BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** C3 COUNTERMEASURES

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$9,422	$17,242	$11,634	$11,874	$12,063	$12,160	$12,185	$12,482

Description:

U.S. military forces operate in an information age where the need for precise, instantaneous intelligence is increasing and expanding across the entire spectrum of military operations. However, this increasing technical sophistication leads to a dependency on technology that, in turn, may represent potentially crippling vulnerabilities. The Air Force (AF) addresses this vulnerability through Information Operations (IO). IO includes those actions taken to gain, exploit, defend, and attack information and information systems and includes two facets, information-in-warfare and information warfare (IW). IW consists of actions conducted to attack an adversary's information and information systems while defending one's own.

Information warfare includes the integrated application of Electronic Warfare (EW), Psychological Operations (PSYOP), military deception, physical attack, computer network attack, counterintelligence, counterdeception, computer network defense, counterpropaganda, information assurance, and operations security (OPSEC). The Air Intelligence Agency (AIA), Air Force Information Warfare Center (AFIWC), 67th Information Operations Wing, and Joint Information Operations Center (JIOC), all located in San Antonio, TX, are responsible for IW and Command and Control Warfare (C2W) operations supporting joint, air component, and/or national objectives. Procurement funds in this program provide the equipment (computer, communications, and unique intelligence and analysis systems) vital to accomplishing and supporting those organizations' IW and C2W missions. Elements of the program are addressed individually below.

1. AF INFORMATION WARFARE CENTER (AFIWC) SUPPORT: AFIWC is the Center of Excellence creating the information warfare advantage for combatant forces through exploring, developing, applying, and transitioning counter-information technology, strategy, tactics, and data to control the information battlespace. Funds procure equipment and tools for the following projects:

a. AUTOMATIC DATA PROCESSING (ADP) UPGRADES: Funding replaces basic AFIWC internal computer infrastructure and network requirements for administrative and management functions.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** C3 COUNTERMEASURES

Description (continued):

b. MODELING AND SIMULATION: No FY04 funding is requested.

c. COMMAND AND CONTROL WARFARE (C2W) OPERATIONS SUPPORT: Funds procure equipment to maintain the C2W Operational Support System (CONSTANT WEB) which is an approved migration database for C2W operations--a proven capability in Desert Storm/Desert Shield and recent operations in Southwest Asia, Bosnia, and Kosovo.

d. INFORMATION WARFARE (IW): Funds procure computer and computer related equipment to support the integration of IW decision aids into combat planning and execution cycles.

e. OFFENSIVE IW: Funding continues the procurement of computer, computer related, memory storage, local and long-haul communications, contractor information system specialties, infrastructure, and unique intelligence and analysis equipment required to support IW analysis which delivers timely AF IW capabilities for training (including Distributed Mission Analysis), EW systems capabilities analysis, and combat operations. This funding begins a scaled evolution of processing power in an attempt to maintain compatibility with the rest of the Distributed Mission Training (DMT) community and the latest changes in simulator systems. This process provides sufficient computation capability to perform high-fidelity simulations required by DMT simulators. Training simulations used by the AFIWC to support large-scale exercises (BLUE FLAG, Roving Sands, Joint Expeditionary Force Experiment, etc.) will also be able to maintain currency with the latest developments in the exercise simulation environment. Additionally, these procurements are vital for the exploration, development, and fielding of reach-back capabilities. They also facilitate migration of AF combat capabilities to Numbered Air Forces and IO personnel responsible for the integration and execution of tools necessary to gain, exploit, defend, and attack information and information systems.

f. ELECTRONIC WARFARE INTEGRATED REPROGRAMMING (EWIR): FY04 funds procure computer equipment and analytical tools to conduct detailed analyses in support of current operations and the acquisition community (to include test and evaluation). These analyses provide the end user with a means of understanding the performance of their systems in hostile threat environments, directly impacting the survivability of combat-coded United States Air Force (USAF) aircraft and aircrews. The analyses are routinely used to support operational mission planning; tactics, techniques, and procedures (TTP) development; and acquisition decisions.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** C3 COUNTERMEASURES

Description (continued):

g. COMPUTER NETWORK DEFENSE (CND) SUPPORT: FY04 funds CND which provides Defensive Counter Information capability to protect AF computer systems and their information against unauthorized intrusion, corruption, and/or destruction, be it deliberate or unintentional. This program contains AF Information Warfare Center (AFIWC) and 67th Information Operations Wing (67th IW) programs and initiatives to protect AF computers, whether they are stand-alone, networked, telephone switches, or embedded in weapon systems, and provide Information Warfare (IW) threat predictions for AF systems.

h. IO TRAINING EQUIPMENT: In FY03, Congress added $2M from the Cost of War Account for Information Warfare Support. Reference Appropriations Conference Report 107-732, October 9, 2002, page 218. These FY03 funds provide for an initial Unclassified but Sensitive Internet Protocol Router Network (NIPRNET) capability within IO classrooms for 50+ students and begin population of NIPRNET, National Security Agency Network (NSANET), Secret Internet Protocol Router Network (SIPRNET), and Joint Worldwide Intelligence Communications System (JWICS) machines within the permanent party area for +50 personnel. Robust and reliable capabilities in both data systems and audio visual system areas are required to conduct advanced-level IO training for students and IO research for permanent party personnel. This initiative will also provide initial NIPRNET, NSANET, SIPRNET, and JWICS machines and an audiovisual infrastructure within the new MILCON building addition. These systems will ensure AF operational units responsible for IO/IW (Information Operations Division (IOD), Numbered AF (NAF) IW Flights, IW Support Team (IWST), AF Computer Emergency Response Team (AFCERT), Network Operations Support Centers (NOSCs), Air Operations Center (AOC), Command and Control Training and Innovation Group (C2TIG) Warrior School, etc.) receive training across a full spectrum of connectivity to be proficient in IW/IO disciplines. It also provides permanent party personnel responsible for researching and building new lesson materials a full spectrum of connectivity to allow for rapidly transitioning training materials, successful concepts, innovations, applications, and tools to students. No FY04 funds are requested.

2. 67th INFORMATION OPERATIONS WING SUPPORT: The 67th Information Operations Wing, Lackland AFB TX, conducts AIA's global mission. The wing directs the planning of multi-source intelligence, electronic combat services, information warfare, and communications security. It assists Air Force components in the development of airpower concepts, conducting exercises and employment of AIA forces in contingencies, low-intensity conflict, and special operations.

a. COMMUNICATIONS SECURITY (COMSEC) ASSESSMENT SUPPORT: No FY04 funding is requested.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** C3 COUNTERMEASURES

Description (continued):

b. TELECOMMUNICATIONS MONITORING AND ASSESSMENT PROGRAM (TMAP): FY04 funding provides systems equipment to monitor digital voice, data, facsimile, and video in an integrated package. Specifically, these funds will be used to complete the analog-to-digital switch conversion, upgrade existing monitoring and analysis equipment at three ESSAC locations to handle increased taskings, acquire full remoting capability to reduce dependence on deployed ESSA Monitoring Teams, upgrade computer-to-computer monitoring capability, capture Blackberry and Pager transmissions, and purchase COTS equipment to monitor the ever-increasing government cell phone usage.

c. COMPUTER NETWORK DEFENSE: In FY03, Congress added $2M from the Cost of War Account for Computer Network Defense. Reference Appropriations Conference Report 107-732, October 9, 2002, page 218. FY04 funds will be used by the AF Computer Emergency Response Team to upgrade aging equipment. Procurement initiatives include:

1) Server Consolidation - Funds will buy disk arrays, providing enough storage to archive at least 3 months of intrusion alert data. With the continuous growth in AF Internet traffic and associated intrusion alerts, the current system is inadequate to the task of storing the required volume of data.

2) Virtual Private Network (VPN) - Funds will buy VPN encryption devices to bring the existing configuration in line with AF VPN standards. VPN provides secure network connectivity between all deployed Automated Security Incident Measurement (ASIM) and Cisco Secure Intrusion Detection System (CSIDS) sensors and the AFCERT. Sensors are deployed at almost every AF installation worldwide, sending unclassified, but very sensitive data back to the AFCERT almost continuously. A robust and efficient VPN capability ensures sensitive intrusion alert data remains protected at all times.

3) Technology Refresh - Funds buy SunBlade 150s, SunBlade 2000s, 18" flat panel displays and Dell 2650 CPUs. Both the SunBlade 150 and 2000 are analyst workstations that interface with the Common Intrusion Detection Director System (CIDDS) database. The 150s are single processor stations and will be used to make the standard query language (SQL) requests. The 2000s can have up to 4 processors and will be used to control the servers. The SunBlades will replace existing systems that are now too slow to keep up with the increasing

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** C3 COUNTERMEASURES

Description (continued):

AFCERT workload and are experiencing increased failure rates while maintenance is becoming difficult. These systems directly support the maintenance and operations management of sensors deployed worldwide in support of both fixed and contingency operations. Flat panel displays are needed to reduce the space required for each analyst's workstation. Increasing workload led to increased manning without an increase in available workspace. Dell systems will replace existing ODS systems, the original ASIM 3.0 sensor hardware, and standardize the deployed ASIM population. ODS systems are increasingly unable to handle traffic loads generated, frequently resulting in the loss of valuable data and leaving AF assets either unavailable or unguarded.

3. JOINT INFORMATION OPERATIONS CENTER (JIOC): The JIOC provides joint force commanders (combatant commanders, subordinate unified commanders, and joint task force commanders), service component commanders, and functional component commanders direct Joint IO support. The JIOC supports the integration of constituent elements of IO throughout planning and execution phases of operations and provides Joint IO planning, including options for Defensive IO and predictive analysis to US forces involved in contingency operations and worldwide exercises. The JIOC also provides enhanced training of battlefield commanders through the use of IO analysis tools. The JIOC analyzes and correlates all-source data on both friendly and threat forces. This data is used as input into sophisticated IO computer models, simulations, and planning analysis tools. These high-fidelity simulations provide field commanders with targeting options and composite analytic pictures. This analysis results in complete assessment of IO options and effectiveness predictions. Funding provides continuing upgrades to multi-processor systems to improve performance and achieve interoperability with virtual simulations. Additional processors and storage capacity must be added to JIOC analysis networks and systems to improve performance of IO computer models. Workstations, which deploy with combatant commander support teams and provide on-scene analytical support as well as reach-back capability, are replaced approximately every three years. Funding also provides for deployable field support systems, equipment, and training for detecting, identifying, locating, targeting, exploiting, and countering signals in support of combatant commanders, national agencies, exercises, and advanced concept technology demonstrations (ACTD) vulnerability assessments.

a. ELECTRONIC COMBAT (EC) ANALYST NETWORK: Funding provides continuing upgrades to multi-processor systems to improve performance and achieve interoperability with virtual simulations. Additional processors and storage capacity must be added to JIOC analysis networks and systems to improve performance of IO computer models.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** C3 COUNTERMEASURES

Description (continued):

b. COMBAT ANALYSIS SYSTEM: Funding provides field commander support systems, including automated support systems for IO training.

c. FIELD COMMANDERS SUPPORT: Funding provides for workstations, which deploy with combatant commander support teams and provide on-scene analytical support as well as reach-back capability (replaced every three years).

d. COMPUTER TRAINING SIMULATION: Funding provides for computer hardware, which hosts IO planning analysis tools used for training at centers worldwide.

e. IO RED TEAM SUPPORT: Funding provides for deployable field support systems, equipment, and training for detecting, identifying, locating, targeting, exploiting, and signals in support of combatant commanders, national agencies, exercises, and ACTD vulnerability assessments.

A reduction or loss in funding would severely hamper support to joint force, service, and functional component commanders in C2W/IO support. Specifically, the lack of funding would result in the following: (1) Inability to replace computer systems to host training simulations in gaming centers worldwide; (2) Extremely limited upgrades to multi-processor which would degrade performance and significantly delay interoperability with virtual simulations; (3) Severe restriction in the use of IO computer models for field Commander Targeting Support and IO Red Team vulnerability assessments; (4) No replacement of combatant commander support team deployable workstations with state-of-the-art technology and equipment; and (5) A dramatic restriction in Protect/Defense support.

Items requested in FY04 are identified on the following P-40a and are representative of items to be procured. Items procured during execution may change based on critical equipment needed to support current Air Force mission requirements.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** C3 COUNTERMEASURES

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		QTY.	COST	QTY.	COST	QTY.	COST	QTY.	COST
1. AFIWC SUPPORT			${6,140}		${10,623}		${8,455}		${8,539}
A. ADP UPGRADES	A		$287		$288		$298		$305
B. MODELING AND SIMULATION	A		$636						
C. C2W OPS SUPPORT	A		$334		$333		$335		$340
D. INFORMATION WARFARE	A				$2,150		$2,633		$2,682
E. OFFENSIVE IW	A		$4,883		$4,512		$1,705		$1,720
F. EWIR	A				$1,358		$1,397		$1,412
G. COMPUTER NETWORK DEFENSE SUPPORT	A						$2,087		$2,080
H. IO TRAINING	A				$1,982				
2. 67TH INFO OPS WING SUPPORT (1) (2)			${1,080}		${3,478}		${1,466}		${1,567}
A. COMSEC ASSESSMENT SPT	A		$334						
B. TMAP	A		$746		$1,496		$1,126		$1,150
C. COMPUTER NETWORK DEFENSE	A				$1,982		$340		$417
3. JIOC (1) (2)			${2,202}		${3,141}		${1,713}		${1,768}
A. EC ANALYST NETWORK	A		$420		$603		$321		$337
B. COMBAT ANALYSIS SYSTEM	A		$1,290		$1,809		$1,000		$1,020
C. FIELD COMMANDERS SUPPORT	A		$130		$190		$106		$110
D. COMPUTER TNG SIM	A		$232		$349		$186		$201
E. IO RED TEAM SUPPORT	A		$130		$190		$100		$100

	P-1 ITEM NO 54		PAGE NO: 122		Page 1 of 2

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** C3 COUNTERMEASURES

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		QTY.	COST	QTY.	COST	QTY.	COST	QTY.	COST
Totals:			$9,422		$17,242		$11,634		$11,874

Remarks:

1. Multiple quantities and/or unit costs associated with C3 Countermeasures equipment.
2. The AIA is the primary contracting office (PCO) for these Countermeasures items. Multiple contracts with varying award and delivery dates exist to procure the various types of equipment throughout the fiscal years. Typical contractors involved are: Silicon Graphics, Mountain View CA; Loral, Las Vegas NV; Raytheon, Galeta CA; L3 Communications Corp, Camden NJ; and Southwest Research Inc (SWRI), San Antonio TX.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** GLOBAL COMBAT SUPPORT SYSTEM - AIR FORCE FAMILY OF SYSTEMS

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$12,746	$12,668	$17,147	$16,023	$17,259	$17,606	$6,771	$6,882

Description:

Global Combat Support System - Air Force Family of Systems (GCSS-AF FoS) includes standard Air Force-wide base level combat support applications to provide the warfighters with a "one update-one time" processing environment. These systems provide a key support foundation to the Air Force's global engagement strategy and capabilities.

