)						
(U)	Performing Organizations	<u>s:</u>									
	Contractor or	Contract									
	Government	Method/Ty	<u>pe Award or</u>	<u>Performing</u>	Project						
	Performing	or Funding	Obligation	<u>Activity</u>	Office Property of the Control of th	Total Prior	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	Budget to	<u>Total</u>
	<u>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	to FY 2001	FY 2001	FY 2002	FY 2003	Complete	<u>Program</u>
	Product Development Orga	<u>nizations</u>									
	Various					14,497	100			0	14,597
	Support and Management C	<u>Organizations</u>									
	MITRE	FFP	Oct 97	5,517	0	4,559	105			0	4,664
	In house contractor Spt	FFP	Varies	2,317	0	1,459	112			0	1,571
	Test and Evaluation Organi	<u>zations</u>									
						Total Prior	Budget	Budget	<u>Budget</u>	Budget to	<u>Total</u>
	Subtotals					to FY 2001	FY 2001	FY 2002	FY 2003	Complete	
	Subtotal Product Developm					14,497	100			0	14,597
	Subtotal Support and Mana	_				6,018	217			0	6,235
	Subtotal Test and Evaluation	on									
	Total Project					20,515	317			0	20,832
Р	roject 1013			Page	e 6 of 13 Pag	es			Exhibi	t R-3 (PE 0)207423F)

	RDT&E BUDGET ITEM JU	STIFIC	ATION S	SHEET ((R-2A E	xhibit)		DATE		ry 2002
	GET ACTIVITY - Operational System Development				R AND TITLE 3F Adva		mmunica	ations Sy	stems	PROJECT 2982
	COST (\$ in Thousands)	FY 2001 Actual	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	216	0	0	0	0	0	0	0	23,139
(U)	A. Mission Description The SINCGARS (Single Channel Ground and Airbo communications and is the primary mode of ECCM maneuver units and joint battlefield operations.		•	-	•					
(U) (U) (U) (U) (U)	FY 2001 (\$ in Thousands) \$116	ding			RC 204 units	5				
(U) (U) (U)	FY 2002 (\$ in Thousands) \$0 No Activity \$0 Total									
(U) (U) (U)	FY 2003 (\$ in Thousands) \$0 No Activity \$0 Total									
(U)	B. Project Change Summary									
(U) (U)	AF RDT&E	2002 stimate	FY 2003 Estimate	FY 2004 Estimate	FY 2003 Estimat	te <u>Estim</u>	nate Es	2007 timate	Cost to Complete	Total Cost
(U) _	Other APPN 0	0	0	0	()	0	0	0	0
	Project 2982		Page	7 of 13 Page	es			Ex	(nibit K-2A ((PE 0207423F)

	RDT&E BUDGET ITEM JUSTIFICATION	ON S	HEET	(R-2	2A Ex	hibit)			DATI		ruary	2002	
	OGET ACTIVITY - Operational System Development		PE NUME 02074			ced C	ommu	ınicatio	ons S	ystems	i	PROJ 298 2	
(U)	D. Acquisition Strategy The Anti-Jam (SINCGARS) is an Army lead program that was awarde	ed after i	full and o	pen cor	npetition.								
		1 **	FY 2 2 * *	2 <u>001</u> 3	4	1	<u>FY</u> 2	2002 3	4	1	FY 2 2	2 <u>003</u> 3	4
	Project 2982	Page	8 of 13 Pa	ages					E	xhibit R-2	2A (PE	02074:	23F)