1. CARGO MOVEMENT OPERATIONS SYSTEM (CMOS): Capable of supporting routine and surge requirements, CMOS automates base shipping and deployment processes, produces movement documentation, and furnishes timely information to Major Commands (MAJCOMs), transportation component commands, and the joint deployment community. CMOS not only serves as the AF's base level system for command and control of cargo and passenger movements, but contributes significantly to the Global Transportation Network (GTN), the Department of Defense system for in-transit visibility. FY04 funds provide Radio Frequency (RF) Data Collection technology hardware to enable current hand-held terminals to scan 2-Dimensional (2-D) bar-coded shipping documents and transmit the data electronically via RF to the CMOS server for processing. The CMOS program also provides funding for other Automatic Identification Technology (AIT) hardware such as optical memory cards, RF identification tags, common access cards, and printers used for 2-D barcode labels. Funding is also allocated for implementation of the newly developed deployable/stand-alone CMOS capability to be fielded via deployable laptops and printers.

2. WING AUTOMATIC DATA PROCESSING (ADP) SUPPORT (WAS): This program provides for Life Cycle Management of Standard Base Level Computer (SBLC) systems at AF installations worldwide. During both peace and wartime contingencies, all active duty AF bases are sustained and maintained with hardware/software tools and services. This ensures effective communications between users and mainframe computers. Furthermore, support extends to flight line maintenance, supply, accounting and finance, budget, and personnel service systems. Additionally, Air National Guard, AF Reserve installations, and Defense Enterprise Computing Centers (DECCs) receive this same support to ensure a common operating environment of interoperability. This program maintains base computer capabilities but does not develop

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** GLOBAL COMBAT SUPPORT SYSTEM - AIR FORCE FAMILY OF SYSTEMS

Description (continued):

new systems or application code. FY04 funding continues to provide hardware upgrades and communications interfaces.

3. FUELS AUTOMATED MANAGEMENT SYSTEM (FAMS): FAMS provides a data collection/information management system on fuel systems using state-of-the-art microcircuit technology to automate the management and control of vital petroleum support operations. FAMS provides numerous mission-related benefits, including: (1) assures inventory visibility of this critical war fighting commodity; (2) reduces accounting error rates; (3) mitigates personnel and property risks by eliminating fuel spills; (4) reduces USAF fuels management manpower; and (5) provides accurate data to support war planning. One hundred thirteen (113) manpower positions were previously taken out of the AF budget based on projected FAMS savings. FAMS eliminates much of the paperwork and manual input required for current fuels management processes, providing total asset visibility while improving cash flow, credit management, and permitting just-in-time deliveries of fuel supplies. The system consists of three hardware components that collect fuel transaction and inventory data at base level for service stations (Automated Fuels Service Stations (AFSS)), storage tanks (Automatic Tank Gauging (ATG) devices), and aircraft refueling systems (Automated Data Collection/Fuel Dispensing System (ADC/FDS) point of sale (POS) devices). In addition, FAMS provides an information management system that supports all users. At the AF level, FAMS enhances the aviation fuel tracking/billing system. FY04 funding continues the installation of 308 ATG devices and 3,170 ADC/FDS POS devices worldwide.

4. FINANCIAL INFORMATION RESOURCE SYSTEM (FIRST): FIRST is the foundation for the AF's Planning, Programming, and Budgeting System (PPBS). The system, which will be developed using the spiral development approach and integrated onto the GCSS-AF architecture, includes, for example: Acquire Accounting, Budget Formulation, Funds Management, Budget Execution, and Cost Modeling. Funds in FY04 will procure hardware for deployment of the FIRST application, an effort aimed at providing an integrated, modern, and seamless financial management system that enables authorized users from the Air Staff to base level to plan, program, and execute their budgets. Additionally, FIRST will continue development of legacy systems' functionality. Previously, FIRST funding was reported in Budget Program Activity Code (BPAC) 834010 General Information Technology, P-1 Line 48.

5. INTEGRATED MAINTENANCE DATA SYSTEM (IMDS): IMDS is an integrated information system for aircraft maintenance and communications-electronics. It will replace numerous legacy systems and interface with many others, cutting across multiple functions to provide maintainers the ability to obtain required information supporting their daily maintenance activities. Managers and commanders will be

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** GLOBAL COMBAT SUPPORT SYSTEM - AIR FORCE FAMILY OF SYSTEMS

Description (continued):

able to retrieve real-time equipment status from a single system instead of several. All IMDS data will be stored and processed via a central server located within the Defense Information Systems Agency. FY04 funding purchases computer hardware, local area networks and servers, and software licenses in support of testing and fielding of the IMDS. Previously, IMDS funding was reported in BPAC 834010 General Information Technologies, P-1 Line 48.

Items requested in FY04 are identified on the following P-40a and are representative of items to be procured. Items procured during execution may change based on critical equipment needed to support current Air Force mission requirements.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** GLOBAL COMBAT SUPPORT SYSTEM - AIR FORCE FAMILY OF SYSTEMS

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		QTY.	COST	QTY.	COST	QTY.	COST	QTY.	COST
1. CMOS	A		$467		$1,612		$888		$766
2. WING ADP (WAS)	A		$3,063		$3,113		$3,125		$2,972
3. FAMS	A		$9,216		$7,943		$8,700		$8,965
4. FIRST (1)	A						$1,882		$729
5. IMDS (1)	A						$2,552		$2,591
Totals:			$12,746		$12,668		$17,147		$16,023

Remarks:

1. FIRST and IMDS funds were previously reported in BPAC 834010, General Information Technology prior to FY04.

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** GLOBAL COMBAT SUPPORT SYSTEM - AIR FORCE FAMILY OF SYSTEMS

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
1. CMOS (1)									
FY02			AFMC/SSG	OPT/FP (2)	MULTIPLE	JUN 02	JUL 02		
FY03			AFMC/SSG	OPT/FP (2)	MULTIPLE	JUN 03	AUG 03	Y	
FY04			AFMC/SSG	OPT/FP (2)	MULTIPLE	JUN 04	AUG 04	Y	
FY05			AFMC/SSG	OPT/FP (2)	MULTIPLE	JUN 05	AUG 05	Y	
2. WING ADP (WAS) (1)									
FY02			AFMC/SSG	OPT/FP (3)	MULTIPLE	OCT 01	NOV 01		
FY03			AFMC/SSG	OPT/FP (3)	MULTIPLE	OCT 02	NOV 02		
FY04			AFMC/SSG	OPT/FP (3)	MULTIPLE	OCT 03	NOV 03	Y	
FY05			AFMC/SSG	OPT/FP (3)	MULTIPLE	OCT 04	NOV 04	Y	
3. FAMS (1) (5)									
FY02			AFMC/WR-ALC	OPT/FP (4)	MULTIPLE	NOV 01	JAN 02		
FY03			AFMC/WR-ALC	OPT/FP (4)	MULTIPLE	OCT 02	DEC 02		
FY04			AFMC/WR-ALC	OPT/FP (4)	MULTIPLE	OCT 03	SEP 04	Y	
FY05			AFMC/WR-ALC	OPT/FP (4)	MULTIPLE	OCT 04	SEP 05	Y	
4. FIRST									

	P-1 ITEM NO 55		PAGE NO: 128		Page 1 of 2

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** GLOBAL COMBAT SUPPORT SYSTEM - AIR FORCE FAMILY OF SYSTEMS

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
FY04			11WING	OPT/CPAF (6)	MULTIPLE	OCT 03	MAR 04	Y	
FY05			11WING	OPT/CPAF (6)	MULTIPLE	OCT 04	MAR 05	Y	
5. IMDS									
FY04			AFMC/SSG	OPT/FP (7)	MULTIPLE	MAY 04	JUL 04	Y	
FY05			AFMC/SSG	OPT/FP (7)	MULTIPLE	MAY 05	JUL 05	Y	

REMARKS:

1. Quantity/unit costs vary depending on configuration of each site.
2. Options to multiple contracts to include: FY00 Automatic Identification Technology II contract with Symbol Technologies, Inc., WPAFB, OH; MMAD with GTSI, Chantilly, VA; along with GSA, BPA, IT Services and ULANA II. Award/delivery dates represent the date of first award/delivery.
3. Options to multiple GSA Schedule contracts. Award/delivery dates represent the date of first award and delivery.
4. Options to multiple contracts to include the following companies: Syn-Tech, Tallahassee, FL; Trans-Flo Instruments Ltd, United Kingdom; Alsom Automation Systems, Cannonsburg, PA; Barton Instrument Systems, City of Industry, CA. Award/delivery dates represent the date of first award/delivery.
5. FAMS switched from Aerospace Fuels under SA-ALC to DET 3 at WR-ALC/AFF effective 1 Oct 2001. This occurred because Kelly AFB, TX was closed due to Base Realignment and Closure (BRAC) decisions.
6. Options to multiple contracts to include the following compainies: Management Informations Systems, Inc. - McLean, VA; EDS - Montgomery, AL; TRW Systems - San Antonio, TX; Sumaria Systems - Montgomery, AL; Northrop Grumman - Montgomery, AL; GTSI - Chantilly, VA. Award/Delivery dates represent the date of first award/delivery.
7. Multiple GSA schedule contractors, including Electronic Data Systems (EDS), Herndon, VA; General Analytics Corp, McLean, VA; HSF Inc, McLean, VA; GTE, West Lake, CA; IBM, Bethesda, MD; PRC, San Antonio, TX; Toshiba American, Irvine, CA; FGM Inc, Herndon, VA; Computer Science Corp (CSC), Hanover, MD; Systems Research & Applications (SRA), Arlington, VA; Comteq Federal, Rockville, MD; Comnet Sciences, Shearwater, NJ; Dynamix, Largo, MD; Compstore, Chantily, VA; Pacific Radio Electronics, Hollywood, CA; Professional Products, Bethesda, MD; Newark Electronics, Bethesda, MD; Logicon Tech, San Pedro, CA, and ORACLE, Redwood Shores, CA. Award/delivery dates reflect date of first award and delivery.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** THEATER BATTLE MANAGEMENT C2 SYSTEM

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$45,722	$55,660	$50,803	$54,152	$51,713	$41,361	$46,454	$47,593

Description:

THEATER BATTLE MANAGEMENT CORE SYSTEMS (TBMCS) is an integrated battle management system used to plan, execute, and assess an air campaign. It provides automated planning tools enabling consistent, coordinated battle management at the Air Operations Center (AOC) (force level) and unit level (operations and intelligence functions). TBMCS is the United States joint standard system for generation and dissemination of the air tasking order and will be interoperable with allied units. The TBMCS program integrated several "stovepipe" systems into a common operating environment, subsuming the functions of the Contingency Theater Automated Planning System (CTAPS), the Combat Intelligence System (CIS), and the Wing Command and Control System (WCCS). This integration provides a consistent software architecture that tightly streamlines the flow of information.

This program purchases state-of-the-art equipment to satisfy Air Force requirements for automated support of command and control (C2) functions at both force and unit level worldwide. As the functions of CTAPS (force level), WCCS (unit level) and CIS (intelligence) migrated into TBMCS, the funding for the earlier separate procurements was realigned under this program.

TBMCS funds procure a full complement of fully configured equipment for initial unit level operations installations at three sites in FY04. Funding procures fully configured hardware upgrades for fielded force and unit level (operations and intelligence) installations necessary to sustain operations and to support TBMCS software versions and required software licenses, Type 1 training, interim contractor support, engineering support, and system program office support for TBMCS applications.

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)		DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** THEATER BATTLE MANAGEMENT C2 SYSTEM	

WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY2002			FY2003			FY2004			FY2005		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
1. TBMCS				{18,297}			{30,582}			{23,805}			{26,178}
A. FORCE	A			9,567			16,205			12,971			13,942
B. UNIT	A			5,935			10,775			8,984			10,386
C. CIS (INTEL)	A			2,795			3,602			1,850			1,850
2. COTS SOFTWARE LICENSES (1)				5,466			9,509			8,150			8,150
3. TYPE 1 TRAINING (2)				9,372			1,799			4,992			5,885
4. INTERIM CONTRACTOR SUPPORT (ICS) (2)				2,367			2,400			1,500			1,480
5. SYSTEM ENGINEERING				5,217			5,473			6,400			6,500
6. PROGRAM SUPPORT				5,003			5,897			5,956			5,959
TOTALS:				45,722			55,660			50,803			54,152

REMARKS:

1. Funding for COTS Software License increases are due to the evolution to Web technologies.
2. Type 1 Training & ICS are ongoing requirements driven by installation schedule & frequent software releases consistent with Spiral development. Starting in FY04, training funds reestablished within WSC 834520.

	P-1 ITEM NO 56		PAGE NO: 131		Page 1 of 1

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** THEATER BATTLE MANAGEMENT C2 SYSTEM

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
1. TBMCS									
A. FORCE									
FY02 (1)			AFMC/ESC	OPT/IDIQ	GSA, MULTIPLE (2)	JAN 02	MAR 02		
FY03 (1)			AFMC/ESC	OPT/IDIQ	GSA, MULTIPLE (2)	OCT 02	DEC 02		
FY04 (1)			AFMC/ESC	OPT/IDIQ	GSA, MULTIPLE (2)	OCT 03	DEC 03	N	APR 03
FY05 (1)			AFMC/ESC	OPT/IDIQ	GSA, MULTIPLE (2)	OCT 04	DEC 04	N	APR 04
B. UNIT									
FY02 (1)			AFMC/ESC	OPT/IDIQ	GSA, MULTIPLE (2)	JAN 02	MAR 02		
FY03 (1)			AFMC/ESC	OPT/IDIQ	GSA, MULTIPLE (2)	OCT 02	DEC 02		
FY04 (1)			AFMC/ESC	OPT/IDIQ	GSA, MULTIPLE (2)	OCT 03	DEC 03	N	APR 03
FY05 (1)			AFMC/ESC	OPT/IDIQ	GSA, MULTIPLE (2)	OCT 04	DEC 04	N	APR 04
C. CIS (INTEL) (1)									
FY02			AFMC/ESC	OPT/IDIQ	GSA, MULTIPLE (2)	JAN 02	MAR 02		
FY02			HQ PACAF	OPT/IDIQ	GSA, MULTIPLE (2)	OCT 01	JAN 02		
FY02			HQ ACC	OPT/IDIQ	GSA, MULTIPLE (2)	OCT 01	JAN 02		
FY03			AFMC/ESC	OPT/IDIQ	GSA, MULTIPLE (2)	NOV 02	JAN 03		
FY03			HQ PACAF	OPT/IDIQ	GSA, MULTIPLE (2)	OCT 02	JAN 03		

	P-1 ITEM NO 56		PAGE NO: 132		Page 1 of 2

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** THEATER BATTLE MANAGEMENT C2 SYSTEM

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
FY03			HQ ACC	OPT/IDIQ	GSA, MULTIPLE (2)	OCT 02	JAN 03		
FY04			AFMC/ESC	OPT/IDIQ	GSA, MULTIPLE (2)	OCT 03	JAN 04	N	APR 03
FY05			AFMC/ESC	OPT/IDIQ	GSA, MULTIPLE (2)	OCT 04	JAN 05	N	APR 04

REMARKS:

1. Varying quantities and unit costs due to number/types of equipment being procured for specific sites.
2. Multiple GSA contracts, including the CITPAD, for commerical off-the-shelf equipment are used. Due to more competitive pricing and delivery, GSA contracts have been selected, at this time. Award/Delivery dates reflect date of first award and delivery.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** AIR OPERATIONS CENTER

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$0	$0	$45,954	$38,996	$47,823	$81,082	$152,998	$83,319

Description:

This program was previously included under General Information Technologies (P-1 Item No. 44) of the FY03 President's Budget dated February 2002.

The Air Operations Center (AOC) (AN/USQ-163) enables the successful prosecution of the air campaign by Air Force (AF), joint, and coalition leaders allowing them to make rapid and effective command and control (C2) decisions by providing the necessary air operations C2 and force execution tools. The AOC develops operations strategy documents, operations planning documents, and disseminates tasking orders. It is responsible for executing day-to-day peacetime and combat aerospace operations, providing rapid reaction to immediate situations by exercising positive control, coordination, and deconfliction of weapon systems. Additionally, it assesses progress of the Joint Force Air Component Commander's (JFACC's) aerospace support to the Joint Force Commander's (JFC's) campaign, effectiveness of force employment and efficiency of internal AOC processes. The AOC program will improve existing C2 capabilities by leveraging technology to modernize current systems and automate C2 and Intelligence, Surveillance, and Reconnaissance (ISR) processes. The AOC will also improve its capability to accurately find, fix, track, target, engage, and assess (F2T2EA) Joint Force targets through expanded capabilities to access and process ISR information. This capability is required for all targets – planned or immediate, fixed or mobile.

1. AOC PROGRAM: The AOC program provides a necessary structure as the focal point for systems integration, technical transition, and process refinement for rapidly evolving C2 programs, processes, and concepts. Numerous independent systems across the entire spectrum of C2, communications, and ISR battle management encompass a robust, fully functioning AOC. Funding will be used to deploy 2 tested, certified, and standardized Block 10 AOC Weapon Systems: one to a deployable AOC in United States Air Forces Europe (USAFE); and the other to a fixed AOC in Pacific Air Forces (PACAF). Block 10 consists of 49 systems, commercial off-the-shelf infrastructure equipment (including a data wall), and other enablers to support the JFC/JFACC in planning, executing, and assessing the battle through C2 and ISR. Block 10 fielding will include initial hardware procurement, technical manuals, and required inter-spiral hardware tech refresh.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** AIR OPERATIONS CENTER

Description (continued):

2. COMBINED AIR OPERATIONS CENTER-EXPERIMENTAL (CAOC-X): The CAOC-X at Langley AFB, VA, supports AOC development efforts under the weapon system block construct. Funding will procure communications and computer infrastructure components to accommodate spiral development and integration of capabilities into the AOC weapon system and instrumentation/test equipment to capture data on system, network, and operator performance during assessments.

3. INTELLIGENCE SURVEILLANCE RECONNAISSANCE (ISR) MANAGER: The ISR Manager is a revolutionary approach for providing synergized planning, visualization, sensor control, and exploitation of ISR assets in-theater. The ISR Manager provides time critical target (TCT) support by shortening sensor-to-shooter "kill chain" inside the enemy's decision cycle. Funding fields ISR Manager that will integrate the AOC with Distributed Common Ground Systems.

4. TIME CRITICAL TARGETING FUNCTIONALITY (TCTF): TCTF provides an enhanced C2 capability to find, fix, track, target, engage, and assess time critical targets (TCTs). Current systems do not meet warfighter requirements for identifying TCTs and tasking strike assets within the limited window of vulnerability. Funding will procure workstations, servers, mass data storage devices printers, and other connectivity equipment.

Items requested in FY04 are identified on the following P-5 and are representative of items to be procured. Items procured during execution may change based on critical equipment needed to support current Air Force mission requirements.

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)		DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** AIR OPERATIONS CENTER	

WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY2002			FY2003			FY2004			FY2005		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
1. AOC PROGRAM										{36,469}			{33,888}
A. BLOCK FIELDING	A									34,469			29,088
B. HELP DESK TECH REFRESH	A												1,500
C. TECHNICAL MANUALS										2,000			3,300
2. CAOC-X	A									2,879			2,905
3. ISR MANAGER	A									393			396
4. TIME CRITICAL TARGETING FUNCTIONALITY	A									6,213			1,807
TOTALS:										45,954			38,996

REMARKS:

	P-1 ITEM NO 57		PAGE NO: 136		Page 1 of 1

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** AIR OPERATIONS CENTER

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
1. AOC PROGRAM									
A. BLOCK FIELDING									
FY04			AFMC/ESC	MIPR/OPT/IDIQ	GSA, MULTIPLE (1)	NOV 03	JAN 04	Y	
FY05			AFMC/ESC	MIPR/OPT/IDIQ	GSA, MULTIPLE (1)	NOV 04	JAN 05	N	APR 04
B. HELP DESK TECH REFRESH									
FY05			AFMC/ESC	MIPR/OPT/IDIQ	GSA, MULTIPLE (1)	NOV 04	JAN 05	N	APR 04
2. CAOC-X									
FY04			HQ ACC	MIPR/OPT/IDIQ	GSA, MULTIPLE (1)	JAN 04	MAY 04	Y	
FY05			HQ ACC	MIPR/OPT/IDIQ	GSA, MULTIPLE (1)	JAN 05	MAY 05	Y	
3. ISR MANAGER									
FY04			HQ ACC	MIPR/OPT/IDIQ	GSA, MULTIPLE (1)	FEB 04	JUN 04	Y	
FY05			HQ ACC	MIPR/OPT/IDIQ	GSA, MULTIPLE (1)	FEB 05	JUN 05	Y	
4. TIME CRITICAL TARGETING FUNCTIONALITY									
FY04			AFMC/ESC	MIPR/OPT/IDIQ	GSA, MULTIPLE (1)	JAN 04	MAR 04	Y	

	P-1 ITEM NO 57		PAGE NO: 137		Page 1 of 2

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** AIR OPERATIONS CENTER

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
FY05			AFMC/ESC	MIPR/OPT/IDIQ	GSA, MULTIPLE (1)	JAN 05	MAR 05	Y	

REMARKS:
1. Multiple GSA Contracts for commercial off-the-shelf equipment will be used. Award/delivery dates reflect date of first award and delivery.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** BASE INFORMATION INFRASTRUCTURE

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$146,986	$217,790	$268,408	$433,394	$622,120	$674,779	$790,619	$822,900

Description:

The Base Information Infrastructure (BII) procurement line supports Air Force downward directed corporate requirements from the Air Staff level. At the present time, Base Information Infrastructure (BII) funds the Combat Information Transport System (CITS) program, Network Connectivity, Public Key Infrastructure (PKI), common servers for the Global Combat Support System (GCSS-AF) Integration Framework infrastructure, Air Force Systems Networking (AFSN), and Operationalizing and Professionalizing the Network (OPTN). Increases in FY04 funding represent an Air Force corporate commitment to increase the number of operational users being migrated to classified networks to increase information assurance capabilities during a time of ever-increasing threats.

1. COMBAT INFORMATION TRANSPORT SYSTEM (CITS): CITS is the Air Force component of the National Information Infrastructure (NII) and the Defense Information Infrastructure (DII). CITS modernizes base/site information transport capability by replacing maintenance intensive equipment, replacing or upgrading existing voice switching systems, providing network management of information systems, increasing the capacity of saturated information transmission systems, and providing information protection tools. This is the primary Air Force program to install complete secure fiber optic infrastructure to mission critical fixed base facilities. This infrastructure ensures the warfighter and wing command center full access to real-time command and control (C2) information during contingencies. Lack of C2 access would severely limit reach-back capability supporting deployable forward footprint-push/pull information capability and impede proactive information protection countermeasures to support collaborative information exchange. The program includes four product areas which are centrally funded and managed by the CITS Program Office. The product areas are described below:

a. INFORMATION TRANSPORT SYSTEM (ITS): The ITS product area implements and keeps technologically current a broad-band, fiber-optic digital information transport network to provide near-instantaneous information transfer for each base and selected geographically separated units (GSUs). The system will have sufficient capacity to meet the classified and unclassified data, voice, video, imagery, and

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** BASE INFORMATION INFRASTRUCTURE

Description (continued):

telemetry requirements at each fixed location. Most Air Force bases have an existing infrastructure that is incapable of supporting the current and future communications needs of the warfighter. Initial capability will include data transport with other media, incorporated as technology and funding permit. Integration of AF and joint information operations will allow immediate threat awareness and impact, intelligence gathering and assessments and other relevant situational awareness of the battlespace. The system will further expand the Secure Internet Protocol Router Network (SIPRNET) infrastructure, the backbone to joint and coalition warfighting. FY04 funds direct mission support and procures ITS installation projects for the highest priority bases. Installs may include: fiber optic backbone, network equipment, encryption devices, virtual private networks, voice and video interfaces, building wiring, training, test, and support. Any delay in ITS installation will impact the schedules of several C2 and combat support automation modernization programs dependent upon the in-place fiber optic ITS infrastructure.

b. NETWORK MANAGEMENT SYSTEM/BASE INFORMATION PROTECT (NMS/BIP): The NMS/BIP product area delivers and keeps technologically current a modern network management system for base Network Control Centers, MAJCOM Network Operations and Security Centers, and Air Force enterprise entities (AF Network Operations Center, AF Computer Emergency Response Center, and enterprise level technical support). NMS/BIP supports the International Standards Organization's (ISO) five network management functions: fault management, configuration management, performance management, accounting management, and security management. The products assure integrity of information systems in the face of attack and assist with defense against cyber attacks on critical defense-related infrastructure. NMS/BIP provides the information assurance, network management, and telephonic management and protection tools for each Air Force base to detect, analyze, deter, isolate, contain, reconstitute, and recover from information systems and network security intrusions or attacks. The tools enable information integrity, security, and confidentiality to be maintained while passing information across the infostructure (networks, servers, clients). Situational awareness of the infostructure is provided via a Common Operational Picture (COP). The efforts in this product area will begin to close all known holes in AF's protective net by 2007, deploy analytical suites, develop automated tools to dynamically detect and respond to network intrusions, develop the roadmap for creating self aware networks to prevent threat based or equipment based network degradations or outages, standardize AF and MAJCOM level operations centers, and provide critical training and support needed to fight cyber threats. The CITS Program Office leverages the experience of industry-leading network companies and government organizations to provide best value for the Air Force. FY04 funds procure direct mission support and continue the installation and support of critical information equipment capabilities for classified and unclassified, in fixed-based and deployed installations worldwide. Additionally, standard network management and trouble ticketing solutions are provided.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** BASE INFORMATION INFRASTRUCTURE

Description (continued):

c. VOICE SWITCHING SYSTEM (VSS): The VSS product area, formerly Digital Switch System (DSS), provides technology upgrades, line expansion to existing base telephone systems. and, at some bases, new commercial-off-the-shelf (COTS) digital switching equipment to replace telephone switches no longer capable of meeting mission requirements. The increased capacity and standard interfaces of new or upgraded equipment (dial central offices, information transport nodes, remote switching centers, private branch exchanges, etc.) will improve intrabase connectivity and capability to move information worldwide. Funding ensures bases will have this initial capability and plans for new mission growth and increasing demands for fax machine and secure telephone dial-in connectivity. FY04 funds direct mission support and procure upgrades for 323 switches and switch upgrade projects in the AF inventory as required, bringing them to the manufacturer's current release.

d. TELECOMMUNICATIONS MANAGEMENT SYSTEM (TMS): This product area acquires, fields, and supports automated telecommunications management systems integrating telephone subscriber, connectivity, and equipment data. TMS uses a secure client/server architecture and a relational database to increase productivity while reducing cost. System functionality includes charge-back billing, automated call collection and fault management, unattended call rating, configuration management, telephone directory generation, online directory assistance, and extensive tracking and reporting options. TMS may be stand-alone or connected to base networks; it interfaces directly with the VSS. FY04 funds direct mission support and procure TMS for multiple Air Force bases. Funding is critical for automation of bases which are using disparate, manual methods to accomplish the same work.

2. NETWORK CONNECTIVITY: Resources will be focused annually on providing critical infrastructure support and connectivity to a variety of Air Force C2 and Air Traffic Control systems based on ongoing operational missions needs. HQ USAF/XI Warfighting Integration is directing the implementation of these improvements to better link sensor-to-shooter information flow and to significantly shorten the "kill-chain" cycle between the time target is identified and the time weapons are placed on target. FY04 funds provide network routers, hubs, and internal building wiring to connect new systems to the fiber optic backbone provided by CITS. Funding will also be used to support the creation of a Network Common Operational Picture that provides situational awareness to base, MAJCOM, and Air Force network control and security personnel and commanders.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** BASE INFORMATION INFRASTRUCTURE

Description (continued):

3. PUBLIC KEY INFRASTRUCTURE (PKI): A Department of Defense (DoD) PKI Program was mandated by the Deputy Secretary of Defense on 8 Aug 97. PKI provides non-repudiation, user identification, and confidentiality for government electronic business. FY04 funds procure infrastructure computers and Air Force-wide public/private key hardware/software needed to generate, certify, and distribute public/private key pairs for computer applications requiring information assurance capabilities (digital signatures and data encryption). Funds support the initial stand up and operational support of registration, training and awareness, directories for certificates, and end user hardware and software required to support Air Force implementation of DoD PKI. The PKI Program line includes funds the AF's portion of DOD Common Access Card requirements, oversight of the DOD Biometric Program, and support the implementation of Biometrics into the Air Force.