	RDT&E PROC	GRAM ELE	MENT/PF	ROJECT CO	OST BR	EAKDO	WN (R-3)	DATE F e	002		
	GET ACTIVITY Operational System	Developme	nt			ER AND TITLE 3F Advan	ced Comi	ns Syster	ns	PROJECT 2982	
(U)	A. Project Cost Breakdow	<u>n (\$ in Thousanc</u>	<u>ls</u>)								
							<u>FY 2</u>		FY 200		FY 2003
(U)	Software Support							98		0	0
(U)	Engineering Support							80		0	0
(U)	Miscellaneous Total							38 216		0	0
(U)	Total							210		0	Ü
(U)	B. Budget Acquisition Hist	tory and Plannin	g Information	ı (\$ in Thousand	<u>s)</u>						
(U)	Performing Organizations Contractor or Government	Contract Method/Type	Award or	Performing	<u>Project</u>						
	Performing	or Funding	Obligation	<u>Activity</u>	<u>Office</u>	Total Prior	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	Budget to	<u>Total</u>
	Activity	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	to FY 2001	FY 2001	FY 2002	FY 2003	Complete	<u>Program</u>
	Product Development Organ										
	Support and Management O MITRE	FFP	Oct 97	401	0	0	160			0	160
	ITSP	FFP FFP	Varies	401	U	22,923	160 56			U	22,979
	Test and Evaluation Organiz		varies			22,923	30				22,919
	Subtotals					Total Prior to FY 2001	Budget FY 2001	Budget FY 2002	Budget FY 2003	Budget to Complete	<u>Total</u> <u>Program</u>
	Subtotal Product Developme Subtotal Support and Manag	gement				22,923	216			0	23,139
	Subtotal Test and Evaluation Total Project	n				22,923	216			0	23,139
Р	roject 2982			Page	9 of 13 Pag	ges			Exhib	it R-3 (PE 0	207423F)

RDT&E BUDGET ITEM JU	ISTIFIC	ATION S	SHEET ((R-2A E	xhibit)		DATE	DATE February 2002			
BUDGET ACTIVITY 07 - Operational System Development	PE NUMBER AND TITLE 0207423F Advanced Communications Systems							ркојест 4934			
COST (\$ in Thousands)	FY 2001 Actual	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	9,126	29,133	4,641	2,732	2,491	2,489	Continuing	TBD		

(U) A. Mission Description

Tactical 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 pallets, Manpack Radios (MPRs), Laser Range Finders (LRF) and computers with associated informational software.

The Air Force fully supports the Joint Tactical Radio System (JTRS) procurement acquisition strategy and is a participant in the Army led JTRS Cluster 1 initiative. The AF's significant FY03 funding increase supports needed for the development of an AF unique requirement within this Cluster. One of the JTRS cluster ground rules is a service must fund any Service unique requirements. The AF's requirement for Link-16 capability within the Cluster 1 radio is considered Service unique, therefore the AF will contribute \$19.8M to the Army for TACP-M JTRS Link-16 vehicular-mounted communication system development (none KPP) and system integration software.

(U) FY 2001 (\$ in Thousands)

(U) \$0 No Activity

(U) \$0 Total

(U) FY 2002 (\$ in Thousands)

(U) \$6,419 Begin developing JTRS compliant TACP Vehicular Communication System (VCS) hardware in conjunction with Army's JTRS Cluster I

acquisition strategy.

(U) \$2,502 Software development and system integration begins.

(U) \$205 Operational and interoperability test planning.

Project 4934 Page 10 of 13 Pages Exhibit R-2A (PE 0207423F

	RDT&E B	SUDGET ITEM	JUSTIF	CATION	SHEET (R-2A Ext	nibit)		DATE Fek	ruary 2	2002
	GET ACTIVITY Operational System	m Develonmeni	•			R AND TITLE	ed Comm	unications	System	s	PROJECT 4934
(U)	A. Mission Description	•	<u> </u>		0201420	, , , , , , , , , , , , , , , , , , ,	,	armounione	, cycloin		1001
(U) (U)	FY 2002 (\$ in Thousands \$9,126 To) Continued									
(U) (U) (U) (U) (U)	\$9,245 So	ontinue JTRS complia ategy. ftware development a perational and interope	nd System into	egration.	ication Syster	n (VCS) hardv	vare in conjunc	tion with Arm	ny's JTRS Cl	uster I acc	uisition
(U)	B. Project Change Summ \$19.8M in funding was relink-16 development. The	callocated internally v				•			o support Cl	uster 1 TA	СР-М
(U)	C. Other Program Fund	ing Summary (\$ in T FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	<u>Cost</u> <u>Comp</u>		Total Cost
(U) (U)	AF RDT&E Other APPN	19,695	18,062	12,050	11,693	6,738	18,933	19,366	Continui	ng	TBD
(U)	D. Acquisition Strategy All major contracts within	this Program Elemen	nt and BPACS	will be awarde	ed after full ar	nd open compe	etition				
(U)	E. Schedule Profile			1	<u>FY 200</u>	<u>)1</u> 3 4	<u>FY</u> 1 2	<u>2002</u> 3 4	. 1	<u>FY 20</u>	0 <u>3</u> 3 4
(U) (U) (U)	VCS JTRS Cluster I RFP VCS JTRS Cluster I Contr VCS JTRS Radio Develop Integration activities Start operational test plant	ract Award oment begins		1	2	J +	X X	X X X	X	2	J #
Р	roject 4934			Page	11 of 13 Page	es			Exhibit R	-2A (PE ()207423F)