4. GLOBAL COMBAT SUPPORT SYSTEM - AIR FORCE (GCSS-AF): While GCSS-AF Family of Systems (P-1 Line 55) provides funding for a variety of functional user systems, Base Information Infrastructure (P-1 Line 58) provides funding for GCSS-AF's Integration Framework and the AF Portal presentation layer to AF operational users. The Portal provides AF users worldwide a standard security and single sign-on for accessing a variety of functional systems. Additional security features using Public Key Infrastructure and Directory Services will be integrated into the overall framework so security will not have to be duplicated in each of the functional systems being modernized under P-1 line 55, GCSS-AF Family of Systems.

a. GCSS-AF ARCHITECTURE. FY04 funding procures the integration framework (architecture) to be fielded AF-wide. The current plan calls for fielding the framework at three Defense Information Systems Agency (DISA) Defense Enterprise Computing Centers, one each in CONUS, Europe, and Asia with possible expansion to two or more CONUS sites. Fielding will install application, security, web, messaging, and proxy servers, software, and associated licenses at the chosen sites. Additionally, fielding will provide six "ship sets" of deployable hardware and software.

b. CHIEF FINANCIAL OFFICER (CFO) SYSTEMS AND SUPPORT- CFO Systems and Support is comprised of two efforts. Commander's Resource Integration System (CRIS), provides an extensive data base capability which includes accounting, logistics, and operational data. The system is currently deployed to each MAJCOM and will deploy to bases over the next two years. The deployment and expansion of the data base for increased data storage will require the purchase of additional servers. The second effort, IAW the SECAF and CSAF Server Consolidation Initiative, is the year-to-year capital replacement on all CFO systems (Automated Business Services Systems, Leave

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** BASE INFORMATION INFRASTRUCTURE

Description (continued):

Web, CRIS). This replacement plan prevents mechanical and technological obsolescence.

b. STANDARD PROCUREMENT SYSTEM (SPS) - consolidates AF contracting systems and process. Funding migrates servers to a central site (FY04), streamlines software upgrades, and avoids increased contract support staff and hardware maintenance costs. Migration of servers is scheduled for FY04.

5. AIR FORCE SYSTEMS NETWORKING (AFSN). This program is tailored specifically to upgrade the classified and unclassified hubs/routers connecting Air Force bases to Defense Information System Agency's (DISA's) Network. Air Force network engineers analyze traffic on a recurring basis and ensure upgrades are programmed in time to avoid major network outages. These gateways are key to ensuring Air Force operational users have ready access to Unclassified (but sensitive) Internet Protocol Router Network (NIPRNET), Secure Internet Protocol Network (SIPRNET), and the world wide web. FY04 funding standardizes classified and unclassified gateway routers to ensure the latest operating systems are in place. This standardized architecture is necessary to thwart existing and emerging threats and to improve daily operations.

6. INFORMATION SYSTEM SECURITY PROGRAM (ISSP). FY 04 funding provides for modernization and implementation of base information protection tools to meet DOD and AF defense in-depth requirements. Technologies, products and systems will focus on improving network intrusion detection systems, firewalls, gateway solutions, virtual private networks, and “insider threat” identification and mitigation. ISSP ensures the detection of malicious intrusions that have circumvented first layer defenses at the protection perimeter, the lockdown or hardening of critical resources and assets, and enhanced access control and auditing capabilities.

7. ALASKA WIDE LAND MOBILE (LMR) PROGRAM. In FY03, Congress added $6.688M for this program. Reference Appropriations Conference Report 107-32. Oct 9, 2002, page 218. Funds will develop the North Zone infrastructure and provide most of the subscriber equipment needs. No FY04 funds requested.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** BASE INFORMATION INFRASTRUCTURE

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		QTY.	COST	QTY.	COST	QTY.	COST	QTY.	COST
1. COMBAT INFORMATION TRANSPORT SYSTEM (CITS)			${134,513}		${195,009}		${221,268}		${386,210}
A. INFORMATION TRANSPORT SYSTEM (ITS)	A		$111,106		$116,950		$107,145		$228,460
B. NETWORK MANAGEMENT SYSTEM/BASE INFORMATION PROTECT (NMS/BIP)	A		$12,308		$53,242		$91,123		$126,850
C. VOICE SWITCHING SYSTEM (VSS)	A		$9,929		$24,817		$18,000		$25,900
D. TELECOMMUNICATIONS MANAGEMENT SYSTEM (TMS)	A		$1,170				$5,000		$5,000
2. NETWORK CONNECTIVITY	A		$3,685				$11,986		$11,857
3. PUBLIC KEY INFRASTRUCTURE (PKI)	A		$4,314		$4,077		$8,065		$7,427
4. GLOBAL COMBAT SUPPORT SYSTEM - AIR FORCE			${4,474}		${10,757}		${15,530}		${15,927}
A. GCSS-AF ARCHITECTURE	A		$3,463		$9,662		$8,590		$8,973
B. CFO SYSTEMS AND SUPPORT	A		$1,011		$1,095		$4,028		$4,054
C. STANDARD PROCUREMENT SYSTEMS	A						$2,912		$2,900
5. AIR FORCE SYSTEMS NETWORKING	A				$1,325		$2,747		$2,707
6. INFORMATION SYSTEMS SECURITY PROGRAM	A						$8,812		$9,266

	P-1 ITEM NO 58		PAGE NO: 144		Page 1 of 2

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** BASE INFORMATION INFRASTRUCTURE

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		QTY.	COST	QTY.	COST	QTY.	COST	QTY.	COST
7. ALASKA WIDE LAND MOBILE RADIO (LMR) PROGRAM	A				$6,622				
Totals:			$146,986		$217,790		$268,408		$433,394

Remarks:

	P-1 ITEM NO 58		PAGE NO: 145		Page 2 of 2

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** BASE INFORMATION INFRASTRUCTURE

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
1. COMBAT INFORMATION TRANSPORT SYSTEM (CITS) (1) (2) (3)									
A. INFORMATION TRANSPORT SYSTEM (ITS)									
FY02			AFMC/ESC	DO/FFP	GENERAL DYNAMICS, NEEDHAM, MA; AVAYA, ST PETERSBURG, FL; TRW, SAN ANTONIO, TX	OCT 01	DEC 01		
FY03			AFMC/ESC	DO/FFP	GENERAL DYNAMICS, NEEDHAM, MA; AVAYA, ST PETERSBURG, FL; TRW, SAN ANTONIO, TX	OCT 02	DEC 02		
FY04			AFMC/ESC	DO/FFP	GENERAL DYNAMICS, NEEDHAM, MA; AVAYA, ST PETERSBURG, FL; TRW, SAN ANTONIO, TX	OCT 03	DEC 03	Y	
FY05			AFMC/ESC	DO/FFP	GENERAL DYNAMICS, NEEDHAM, MA; AVAYA, ST PETERSBURG, FL; TRW, SAN ANTONIO, TX	OCT 04	DEC 04	Y	
B. NETWORK MANAGEMENT SYSTEM/BASE INFORMATION PROTECT (NMS/BIP)									
FY02			AFMC/ESC	DO/FFP	EDS, HERNDON, VA; TRW, SAN ANTONIO, TX	NOV 01	JAN 02		
FY03			AFMC/ESC	DO/FFP	EDS, HERNDON, VA; TRW, SAN ANTONIO, TX	NOV 02	JAN 03		
FY04			AFMC/ESC	DO/FFP	EDS, HERNDON, VA; TRW, SAN ANTONIO, TX	NOV 03	JAN 04	Y	
FY05			AFMC/ESC	DO/FFP	EDS, HERNDON, VA; TRW, SAN ANTONIO, TX	NOV 04	JAN 05	Y	
C. VOICE SWITCHING SYSTEM (VSS)									

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** BASE INFORMATION INFRASTRUCTURE

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
FY02			AFMC/ESC	DO/FFP	GENERAL DYNAMICS, NEEDHAM; AVAYA, ST PETERSBURG, FL	JAN 02	DEC 02		
FY03			AFMC/ESC	DO/FFP	GENERAL DYNAMICS, NEEDHAM; AVAYA, ST PETERSBURG, FL	OCT 02	DEC 02		
FY04			AFMC/ESC	DO/FFP	GENERAL DYNAMICS, NEEDHAM; AVAYA, ST PETERSBURG, FL	OCT 03	DEC 03	Y	
FY05			AFMC/ESC	DO/FFP	GENERAL DYNAMICS, NEEDHAM; AVAYA, ST PETERSBURG, FL	OCT 04	DEC 04	Y	
D. TELECOMMUNICATIONS MANAGEMENT SYSTEM (TMS)									
FY02			AFMC/ESC	DO/FFP	TRW, SAN ANTONIO, TX	OCT 01	MAY 02		
FY04			AFMC/ESC	DO/FFP	TRW, SAN ANTONIO, TX	OCT 03	MAR 04	Y	
FY05			AFMC/ESC	DO/FFP	TRW, SAN ANTONIO, TX	OCT 04	MAR 05	Y	
2. NETWORK CONNECTIVITY (1) (2) (3)									
FY02			HQ AFCA	DO/FFP	MULTIPLE (2)	OCT 01	MAY 02		
FY04			HQ AFCA	DO/FFP	MULTIPLE (2)	OCT 03	MAY 04	Y	
FY05			HQ AFCA	DO/FFP	MULTIPLE (2)	OCT 04	MAY 05	Y	
3. PUBLIC KEY INFRASTRUCTURE (PKI) (1) (2) (3)									
FY02			AFMC/SSG	DO/FFP	MULTIPLE (2)	DEC 01	JAN 02		
FY03			AFMC/SSG	DO/FFP	MULTIPLE (2)	DEC 02	FEB 03		

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** BASE INFORMATION INFRASTRUCTURE

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
FY04			AFMC/SSG	DO/FFP	MULTIPLE (2)	DEC 03	JAN 04	Y	
FY05			AFMC/SSG	DO/FFP	MULTIPLE (2)	DEC 04	JAN 05	Y	
4. GLOBAL COMBAT SUPPORT SYSTEM - AIR FORCE (1) (2) (3)									
A. GCSS-AF ARCHITECTURE									
FY02			AFMC/SSG	DO/FFP	MULTIPLE (2)	DEC 01	JAN 02		
FY03			AFMC/SSG	DO/FFP	MULTIPLE (2)	DEC 02	FEB 03		
FY04			AFMC/SSG	DO/FFP	MULTIPLE (2)	DEC 03	JAN 04	Y	
FY05			AFMC/SSG	DO/FFP	MULTIPLE (2)	DEC 04	JAN 05	Y	
B. CFO SYSTEMS AND SUPPORT									
FY02			11WING	DO/FFP	MULTIPLE (2)	FEB 02	JUL 02		
FY03			11WING	DO/FFP	MULTIPLE (2)	JAN 03	MAR 03		
FY04			11WING	DO/FFP	MULTIPLE (2)	FEB 04	MAR 04	Y	
FY05			11WING	DO/FFP	MULTIPLE (2)	FEB 05	MAR 05	Y	
C. STANDARD PROCUREMENT SYSTEM									
FY04			AFMC/SSG	DO/FFP	MULTIPLE (2)	OCT 03	JAN 04	Y	
FY05			AFMC/SSG	DO/FFP	MULTIPLE (2)	OCT 04	JAN 05	Y	

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** BASE INFORMATION INFRASTRUCTURE

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
5. AIR FORCE SYSTEMS NETWORKING (1) (2) (3)									
FY03			AFMC/SSG	DO/FFP	MULTIPLE (2)	OCT 02	NOV 02		
FY04			AFMC/SSG	DO/FFP	MULTIPLE (2)	OCT 03	NOV 03	Y	
FY05			AFMC/SSG	DO/FFP	MULTIPLE (2)	OCT 04	NOV 04	Y	
6. INFORMATION SYSTEMS SECURITY PROGRAM (4)									
FY04			AFMC/ESC	DO/FP	MULTIPLE (2)	NOV 03	JAN 04	Y	
FY05			AFMC/ESC	DO/FP	MULTIPLE (2)	NOV 04	JAN 05	Y	
7. ALASKA WIDE LMR (2)									
FY03			HQ PACAF	DO/FFP	MULTIPLE (2)	MAR 03	JUN 03	Y	

REMARKS:

1. Award/delivery dates reflect date of first award and delivery.
2. Multiple contractors will be used to satisfy requirements. Contracts are typically, but not exclusively, executed off Standard Systems Group Commercial Information Technology-Product Area Directorate (CIT-PAD).
   a. CITS: Typical contractors include EDS, Herndon, VA; TRW, San Antonio, TX; General Dynamics, Needham, MA.
   b. PKI: typical vendors are Sun Microsystems, Palo Alto, CA and Dell, Round Rock, TX.
   c. GCSS typical vendors: ORACLE/AMARC, Davis Monthan AFB, AZ (PCO is DISA St Louis, MO, contract type T&M); Anser, VA (PCO GSA); KPMG , Washington DC (PCO is in Dept of Labor); Lockheed Martin Systems, VA
3. Given the close linkage between CITS and ISSP, ISSP will be executed through the CITS contractors listed above.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** USCENTCOM

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$17,148	$9,743	$30,335	$31,636	$32,276	$33,512	$34,153	$35,281

Description:

The Air Force (AF) is the executive agent for United States Central Command (USCENTCOM). USCENTCOM is geographically separated from its area of responsibility (AOR) by over 7,000 miles. In order to meet its mission responsibilities despite that geographical handicap, USCENTCOM relies on command, control, communications, and computer (C4) systems capable of achieving full spectrum information superiority. Funding increases starting in FY04 will significantly improve communications reliability, capacity and security in a number of operating locations in Southwest Asia. Introduction of newer technology will reduce the Air Force's dependance on activating Guard and Reserve units to maintain and operate older, more manpower intensive tactical communications systems.

1. USCENTCOM COMMAND AND CONTROL SYSTEMS: As executive agent for USCENTCOM, the Air Force is responsible for funding Headquarters USCENTCOM's Command and Control (C2) needs. FY04 funds continue to provide for modernization of communications and C2 systems, including Global Command and Control System (GCCS), classified and unclassified telephone switches, local area networking servers, information assurance tools, and enterprise software licenses.

2. JOINT COMMUNICATIONS SUPPORT ELEMENT (JCSE): JCSE, assigned under US Joint Forces Command, is the only joint Department of Defense (DoD) unit specifically formed to provide C4 systems support for Joint Chiefs of Staff (JCS) contingency operations worldwide. FY04 funds provide the AF's one-third share to procure C4 equipment in support of deployed Joint Task Force Headquarters and deployed Special Operations Command Headquarters. Equipment requirements are approved annually by the JCS and procurement for the AF share is executed by JCSE.

3. AIR FORCE SPECIAL OPERATIONS COMMAND (AFSOC) DEPLOYABLE C3 UNITS: FY04 funding will replace AFSOC's aging

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** USCENTCOM

Description (continued):

International Maritime Satellite Terminal (INMARSAT) inventory with fully integrated systems to allow for a single-man-lift, easily deployable, and secure access to voice/data networks from bare base environments. This is a small network access package incorporating a high speed voice and data reach back. Systems provide worldwide ability for survey teams to transmit secure data directly back to a Continental United States (CONUS) based server in near real-time. Planners will have immediate and up-to-date access on numerous locations around the world.

4. AIR FORCE COMMUNICATIONS AGENCY (AFCA) INTRUSION DETECTION: No FY04 funding requested.

5. AIR COMBAT COMMAND (ACC) COMMUNICATIONS: Central Air Forces (CENTAF) is the Air Combat Command (ACC) component designated to support USCENTCOM operations in deployed theaters for the Air Force. CENTAF will execute the FY04 funding increases to modernize the systems currently deployed. This modernization will significantly increase CENTCOM's C2 capabilities and reduce AF manpower needs. This is an important issue, both from a force protection standpoint and a quality of life viewpoint, for AF Guard and Reserve personnel. FY04 funds provide for modernization of communications and automation systems, including commercial satellite terminals, telephone switches, network servers and associated information assurance tools.

Items requested in FY04 are identified on the attached P-40a and are representative of items to be procured. Items procured during execution may change based on critical equipment needed to support current Air Force mission requirements.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** USCENTCOM

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		QTY.	COST	QTY.	COST	QTY.	COST	QTY.	COST
1. USCENTCOM COMMAND AND CONTROL SYSTEMS	A		$5,736		$3,438		$3,143		$3,177
2. JOINT COMMUNICATIONS SUPPORT ELEMENT (JCSE)	A		$5,028		$5,833		$4,298		$3,377
3. AFSOC DEPLOYABLE C3 UNITS	A				$472		$478		$492
4. AFCA INTRUSION DETECTION	A								$1,245
5. ACC COMMUNICATIONS	A		$6,384				$22,416		$23,345
Totals:			$17,148		$9,743		$30,335		$31,636

Remarks:

	P-1 ITEM NO 59		PAGE NO: 152		Page 1 of 1

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** USCENTCOM

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
1. USCENTCOM COMMAND AND CONTROL SYSTEMS									
FY02			USCENTCOM	C/FFP	MULTIPLE (2)	DEC 01	JAN 02		
FY03			USCENTCOM	C/FFP	MULTIPLE (2)	DEC 02	JAN 03		
FY04			USCENTCOM	C/FFP	MULTIPLE (2)	DEC 03	JAN 04	Y	
FY05			USCENTCOM	C/FFP	MULTIPLE (2)	DEC 04	JAN 05	Y	
2. JOINT COMMUNICATIONS SUPPORT ELEMENT (JCSE)									
FY02			11WING	C/FFP	MULTIPLE (2)	FEB 02	JUL 02		
FY03			11WING	C/FFP	MULTIPLE (2)	FEB 03	JUL 03		
FY04			11WING	C/FFP	MULTIPLE (2)	FEB 04	JUL 04	Y	
FY05			11WING	C/FFP	MULTIPLE (2)	FEB 05	JUL 05	Y	
3. AFSOC DEPLOYABLE C3 UNITS (1)									
FY03			HQ AFSOC	C/FFP	MULTIPLE (2)	FEB 03	JUL 03		
FY04			HQ AFSOC	C/FFP	MULTIPLE (2)	FEB 04	JUL 04	Y	
FYO5			HQ AFSOC	C/FFP	MULTIPLE (2)	FEB 05	JUL 05	Y	
4. AFCA INTRUSION DETECTION (1)									

	P-1 ITEM NO 59		PAGE NO: 153		Page 1 of 2

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** USCENTCOM

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
FY05			HQ AFCA	C/FFP	MULTIPLE (2)	FEB 05	JUL 05	Y	
5. ACC COMMUNICATIONS									
FY02			HQ ACC	C/FFP	MULTIPLE (2)	DEC 02	JAN 03		
FY04			HQ ACC	C/FFP	MULTIPLE (2)	DEC 03	JAN 04	Y	
FY05			HQ ACC	C/FFP	MULTIPLE (2)	DEC 04	JAN 05	Y	

REMARKS:

1. Quantities and unit costs vary because multiple types of equipment are being procured.
2. Multiple contract awards for small acquisitions through different government contracts and contracting agencies, for example: 6th Contracting Squadron, MacDill AFB, FL; NSA, Ft Meade, MD; PM-MILSATCOM, Ft Monmouth, NJ; and SPAWAR, North Charleston, SC. Contractor/vendor examples: GTE, Needham Heights, MA; Booz-Allen Hamilton, St. Inigoes, MD; MITRE, Fort Monmouth, NJ; SAIC, San Diego, CA; Microsoft, Charlotte, NC; Sun, McLean, VA; Xerox, Tampa, FL; LNR, Hauppauge, NY; and NISE East, Portsmouth, VA. Award/delivery dates reflect date of first award and delivery.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** DEFENSE MESSAGE SYSTEM (DMS)

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$13,182	$18,785	$10,555	$11,940	$13,541	$13,151	$13,813	$13,927

Description:

This program acquires equipment necessary to implement and sustain Air Force (AF) email/messaging requirements for the Defense Message System (DMS). The DMS provides essential capabilities to carry on the wartime and peacetime missions of the AF in lieu of the base telecommunications centers and Automatic Digital Network (AUTODIN) switches. DMS replaces AUTODIN, which terminates in FY03.

Per the Joint Operational Requirements Document, record messaging communicates and documents command and control directives, agreements, financial data, and other mission essential data while providing users with confidence that the message is authentic, credible, and traceable back to the originator. DMS provides these assurances while maintaining the look, feel, and simplicity of e-mail. All features of DMS must be operational and extended to all users in order to terminate AUTODIN. This transition will occur in three distinct phases:
- All Top Secret/Collateral (TS/C) and below General Service (GENSER) non-Special Category/Special Handling Designator (SPECAT/SHD) users transitioned 30 Jun 01 (90 percent of Air Force users are in this category)
- All SPECAT/SHD users (approximately 5 percent of Air Force users) are transitioning to DMS version 3.0.
- Remaining users (intelligence and allied communities) will transition by the end of FY03

Without DMS funding, the AF will not have the capability to support the operational community's message requirements and would have an increased susceptibility to information operations attacks conducted by only a mildly sophisticated adversary. These attacks could easily induce significant confusion into operations, increasing the likelihood of American casualties.

1. DMS COMPONENTS: FY02-04 funding continues all DMS efforts at all Air Force bases and sub-sites. Efforts include engineering/installation services, DMS software upgrades, message-handling capability, and initiation of a critical technical refresh program intended to ensure DMS hardware is capable of continued mission support through the maturation of software. User communities are now being transitioned to DMS services. Funding levels must be maintained as DMS transitions to the system of record.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** DEFENSE MESSAGE SYSTEM (DMS)

Description (continued):

2. DMS SECURITY:

a. FORTEZZA. FY04 funding purchases new Fortezza cards to incorporate the DMS software upgrades and to replace outdated cards that will expire during this timeframe.

b. GUARDS. No FY04 funding is requested.

3. DEPLOYABLE DMS: Deployable DMS provides the warfighter with the same messaging capability whether deployed or in-garrison. Currently the DMS-AF Program Management Office (PMO) provides deployed equipment to over 140 units. Present equipment is reaching end of life. It was the first rendition of DMS deployed equipment and, as such, is large and bulky. FY02-04 funds will be used to provide modernized deployed equipment to the warfighters. Deploying units requested equipment with a smaller footprint and newer technologies will allow us to provide this. Also, with the reduction in price in computer systems, it will be more cost effective to purchase new suites rather than sustaining the existing suites. New suites will be easier to support, as they will be more Commercial-Off-The-Shelf (COTS) compliant and less vendor tailored. Since 9/11, DMS is projected to grow in the deployed environment and creates the need for the warfighter to be deployed with the best possible equipment.

Items requested in FY04 are identified on the following P-40a and are representative of items to be procured. Items procured during execution may change based on critical equipment needed to support current Air Force mission requirements.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** DEFENSE MESSAGE SYSTEM (DMS)

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		QTY.	COST	QTY.	COST	QTY.	COST	QTY.	COST
1. DMS COMPONENTS	A		$10,100		$15,204		$7,297		$7,174
2. DMS SECURITY							${100}		${1,730}
A. FORTEZZA	A						$100		$630
B. GUARDS	A								$1,100
3. DEPLOYABLE DMS	A		$3,082		$3,581		$3,158		$3,036
Totals:			$13,182		$18,785		$10,555		$11,940

Remarks:

	P-1 ITEM NO 60		PAGE NO: 157		Page 1 of 1

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** DEFENSE MESSAGE SYSTEM (DMS)

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
1. DMS COMPONENTS (1)									
FY02			AFMC/SSG	OPT/FFP	LOCKHEED-MARTIN CORP., MANASSAS, VA (2)	DEC 01	JAN 02		
FY03			AFMC/SSG	OPT/FFP	LOCKHEED-MARTIN CORP., MANASSAS, VA (2)	NOV 02	DEC 02		
FY04			AFMC/SSG	OPT/FFP	LOCKHEED-MARTIN CORP., MANASSAS, VA (2)	OCT 03	NOV 03	Y	
FY05			AFMC/SSG	OPT/FFP	LOCKHEED-MARTIN CORP., MANASSAS, VA (2)	OCT 04	NOV 04	Y	
2. DMS SECURITY									
A. FORTEZZA									
FY04			AFMC/SSG	MIPR/FFP	NAVY/MYKOTRONIX, TORRANCE, CA (3)	OCT 03	OCT 04	Y	
FY05			AFMC/SSG	MIPR/FFP	NAVY/MYKOTRONIX, TORRANCE, CA (3)	OCT 04	OCT 05	Y	
B. GUARDS									
FY05			AFMC/SSG	MIPR/FFP	NSA, FT MEAD, MD	OCT 04	OCT 05	Y	
3. DEPLOYABLE DMS (1)									
FY02			AFMC/SSG	OPT/FFP	TRW, SAN ANTONIO, TX (4)	MAR 02	MAY 02		
FY03			AFMC/SSG	OPT/FFP	TRW, SAN ANTONIO, TX (4)	NOV 02	DEC 02		
FY04			AFMC/SSG	OPT/FFP	TRW, SAN ANTONIO, TX (4)	OCT 03	NOV 03	Y	
FY05			AFMC/SSG	OPT/FFP	TRW, SAN ANTONIO, TX (4)	OCT 04	NOV 04	Y	

	P-1 ITEM NO 60		PAGE NO: 158		Page 1 of 2

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** DEFENSE MESSAGE SYSTEM (DMS)

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL

REMARKS:
1. Quanitites and unit costs vary due to different site configurations.
2. Option to Lockheed-Martin Corp., awarded Oct 96, extended through 30 Apr 05.
3. Option to Navy contract with Mykotronix, Torrance, CA.
4. Option to TRW, San Antonio, TX awarded April 99.

	P-1 ITEM NO 60		PAGE NO: 159		Page 2 of 2

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** SBIRS HIGH MISSION CONTROL STATION BACKUP (MCSB)

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$0	$0	$95,421	$0	$666	$1,140	$0	$0

Description:

The primary mission of the Space-Based Infrared System (SBIRS) is to provide initial warning of a ballistic missile attack on the United States (US), its deployed forces, and its allies. SBIRS will incorporate new technologies to enhance detection, and improve reporting of intercontinental ballistic missiles, sea launched ballistic missiles and tactical ballistic missiles for national and theater missile defense. SBIRS will provide increased performance in order to meet requirements in US Space Command's Capstone Requirements Document and Operations Requirements Document. SBIRS will consist of satellites in Geosynchronous Earth Orbit (GEO) and payloads hosted on Highly Elliptical Orbit (HEO) satellites, an integrated centralized ground station serving all SBIRS space elements and Defense Support Program (DSP) satellites.

FY04 funding provides for the Fit-Up (procurement, test, installation, and checkout of the equipment and furnishings) for the SBIRS Mission Control Station Backup (MCSB). The Joint Requirements Oversight Council (JROC) approved the MCSB as the catastrophic peacetime backup to the SBIRS Mission Control Station (MCS) at Buckley Air Force Base (AFB), CO. The MCSB is a stand alone facility that is operationally a duplicate of the MCS with the exception of a Technical Intelligence Center (TIC) and nuclear detection capability. As such, it is capable of performing the SBIRS mission (missile warning, missile defense) and conducting tracking, telemetry, and commanding (TT&C) for the DSP and SBIRS GEO satellites. The location for the MCSB is Schriever AFB, CO. The MCSB is geographically separated from the MCS to avoid collateral weather outage, but near enough to the MCS for personnel to easily transition operations if necessary.

FY04 MCSB funds will procure Fit-Up, Government Furnished Equipment (GFE), System Engineering, Integration and Test (SEIT) support, and hardware and software licenses. MCSB Fit-Up funding will procure equipment and furnishings needed for site activation, pre-operational support, and other associated efforts. GFE funding will procure the Uninterruptable Power Supply (UPS), Defense Red Switching Network (DRSN), and other security measures. The FY04 need is due to the procurement lead time associated with some of the larger and more complex equipment items.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** SBIRS HIGH MISSION CONTROL STATION BACKUP (MCSB)

Description (continued):

Items requested in FY04 are identified on the following P-5 and are representative of items to be procured. Items procured during execution may change based on critical equipment needed to support current Air Force mission requirements.

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)		DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** SBIRS HIGH MISSION CONTROL STATION BACKUP (MCSB)	

WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY2002			FY2003			FY2004			FY2005		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
PRIME MISSION EQUIPMENT	A									68,121			
SYSTEM ENGINEERING										15,000			
HARDWARE/SOFTWARE LICENSES										5,600			
GOVERNMENT FURNISHED EQUIPMENT	A									6,700			
TOTALS:										95,421			

REMARKS:
Quantity and unit cost varies due to different types of equipment being procured.

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** SBIRS HIGH MISSION CONTROL STATION BACKUP (MCSB)

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
PRIME MISSION EQUIPMENT (1)									
FY04			HQ AFSPC	OPT/CPAF (2)	LOCKHEED MARTIN MISSILES & SPACE (LMMS)/SUNNYVALE, CA	JAN 04	JUN 04	Y	
GOVERNMENT FURNISHED EQUIPMENT (1)									
FY04			HQ AFSPC	OPT/CPAF (2)	LMMS/SUNNYVALE, CA	JAN 04	JUN 04	Y	

REMARKS:
1. Quantity and unit cost varies due to different types of equipment being procured.
2. Option to the SBIRS High contract with LMSS, Sunnyvale, CA, awarded Nov 96.