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)									DATE February 2			
UDGET ACTIVITY 7 - Operational System Development		PE NUM 02074		TITLE Advan	ced Co	ommu	nicati	ons S	ystem	ıs	PRO. 493	JECT 84
J) E. Schedule Profile Continued		FY	<u>2001</u>			FY 2	2002			FY	<u> 2003</u>	
'X' Activity has not been completed	1	2	3	4	1	2	3	4	1	2	3	4
1												
Project 4934	Расе	: 12 of 13 I	Pages					F	xhibit F	R-2A (PI	E 02074	123F

									DATE		
	RDT&E PROG	RAM ELE	MEN I/PF	ROJECT CC	SIBR	REAKDO	WN (R-3)	February 2002			
BUDO	GET ACTIVITY				PE NUMBER AND TITLE						PROJECT
07 -	Operational System I	Developme	nt		0207423F Advanced Communication					ms	4934
(U)	A. Project Cost Breakdown	(\$ in Thousand	de)								
(0)	A. I Toject Cost Dreakdown	(\$ III THOUSAIN	<u>15)</u>				FY	2001	FY 20	02	FY 2003
(U)	Engineering Support						<u> </u>	<u> </u>	2,7		2,929
(U)	VCS JTRS Compliant Radio	Development							3,30		16,558
(U)	Software development and Sy		n						2,70		9,316
(U)	Travel								15	50	130
(U)	Test								20)5	200
(U)	Total								9,12	26	29,133
(U)	B. Budget Acquisition Histo	rv and Plannin	g Information	n (\$ in Thousands	s)						
(U)	Performing Organizations:	•		•	_						
(0)	Contractor or	Contract									
	Government	Method/Type	Award or	Performing	Project						
	Performing	or Funding	Obligation	Activity	Office	Total Prior	Budget	Budget	Budget	Budget to	Total
	Activity	Vehicle	Date	EAC	EAC	to FY 2001	FY 2001	FY 2002	FY 2003	Complete	Program
	Product Development Organiz										
	ESC / CECOM Cluster I	CPAF	TBD	TBD	TBD	0	0	3,300	16,658	Continuing	TBD
	ESC Sys Int Software Dev't	TBD	TBD	TBD	TBD			2,700	9,216	Continuing	TBD
	Support and Management Org	ganizations								_	
	ESC	FFP	Varies			0	0	2,921	3,059	Continuing	TBD
	Test and Evaluation Organiza	<u>tions</u>									
	JITC / 605th TS / 46th TS					0	0	205	200	Continuing	TBD
						Total Prior	<u>Budget</u>	<u>Budget</u>	Budget	Budget to	<u>Total</u>
	Subtotals					to FY 2001	FY 2001	FY 2002	FY 2003	Complete	<u>Program</u>
	Subtotal Product Developmen					0	0	6,000	25,874	TBD	TBD
	Subtotal Support and Manage	ment				0	0	2,921	3,059	TBD	TBD
	Subtotal Test and Evaluation					0	0	205	200	TBD	TBD
	Total Project					0	0	9,126	29,133	TBD	TBD
1											
Р	roject 4934			Page 1	13 of 13 Pa	ges			Exhib	oit R-3 (PE 0	207423F)