	P-1 ITEM NO 61		PAGE NO: 163		Page 1 of 1

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** NAVSTAR GPS SPACE

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$3,780	$12,983	$10,332	$10,326	$8,208	$5,306	$9,624	$21,192

Description:

The NAVSTAR Global Positioning System (GPS) satisfies validated joint service requirements for worldwide, accurate, common grid, three-dimensional positioning/navigation for military aircraft, ships, ground vehicles, and ground personnel. The system is comprised of three segments: (1) satellites, (2) a control network, and (3) user equipment (UE). The satellites broadcast high accuracy data using precisely synchronized signals that are received and processed by UE installed in military platforms i.e., B-1B, B-2, C-17, F-117A. The control network updates the navigation messages broadcast from the satellites to provide system vectors to target location or navigational way points. Air Force (AF) UE consists of 5-channel handheld sets, Precision Lightweight GPS Receivers (funded in Other Procurement, Air Force appropriation P-1 Item No 62), and 5-channel airborne sets (funded in Aircraft Procurement appropriation P-1 Item No 73). FY04 GPS funding provides for increased anti-jam capabilities on GPS user equipment and M-code UE development (M-code is new advanced military code that makes up part of GPS modernization capabilities).

1. PRECISION LIGHTWEIGHT GPS RECEIVER (PLGR): The PLGR is a lightweight, handheld GPS set that receives satellite signals and processes the data into precise position and velocity information. This non-developmental item supports Air Liaison Officers (ALOs), Forward Air Controllers (FACs), Explosive Ordnance Disposal Teams, Security Police, and Combat Control Teams (CCTs) by supplying precise position information on a universal grid reference system and time synchronization for anti-jam communications systems. The AF has lead service responsibility that include Army, Navy, and Marines for PLGR procurement. FY04 funding extends the PLGR warranties.

2. KEY DATA LOADING INSTALLATION FACILITY (KLIF)/GPS SECURITY DEVICE: FY04 funding provides for the programming of black key algorithms into Selective Availability Anti-Spoofing Module (SAASM) chips, providing an accurate positioning solution for GPS users using secure equipment. Funds will procure additional parts in support of Key Data Processors (KDP), ensuring uninterrupted support to SAASM vendors. SAASM vendors are required to use government provided KDP as part of the security architecture. FY04 funding procures additional hardware chips parts for KLIF.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** NAVSTAR GPS SPACE

Description (continued):

3. DEFENSE ADVANCED GPS RECEIVER (DAGR): DAGR, the follow-on to the PLGR, will be the next generation handheld self-contained GPS receiver with precise positioning using SAASM. It will be interoperable with existing PLGR interfaces and support equipment so present integration and support capabilities are minimally affected. DAGR will be primarily used in the stand alone mode, in wheeled and tracked vehicles, in airborne and air-drop operations, and in weapons integration. FY04 funding procures military secure handheld GPS receivers (i.e., DAGRs) for US forces in order for them to prosecute their mission.

4. HANDHELD TESTING SUPPORT: FY04 funding provides testing support for next-generation user equipment concepts (DAGR), as well as the current GPS handheld receiver (PLGR). Testing includes engineering change proposals, characterization, and product improvements for PLGR and DAGR.

5. ALTERNATE MASTER CONTROL STATION (AMCS): No FY04 funds are requested.

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)		DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** NAVSTAR GPS SPACE	

WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY2002			FY2003			FY2004			FY2005		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
NAVSTAR GPS				{3,780}			{12,983}			{10,332}			{10,326}
1. PLGR WARRANTY EXTENSION				782			121			117			44
2. KLIF/GPS SECURITY DEVICE				2,498			823			7,746			7,964
3. DAGR	A						3,109			2,269			2,118
4. HANDHELD TESTING SUPPORT				500			163			200			200
5. ALTERNATE MASTER CONTROL STATION (AMCS)	A						8,767						
TOTALS:				3,780			12,983			10,332			10,326

REMARKS:

	P-1 ITEM NO 62		PAGE NO: 166		Page 1 of 1

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** NAVSTAR GPS SPACE

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
3. DAGR									
FY03			AFSPC/SMC	C/FFP	ROCKWELL COLLINS, CEDAR RAPIDS, IA AND RAYTHEON SYSTEMS, EL SEGUNDO, CA	OCT 02	MAY 03		
FY04			AFSPC/SMC	OPT/FP W/OPT	ROCKWELL COLLINS, CEDAR RAPIDS, IA OR RAYTHEON SYSTEMS, EL SEGUNDO, CA	MAR 04	NOV 04	Y	
FY05			AFSPC/SMC	OPT/FP W/OPT	ROCKWELL COLLINS, CEDAR RAPIDS, IA OR RAYTHEON SYSTEMS, EL SEGUNDO, CA	JAN 05	JUN 05	Y	
5. ALTERNATE MASTER CONTROL STATION (AMCS)									
FY03			AFSPC/SMC	SS/CPFF	BOEING NORTH AMERICA, SEAL BEACH, CA	OCT 02	DEC 02		

REMARKS:

	P-1 ITEM NO 62		PAGE NO: 167		Page 1 of 1

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** NUDET DETECTION SYSTEM (NDS) SPACE

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$8,372	$7,860	$10,786	$7,594	$9,359	$12,299	$15,328	$26,367

Description:

The United States Nuclear Detonation (NUDET) Detection System (USNDS) provides a worldwide, highly survivable capability to detect, locate, and report nuclear detonations in the earth's atmosphere or in near space in near real-time. USNDS supports NUDET detection requirements for Air Force Space Command (AFSPC) {Integrated Tactical Warning and Attack Assessment (ITW/AA)}, US Strategic Command (USSTRATCOM) (Nuclear Force Management), and the Air Force Technical Applications Center (AFTAC) (Treaty Monitoring). USNDS consists of space and ground mission-processing segments. The space segment consists of NUDET detection sensors on both the Global Positioning System (GPS)/Nuclear Detonation System (NDS) satellites and the Defense Support Program (DSP)/NDS satellites. The ground mission processing segment consists of the Integrated Correlation and Display System (ICADS), Ground NDS Terminals (GNT), and the DSP/NDS Advanced Radiation Detection Units (ARDU). The increased requirement in FY04 is due to the alignment of the ground mission processing segment with the launch schedule. This allows time for the ground segment to be tested and ready for launch of the new generation GPS satellites. Launches are scheduled for FY03 - FY09.

The GNT processes raw NDS sensor data and is the only system that provides survivable NUDET detection, analysis, and reporting to the President, Congress, and Secretary of Defense. The ICADS receives daily navigation update messages and NUDET detection mission data from the satellites. Presently, the USNDS supports national level missions for the combatant commanders including USSTRATCOM, Air Combat Command (ACC), and AFTAC. NUDET reporting is required for the ITW/AA, Nuclear Force Management, and nuclear test ban treaty monitoring missions.

1. ICADS UPGRADE: The FY04 funding continues upgrades to include two NDS Antenna Systems (NAS), eight NDS Receiver Systems (NRS) for both forward sites and the contractor facility. FY04 funding starts the inclusion of DSP Neutron Gamma capabilities into ICADS with two new Advanced Radiation Detection Systems.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** NUDET DETECTION SYSTEM (NDS) SPACE

Description (continued):

2. GNT UPGRADES: FY04 will provide funding for two GNT test beds (1 system and 1 integration). These upgrades will provide the software update to support the new satellite capabilities. This upgrade also funds test equipment used to ensure upgrades are compatible on the test bed before you load it into the actual ground station.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** NUDET DETECTION SYSTEM (NDS) SPACE

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		QTY.	COST	QTY.	COST	QTY.	COST	QTY.	COST
1. ICADS UPGRADE	A		$7,510		$6,885		$8,192		$4,440
2. GNT UPGRADE	A		$862		$975		$2,594		$3,154
Totals:			$8,372		$7,860		$10,786		$7,594

Remarks:

	P-1 ITEM NO 63		PAGE NO: 170		Page 1 of 1

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** NUDET DETECTION SYSTEM (NDS) SPACE

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
1. ICADS UPGRADE (1) (2)									
FY02			AFMC/SMC	MIPR/OTH/OTH	DOE SANDIA NATIONAL LAB, ALBUQUERQUE, NM	DEC 01	DEC 03		
FY03			AFMC/SMC	MIPR/OTH/OTH	DOE SANDIA NATIONAL LAB, ALBUQUERQUE, NM	DEC 02	APR 03		
FY04			AFMC/SMC	MIPR/OTH/OTH	DOE SANDIA NATIONAL LAB, ALBUQUERQUE, NM	DEC 03	OCT 04	Y	
FY05			AFMC/SMC	MIPR/OTH/OTH	DOE SANDIA NATIONAL LAB, ALBUQUERQUE, NM	DEC 04	OCT 05	Y	
2. GNT UPGRADE (1) (2)									
FY02			HQ AFSPC	MIPR/OTH/OTH	DOE SANDIA NATIONAL LAB, ALBUQUERQUE, NM	DEC 01	DEC 03		
FY03			HQ AFSPC	MIPR/OTH/OTH	DOE SANDIA NATIONAL LAB, ALBUQUERQUE, NM	DEC 02	NOV 04		
FY04			HQ AFSPC	MIPR/OTH/OTH	DOE SANDIA NATIONAL LAB, ALBUQUERQUE, NM	DEC 03	AUG 05	Y	
FY05			HQ AFSPC	MIPR/OTH/OTH	DOE SANDIA NATIONAL LAB, ALBUQUERQUE, NM	DEC 04	MAY 07	Y	

REMARKS:
1. Unit costs and quantities vary due to multiple types of computer hardware being procured.
2. The contract type to the Department of Energy (DOE) Sandia National Laboratory is cost reimbursement.

	P-1 ITEM NO 63		PAGE NO: 171		Page 1 of 1

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** AIR FORCE SATELLITE CONTROL NETWORK SPACE

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$28,336	$44,627	$48,229	$44,112	$51,574	$50,483	$55,515	$59,796

Description:

The Air Force Satellite Control Network (AFSCN) is a global infrastructure of control centers, Remote Tracking Stations (RTS), and communications links that provide the highly reliable command, control, and communications range systems required to support the nation's surveillance, navigation, communications, and weather satellite operations. The AFSCN is the DoD common user network providing satellite state-of-health, tracking, telemetry, and commanding (TT&C) for the following operational satellite systems: Defense Meteorological Satellite Program (DMSP), Global Positioning System (GPS), Defense Satellite Communications System (DSCS), Defense Support Program (DSP), Fleet Satellite (FLTSAT), Military Strategic and Tactical Relay (MILSTAR) Satellite, Skynet, North Atlantic Treaty Organization (NATO), and classified program systems. The AFSCN also provides mandatory launch and early orbit tracking operations in support of all major US launches.

This project procures integrated mission critical electronics and telecommunications equipment for aging command, control and communications (C3), and range elements of the AFSCN. These technological upgrades will ensure DoD space systems will be operationally ready to support future Warfighting Commander requirements. Equipment requested for FY04 and described herein is representative of capability to be procured in support of AFSCN improvement and modernization.

AIR FORCE SATELLITE CONTROL NETWORK IMPROVEMENT AND MODERNIZATION (AFSCN I&M): AFSCN I&M is an on-going program of replacements and upgrades which will meet Air Force Space Command (AFSPC) operational requirements to replace non-standard, unsupportable equipment with commercial-off-the-shelf (COTS) and COTS-based hardware and software. This new equipment will dramatically reduce AFSPC satellite operations hardware/software (HW/SW) maintenance. Principal efforts within AFSCN I&M include:

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** AIR FORCE SATELLITE CONTROL NETWORK SPACE

Description (continued):

a. NETWORK OPERATIONS UPGRADES: Previously referred to as "Command & Control System (Network Operations) Upgrades" these efforts transition upgrade the current Electronic Schedule Dissemination (ESD) system to provide AFSCN resource monitoring and schedule dissemination capability. Network Operations Upgrades use integrated and pre-deployment-tested COTS HW and SW to the maximum extent possible. FY04 funds procure equipment for the Resource Scheduling System Upgrade.

b. RANGE AND COMMUNICATIONS UPGRADES: These efforts will transition the current, point-to-point AFSCN communications network to a distributed communications system that integrates government and commercial networks, and will upgrade the aging equipment at the Operational Control Nodes (OCNs) and RTSs. Several standardization efforts are being implemented to improve and modernize the communications and range segment elements of the AFSCN, including integrated pre-deployment HW/SW validation, antenna replacements, and equipment upgrades at the RTSs. AFSCN capacity, reliability, data quality, and user access will be significantly improved. FY04 funds will procure additional antenna systems and associated equipment as well as equipment to connect external users to the AFSCN resources.

c. INTERIM SUPPLY SUPPORT: FY04 funds will provide Interim Supply Support (ISS) to include support services and initial spares under the Reformed Supply Support Process (RSSP) for the Satellite Control Network Contract (SCNC) and to transition to government supply support.

d. OTHER CONTRACTOR SUPPORT: FY04 funds will procure other support to the system program office including, but not limited to: engineering, cost estimating, contract reconciliation, configuration management, and information technology support, as well as other similar efforts.

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)		DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** AIR FORCE SATELLITE CONTROL NETWORK SPACE	

WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY2002			FY2003			FY2004			FY2005		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
AFSCN I&M													
A. COMMAND & CONTROL SYSTEM (NETWORK OPERATIONS) UPGRADES	A						1,624			8,442			5,890
B. RANGE & COMMUNICATIONS UPGRADES	A			28,336			36,296			31,515			29,686
C. INTERIM SUPPLY SUPPORT										1,164			1,026
D. OTHER CONTRACTOR SUPPORT							6,707			7,108			7,510
TOTALS:				28,336			44,627			48,229			44,112

REMARKS:

	P-1 ITEM NO 64		PAGE NO: 174		Page 1 of 1

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** AIR FORCE SATELLITE CONTROL NETWORK SPACE

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
AFSCN I&M									
A. COMMAND & CONTROL SYSTEM (NETWORK OPERATIONS) UPGRADES (1)									
FY03			AFSPC/SMC	OPT/CPAF	HONEYWELL TECHNOLOGY SOLUTIONS, COLORADO SPRINGS, CO (2)	DEC 02	APR 03		
FY04			AFSPC/SMC	OPT/CPAF	HONEYWELL TECHNOLOGY SOLUTIONS, COLORADO SPRINGS, CO (2)	DEC 03	APR 04	Y	
FY05			AFSPC/SMC	OPT/CPAF	HONEYWELL TECHNOLOGY SOLUTIONS, COLORADO SPRINGS, CO (2)	DEC 04	APR 05	Y	
B. RANGE AND COMMUNICATIONS UPGRADES (1)									
FY02			AFSPC/SMC	C/CPAF	HONEYWELL TECHNOLOGY SOLUTIONS, COLORADO SPRINGS, CO (2)	DEC 01	AUG 02		
FY03			AFSPC/SMC	OPT/CPAF	HONEYWELL TECHNOLOGY SOLUTIONS, COLORADO SPRINGS, CO (2)	DEC 02	APR 03		
FY04			AFSPC/SMC	OPT/CPAF	HONEYWELL TECHNOLOGY SOLUTIONS, COLORADO SPRINGS, CO (2)	DEC 03	JUN 04	Y	
FY05			AFSPC/SMC	OPT/CPAF	HONEYWELL TECHNOLOGY SOLUTIONS, COLORADO SPRINGS, CO (2)	DEC 04	JUN 05	Y	

REMARKS:
1. Quantities and unit costs vary due to different types/configurations of equipment being procured. Delivery dates reflect first delivery date of multiple deliveries.
2. New Satellite Control Network Contract (SCNC) baseline awarded in Dec 01.

	P-1 ITEM NO 64		PAGE NO: 175		Page 1 of 1

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** SPACELIFT RANGE SYSTEM (SPACE)

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$128,414	$102,405	$80,635	$106,791	$94,186	$82,834	$122,971	$100,925

Description:

The Eastern Range (ER), at Patrick Air Force Base (AFB), FL, and the Western Range (WR), at Vandenberg AFB (VAFB), CA, are the nation's primary Spacelift Ranges. They provide tracking, telemetry, control, communications, flight analysis, and other capabilities necessary to safely conduct national security, civil, and commercial spacelift operations; intercontinental and sea-launched ballistic missile evaluations; and aeronautical and guided weapons tests. Many of the range assets are outdated, unreliable, inefficient, and costly to operate and maintain.

The Air Force (AF) is addressing range shortcomings through modernization and recapitalization efforts under the Spacelift Range System (SLRS) program, also known as the Launch and Test Range System (LTRS) program. Modernization meets documented requirements for a standardized and automated spacelift range system to support the evolving launch mission. Recapitalization replaces deficient, obsolete, and difficult to sustain equipment with more efficient and reliable equipment. Together, these efforts will improve range responsiveness to launch demands, enhance range safety, standardize logistics support, and reduce operations and maintenance costs. Funding for the associated RDT&E efforts is in Budget Activity 7, Operational Systems Development, PE 35182F, Project 674137.

The AF is implementing range modernization and recapitalization through two complementary contracts. First, the Range Standardization and Automation (RSA) Phase IIA program modernizes the control/display and communication segments of the ranges. Second, the Spacelift Range System Contract (SLRSC) modernizes the instrumentation segment of the ranges, and engineers and executes a proactive recapitalization process to replace hardware no longer efficient and sustainable. Beginning in FY04, the Air Force is descoping the RSA Phase IIA effort to support higher priorities and refocusing the SLRSC effort on sustainment and recapitalization with limited modernization. Modernization and recapitalization efforts identified herein are representative of the projects to be pursued during execution years, since changing operational requirements/priorities and reliability, maintainability, and availability (RMA) status will determine the final list of projects to be pursued during each execution year. Following are details of the FY04 program:

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** SPACELIFT RANGE SYSTEM (SPACE)

Description (continued):

1. RANGE STANDARDIZATION AND AUTOMATION (RSA) Phase IIA: The RSA Phase IIA program modernizes the control/display and communications segments, to include: planning and scheduling; metric tracking; flight safety; digital telemetry; communications; and weather equipment. The AF will complete procurement for this effort in FY04.

FY04 funds will complete RSA Phase IIA, to include final Interim Contractor Support, and Interim Supply Support (ISS), such as: support services; the spares transition package; any required reprocurement data; and transition common spares.

2. SPACELIFT RANGE SYSTEM CONTRACT (SLRSC): The SLRSC completes range modernization efforts and implements proactive recapitalization efforts. It procures an integrated suite of automated instrumentation with associated test and interface equipment, downrange remote control assets, and follow-on control and display and communications systems, to complete the modernization effort. Also, it executes recapitalization projects to fix equipment deficiencies, replace aging equipment, control obsolescence, reduce reliance on diminishing manufacturing resources, eliminate single points of failure, and reduce support costs. The recapitalization projects are based on collection and analysis of reliability, maintainability, and availability (RMA) data; prioritization of deficiencies by the range operators; and conformance with the SLRS architecture, to achieve the best overall return on investment.

FY04 modernization funds will continue to procure fixed and mobile telemetry equipment and fixed and mobile command equipment. Associated test and interface equipment necessary to link instrumentation to the network segment and control and display segment will be procured to implement the SLRS architecture. Funds will buy interface equipment to support activation of the Western Range Operations Control Center. Additionally, funds will pay for ISS which include support services, the spares transition package, any required reprocurement data and transition common spares. (Note: Initial spares in this line are for new systems being procured under current modernization contracts. Spares for legacy range systems procured under earlier contracts are included in the Spares and Repair Parts line, P-1 Item No. 106.)

FY04 recapitalization efforts will include, but are not limited to: continued deactivation of Titan sites and removing/reposition of communications equipment; replacement of graphic work stations; replacement of metric data display systems; continuing upgrade of the "Fail Safe" holdfire capability and range data circuit modems; replacement of GPS receivers; replacement of lighting warning system; replacement of site computers; upgrading of count distribution system; upgrade of telemetry encoders; lay-in of fiber optic lines for saturated

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** SPACELIFT RANGE SYSTEM (SPACE)

Description (continued):

backbone, improvement and integration of flight safety systems; replacement of penril modems and replacement of shuttle landing facility meteorological sensors. Additionally, FY04 funds will pay for ISS, to include: support services; the spares transition package; any required reprocurement data; and transition common spares.

3. OTHER CONTRACTOR SUPPORT: Other contractor support to the system program office includes, but is not limited to: engineering; cost estimating; contract reconciliation; configuration management; and information technology support, as well as other similar efforts. FY04 funds continue this contractor support.

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)		DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** SPACELIFT RANGE SYSTEM (SPACE)	

WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY2002			FY2003			FY2004			FY2005		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
1. RSA PHASE IIA				{32,634}			{16,733}			{14,307}			
EQUIPMENT/HARDWARE/SOFTWARE	A			22,469			4,916						
INTERIM CONTRACTOR SUPPORT (ICS)				9,133			10,413			10,678			
INTERIM SUPPLY SUPPORT (ISS)				529			720			1,861			
TRANSITION PACKAGE				503			684			1,768			
2. SPACELIFT RANGE SYSTEM CONTRACT (SLRSC)				{84,486}			{66,737}			{54,258}			{93,758}
EQUIPMENT/HARDWARE/SOFTWARE	A			44,070			27,853			19,590			48,000
INTERIM SUPPLY SUPPORT (ISS)				5,425			3,478			3,107			7,752
RECAPITALIZATION				34,991			29,672			26,900			33,076
RECAP INTERIM SUPPLY SUPPORT (ISS)							5,734			4,661			4,930
3. OTHER CONTRACTOR SUPPORT				{11,294}			{18,935}			{12,070}			{13,033}
PROGRAM SUPPORT (1)				11,294			18,935			12,070			13,033
TOTALS:				128,414			102,405			80,635			106,791

REMARKS:

1. Program support previously included in the RSA IIA and LRSC contract cost. This was changed to combine RSA IIA and LRSC other contractor support into one item.

	P-1 ITEM NO 65		PAGE NO: 179		Page 1 of 1

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** SPACELIFT RANGE SYSTEM (SPACE)

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
1. RSA PHASE IIA (1) (2)									
EQUIPMENT/HARDWARE/SOFTWARE									
FY 02			AFSPC/SMC	OPT/CPAF	LOCKHEED MARTIN, SANTA MARIA, CA	OCT 01	JAN 02		
FY 03			AFSPC/SMC	OPT/CPAF	LOCKHEED MARTIN, SANTA MARIA, CA	NOV 02	JAN 03		
2. SPACELIFT RANGE SYSTEM CONTRACT (SLRSC) (1) (3)									
EQUIPMENT/HARDWARE/SOFTWARE									
FY 02			AFSPC/SMC	OPT/CPAF	ITT INDUSTRIES, CAPE CANAVERAL, FL	MAR 02	JUL 02		
FY 03			AFSPC/SMC	OPT/CPAF	ITT INDUSTRIES, CAPE CANAVERAL, FL	NOV 02	FEB 03		
FY04			AFSPC/SMC	OPT/CPAF	ITT INDUSTRIES, CAPE CANAVERAL, FL	DEC 03	APR 04	Y	
FY 05			AFSPC/SMC	OPT/CPAF	ITT INDUSTRIES, CAPE CANAVERAL, FL	DEC 04	APR 05	Y	

REMARKS:

1. The quantities vary due to numerous increments of products being delivered across fiscal years. Additionally, unit costs vary because of different types/configurations of equipment being procured. Dates shown for each FY reflect first contract option award and delivery date for the contract in that fiscal year.
2. The RSA Phase IIA contract, awarded in FY96, includes hardware procurement options, along with integration and interim contractor support activities. The contract has multiple options for various related product items.
3. The SRLSC has modernization options from FY02 through FY07 and additional systems engineering and depot level maintenance options through FY10. The contract has multiple options for various product items and depot level maintenance .

	P-1 ITEM NO 65		PAGE NO: 180		Page 1 of 1

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** MILSATCOM SPACE

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$15,221	$21,489	$42,329	$131,060	$110,600	$90,288	$114,108	$121,990

Description:

Military Satellite Communications (MILSATCOM) joint-service systems collectively provide a broad range of satellite communication capabilities, including secure, jam-resistant, 24-hour worldwide communications to meet essential strategic, tactical, and general-purpose operational requirements. MILSATCOM Terminals support communication requirements for the President and Secretary of Defense, Unified and Specified Combatant Commanders, uniformed services, and defense agencies. Refer to Research, Development, Test, & Evaluation (RDT&E) Budget Justification Exhibits for Program Element (PE) 0303601F for more information on terminal development efforts, except where otherwise noted. The decrease in FY04 funding from last year's submission is due to the delay in Ground Multiband Terminal (GMT) production from FY04 until FY05.

1. SINGLE-CHANNEL ANTI-JAM MAN-PORTABLE (SCAMP) TERMINALS: No FY04 funding is requested.

2. SECURE MOBILE ANTI-JAM RELIABLE TACTICAL TERMINALS (SMART-T): SMART-T is a multi-channel tactical communications platform designed by the US Army for use with Milstar extremely high frequency (EHF) satellites, capable of transmitting/receiving low data rate (LDR) and medium data rate (MDR) voice, data, video, and facsimiles. The Air Force (AF) procurement of SMART-T supports Pacific Air Forces (PACAF), US Air Forces in Europe (USAFE), Air Combat Command (ACC), AF Special Operations Command (AFSOC), and US Central Command (USCENTCOM) communications requirements. FY04 funds are for terminals and related items for USCENTCOM.

3. ULTRA HIGH FREQUENCY (UHF) SATELLITE COMMUNICATIONS (SATCOM) TERMINALS: No FY04 funding is requested.

4. SUPER HIGH FREQUENCY (SHF) TERMINALS: SHF terminals operate over the Defense Satellite Communications System (DSCS) and Wideband Gapfiller Satellite System (WGS) to support the command and control requirements of unified and specified Combatant

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** MILSATCOM SPACE

Description (continued):

Commanders and the connectivity requirements of the President, Secretary of Defense, State Department, US strategic and tactical forces, the North Atlantic Treaty Organization (NATO), and United Kingdom Skynet network. The AF is responsible for procuring terminal equipment for selected locations that form part of the ground segment for large terminals. FY04 funds procure equipment to modernize DSCS, the Jam-Resistant Secure Communications (network provides jam-resistant, secure, nuclear-effects-protected MILSATCOM connectivity between selected Department of Defense (DoD) facilities, the President, Secretary of Defense and nuclear Combatant Commanders) subnet, sensor sites and DSCS hub stations, and to leverage WGS capabilities and interoperability with the Army, Navy, AF, and the State Department. Equipment procurement includes ground terminal modernization kits, fiber optic modems, patch panels, timing sources, interconnect facility links, and equipment facilities.

5. GLOBAL BROADCAST SERVICE (GBS): This AF-led joint program implements a worldwide high-capacity satellite broadcast information system to provide a continuous one-way high-speed, high-volume flow of classified and unclassified data and imagery to garrisoned, deployed, or moving forces. GBS reduces DoD reliance on costly leased commercial satellite communications. GBS Receive Suites and Theater Injection Points will provide lower-echelon AF users with efficient high-data-rate in-theater and reachback connectivity to many distributed information sources via satellite-hosted GBS packages. See also the RDT&E Budget Item Justification Sheet for Program Element 0603840F.

a. GBS RECEIVE SUITES: The receive suites link users to information sources via GBS payloads hosted on UHF Follow-on (UFO) satellites offering near-worldwide service. FY04 funds procure ground receive suites, upgrades, integration and installation, training, technical manual updates, systems engineering, and program support.

b. THEATER INJECTION POINTS (TIP): The TIP is a ground mobile satellite transmit suite transportable via two Heavy High Mobility Multi-purpose Wheeled Vehicles (HHMMWV). The TIP provides the Joint Force Air Component Commander one-way high capacity connectivity to supply lower echelon wings/squadrons/bases with intelligence dissemination, air tasking order transmission, unmanned aerial vehicle videos, and other information critical to the conduct of air campaigns. FY04 funds procure TIPS, system engineering, and program support.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** MILSATCOM SPACE

Description (continued):

c. WIDEBAND GAPFILLER SATELLITE (WGS) TRANSMIT SUITE: Funds provide for procurement of new or modified uplink terminals and GBS Satellite Broadcast Manager (SBM) capability to support injection of GBS broadcast data. The existing GBS Transmit Suites are dedicated to the support of UFO/GBS satellites. The WGS uplink terminals are dedicated to the support of WGS satellites and will provide connectivity from the GBS SBMs to WGS satellites for broadcast of GBS data to users worldwide. The acquisition effort will include hardware procurement, integration, and system installation and checkout. FY04 funds provide for uplink terminals and upgrade the SBMs to insert unique information products through the UFO and WGS satellites. See also Budget Project Activity Codes 644870 in the RDT&E Budget Item Justification Sheet for Program Element 0603854F, WGS, and PE 0603840F, GBS.

6. COMMAND & CONTROL SYSTEM - CONSOLIDATED (CCS-C): CCS-C will continue MILSATCOM satellite command and control capabilities after the Air Force Satellite Control Network CCS basic sustainment contract ends in FY03, providing automated control of satellite launch and on-orbit operations for existing satellites (DSCS and Milstar) and systems in development (WGS and Advanced Extremely High Frequency [AEHF]). FY04 funds procure CCS-C production commercial-off-the-shelf (COTS) hardware and software for command and control strings, including computers, workstations, servers, cabling, equipment, and interim contractor support. Production equipment being procured is vital to replacing the existing CCS with the CCS-C system. Failure to provide this equipment will result in $30-$40M a year cost to sustain CCS, prevent AF after launch operations of the WGS, and delay AEHF launch dates due to lack of equipment to support AEHF launch and post launch operations. See also Budget Project Activity Code 644870 in the RDT&E Budget Item Justification Sheet for Program Element 0603854, Wideband Gapfiller System (Space).

7. GROUND MULTI-BAND TERMINAL (GMT): No FY04 funding is requested.

8. RIVET JOINT AEHF SATCOM TERMINALS: No FY04 funding is requested.

9. COUNTERSPACE: No FY04 funding is requested.

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)		DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** MILSATCOM SPACE	

WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY2002			FY2003			FY2004			FY2005		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
1. SCAMP TERMINALS													{7,300}
UPGRADES	A												3,491
WARRANTY													3,600
PROGRAM SUPPORT													209
2. SMART-T										{3,874}			{23,969}
TERMINALS	A									1,600			
UPGRADES	A												23,493
PROGRAM SUPPORT										593			476
WARRANTY										400			
ANCILLIARY EQUIP	A									1,281			
3. UHF SATCOM TERMINALS				{6,862}									
PROGRAM SUPPORT				664									
TERMINAL UPGRADES/ANCILLIARY EQUIP	A			5,268									
SYSTEM ENGINEERING				930									

	P-1 ITEM NO 66		PAGE NO: 184		Page 1 of 3

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)		DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** MILSATCOM SPACE	

WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY2002			FY2003			FY2004			FY2005		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
4. SHF TERMINALS				{1,467}						{2,447}			{3,500}
SHF EQUIPMENT	A			1,467						2,447			3,500
5. GBS				{6,892}			{15,946}			{27,899}			{15,793}
A. GBS RECEIVE SUITES				{6,892}			{13}			{12,616}			{12,203}
RECEIVE SUITES (1)	A			4,836						6,998			8,480
UPGRADES										2,255			186
INTEGRATION & INSTALLATION				858						1,610			1,855
SYSTEM ENGINEERING				922						1,158			1,181
PROGRAM SUPPORT				276			13			595			501
B. TIPS	A									3,419			3,590
C. WGS TRANSMIT SUITES (1)	B						15,933			11,864			
6. CCS-C							{5,543}			{8,109}			{2,135}
HARDWARE/SOFTWARE STRINGS	B						5,543			8,109			2,135

	P-1 ITEM NO 66		PAGE NO: 185		Page 2 of 3

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)		DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** MILSATCOM SPACE	

WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY2002			FY2003			FY2004			FY2005		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
7. GROUND MULTIBAND TERMINALS (2)													{77,187}
GROUND TERMINALS	B												72,805
SYSTEM ENGINEERING													2,757
PROGRAM SUPPORT													1,625
8. RIVET JOINT AEHF SATCOM TERMINALS													{863}
SYSTEM ENGINEERING													863
9. COUNTERSPACE													{313}
SYSTEM ENGINEERING													313
TOTALS:				15,221			21,489			42,329			131,060

REMARKS:

1. Unit costs vary based on configurations and quantities purchased.
2. Ground Multiband Terminal unit costs vary based on terminal/antenna configurations and quantities purchased.

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** MILSATCOM SPACE

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
1. SCAMP TERMINALS									
UPGRADES									
FY05			AFMC/ESC	MIPR/OPT/FFP	ARMY CECOM/ROCKWELL, CEDAR RAPIDS, IA	JAN 05	AUG 05	N	JAN 05
2. SMART-T									
TERMINALS									
FY04			AFMC/ESC	MIPR/OPT/FFP	ARMY CECOM/RAYTHEON, MARLBOROUGH, MA	JAN 04	AUG 04	Y	
UPGRADES									
FY05			AFMC/ESC	MIPR/OPT/FFP	ARMY CECOM/RAYTHEON, MARLBOROUGH, MA	JAN 05	AUG 05	N	JAN 05
3. UHF SATCOM TERMINALS									
TERMINAL UPGRADES/ANCILLIARY EQUIP									
FY02			AFMC/ESC	MIPR/C/FFP	MULTIPLE (1)	DEC 01	FEB 02		
4. SHF TERMINALS									
SHF EQUIPMENT									
FY02			AFMC/ESC	MIPR/C/FFP	MULTIPLE (1)	DEC 01	FEB 02		
FY04			AFMC/ESC	MIPR/C/FFP	MULTIPLE (1)	DEC 03	FEB 04	Y	
FY05			AFMC/ESC	MIPR/C/FFP	MULTIPLE (1)	DEC 04	FEB 05	Y	

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** MILSATCOM SPACE

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
5. GBS									
A. GBS RECEIVE SUITES (3)									
RECEIVE SUITES									
FY02			AFMC/ESC	OPT(2)/FFP	RAYTHEON, RESTON, VA	JUN 02	FEB 03		
FY04			AFMC/ESC	OPT(2)/FFP	RAYTHEON, RESTON, VA	JAN 04	AUG 04	Y	
FY05			AFMC/ESC	OPT(2)/FFP	RAYTHEON, RESTON, VA	JAN 05	AUG 05	Y	
B. TIPS									
FY04			AFMC/ESC	MIPR/OPT (4)/FFP	RAYTHEON, RESTON, VA	JAN 04	SEP 04	Y	
FY05			AFMC/ESC	MIPR/OPT (4)/FFP	RAYTHEON, RESTON, VA	JAN 05	SEP 05	Y	
C. WGS TRANSMIT SUITES									
FY03			AFSPC/SMC	C/FFP	RAYTHEON, RESTON, VA	DEC 02	NOV 03		
FY04			AFSPC/SMC	OPT/FFP	RAYTHEON, RESTON, VA	JAN 04	NOV 04	N	DEC 03
6. CCS-C									
HARDWARE/SOFTWARE STRINGS									
FY03			AFSPC/SMC	C/FFP	INTEGRAL SYS INC., LANHAM MD	NOV 02	FEB 03		
FY04			AFSPC/SMC	OPT/FFP	INTEGRAL SYS INC., LANHAM MD	NOV 03	NOV 03	N	SEP 03
FY05			AFSPC/SMC	OPT/FFP	INTEGRAL SYS INC., LANHAM MD	NOV 04	NOV 04	N	SEP 04

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** MILSATCOM SPACE

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
7. GROUND MULTI-BAND TERMINALS (5)									
GROUND TERMINALS									
FY05			AFMC/ESC	OPT (6)/FFP	HARRIS CORP., MELBOURNE FL	JAN 05	AUG 05	N	NOV 04

REMARKS:

1. Multiple contractors through multiple government agencies (GSA, DLA, NSA, Army CECOM, or individual bases depending on requirements) with multiple contract award/delivery dates. Award/delivery dates reflect first award and delivery dates.
2. Options to the basic development contract awarded in Nov 97.
3. GBS receive suite unit costs vary based on configurations and quantities purchased.
4. Options to the Army contract executed through the DATA Exchange. Funding will be sent via MIPR to ARMY CECOM
5. GMT unit costs vary based on terminal/antenna configurations and quantities purchased.
6. Fixed price procurement option to GMT basic RDT&E contract awarded Jun 01.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** SPACE MODS SPACE

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$28,465	$14,497	$30,747	$16,931	$17,146	$15,705	$9,220	$9,198

Description:

Permanent modifications are configuration changes to in-service systems and equipment which correct materiel or other deficiencies, or which add or delete capability. Safety modifications correct deficiencies that produce hazards to personnel, systems, or equipment. This budget line encompasses both new and on-going modification efforts for space equipment and systems. Modification installation funding is budgeted in the year the installation occurs.

1. NAVSTAR GLOBAL POSITIONING SYSTEM (GPS): The NAVSTAR GPS is a space-based radio navigation, time distribution, and nuclear detonation (NUDET) detection system (NDS). The GPS mission is to provide highly accurate position, velocity, timing, and NUDET information to properly equipped air, land, sea, and space-based users worldwide. The GPS system consists of four segments: Space Segment (SS), Operational Control Segment (OCS), Navigation User Segment (NUS), and Nuclear Detection Segment (NDS). The OCS segment requires modifications (described below) to replace high failure rate parts and preclude system operational degradation. Without these modifications, aging and obsolete equipment will continue to fail excessively and degrade system operational availability and inaccurate navigation data will be transmitted to worldwide users, resulting in potential loss of life and/or operational equipment, including multi-million dollar satellites.

A. MOD #T7215, MONITOR STATION TIMING SUBSYSTEM ENHANCEMENT (MSTSE): No FY04 funding is requested.

B. MOD # TBD, VERSION V MASTER CONTROL STATION (MCS) UPGRADE: No FY04 funding is requested.

C. MOD #T7199, HIGH POWER AMPLIFIER (HPA): This modification will replace existing Klystrons (an evacutated electron tube) and increase the mean time between failure (MTBF) to approximately 8,000 hours. If not funded, downtime due to Klystron failures will continue to increase, resulting in the inability to upgrade navigation data and satellite commands to the GPS constellation. Inaccurate navigation data will

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** SPACE MODS SPACE

Description (continued):

be transmitted to worldwide civilian and military users resulting in potential losses of life and/or operational equipment. FY04 funds continue system integration.

D. MOD # S5000102401, BLACK SHELTER EQUIPMENT UPGRADE: This modification replaces obsolete, unsupportable electronic equipment (radio-frequency power meters, data acquisition control unit, command decoder, baseband assembly, distribution amplifier, Timing Frequency Standard (TFS) receivers, echo receiver, and servo control unit) with versabus-module eurocard (VME) based (or similar) equipment. VME based equipment increases compatibility with the new control segment architecture and increases overall reliability and maintainability (R&M) of individual components. FY04 funds procure 7 kits and provide for installation of 1 kit in the lab.

E. MOD # TBD, MISC LOW COST MOD, AUTOMATED MASTER CONTROL STATION (AMCS) COMMUNICATIONS INFRASTRUCTURE SUPPORT UPGRADE: This modification provides for mission crypto equipment, communications equipment, Defense Information Systems Network (DISN) system changes, and administration communications peripheral equipment at the AMCS. This equipment and infrastructure is required to support AMCS connectivity at Schriever Air Force Base (AFB), CO, and National Imagery and Mapping Agency (NIMA) sites. The support upgrade line also provides for in-process engineering change proposal (ECP) changes required to keep the AMCS consistent with modifications historically made to the MCS. This modification provides for the impact analysis, identification of requirements, and integration of requirements into the AMCS baseline. Without these upgrades, the AMCS will not be able to communicate with Schriever AFB, CO, and the NIMA sites. This will prevent the AMCS from standing up in the event of the MCS going down. Additionally, data from NIMA sites will not be incorporated into AMCS Kalman filter resulting in a degraded GPS signal over time. FY04 funds procure the upgrades for the AMCS.

F. MOD # TBD, OCS V6 SITE MODIFICATION (SNAPM/SAASM): No FY04 funding is requested.

G. MOD # TBD, MONITOR STATION ENVIRONMENTAL SENSOR: No FY04 funding is requested.

H. MOD # TBD, COMMERCIAL OFF THE SHELF (COTS) INTEGRATION EQUIPMENT UPGRADE: No FY04 funding is requested.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** SPACE MODS SPACE

Description (continued):

2. 474N SEA LAUNCHED BALLISTIC MISSILE (SLBM) DETECTION AND WARNING SYSTEM: The 474N SLBM Detection and Warning System consists of the AN/FPQ-16 Perimeter Acquisition Radar Attack Characterization System (PARCS) and the AN/FPS-123 PAVE PAWS System (Phased Array Radars for SLBM Detection and Warning System). The primary mission is to provide the Cheyenne Mountain Complex (CMC), CO, with credible tactical warning/attack assessment (TW/AA) data on all SLBMs penetrating the coverage area. This data includes an estimation of launch and impact locations and times. The secondary mission is to provide the CMC and other users with TW/AA data on inter-continental ballistic missiles (ICBMs) penetrating the coverage area. Additionally, PAVE PAWS and PARCS support the Space Surveillance Network by providing space vehicle surveillance, tracking, and identification as required by the Space Surveillance Center and the Joint Space Intelligence Center. The sensors have an operational availability requirement of 98 percent. PAVE PAWS consists of two operational sites: Site I at Cape Cod, MA, and Site II at Beale AFB, CA.

A. AN/FPQ-16 PERIMETER ACQUISITION RADAR ATTACK CHARACTERIZATION SYSTEM (PARCS): The AN/FPQ-16 radar sensor and the AN/FSQ-100 Data Processing System (DPS) are the two major subsystems which comprise the PARCS system at Cavalier AFB, ND. The PARCS is a single faced, long range phased array radar whose primary mission is to provide tactical warning and assessment of SLBM and ICBM attack against North America. This one-of-a-kind system was originally developed in the early 1970's, and has operated continuously since 1977.

(1) MOD #S626182, PARCS IMPROVED TRANSMITTER MONITORING SYSTEM (ITMS): No FY 04 funds are requested.

(2) MOD #S532492, PARCS DISPLAY UPGRADE: This modification replaces unsupportable and unreliable display subsystem equipment. This equipment is composed of unique, custom-built components that became obsolete in the early 1980's. Parts for this equipment are no longer available. Site operations have continued through cannibalization from spares and training consoles. Prior year funds purchased support with ITT Industries to engineer, produce, install, and test functional replacement equipment. FY04 funds provide for installation and test as well as Interim Supply Support (ISS) and Program Support.

(3) MOD #S532496, PARCS MAINTENANCE & DIAGNOSTICS SUBSYSTEM (M&DS) UPGRADE: The M&DS provides the only

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** SPACE MODS SPACE

Description (continued):

fault detection and isolation capability for the prime mission computer and its associated data processing equipment. Most important, the M&DS is used to re-initialize the computer in the event of a shutdown. This upgrade will eliminate the need for the 1960s-technology CDC 1702 computer, 8-track tapes, line printers, teletypes, disk drives and punch card readers. This upgrade also eliminates the Data Transmission Controller and upgrades the Digital Data Group to eliminate the M&DS interface. This equipment is not only obsolete but has a high risk of operational non-supportability due to vanishing vendors. FY04 funds provide for installation and checkout of the hardware and engineering and production of the first Digital Data Group modification. Failure to upgrade this equipment increases the risk that catastrophic failure will cause excessive downtime while site technicians manually troubleshoot the mission computer or load punch tapes to bring the computer back on-line. Ultimately, this failure would prevent PARCS from performing its missile warning and space surveillance mission. In addition, FY04 funding provides for ISS and Program Support.

B. PAVE PAWS: No FY04 funds are requested.

3. 496L SPACETRACK NETWORK: The 496L SPACETRACK Network modification is comprised of the AN/FSD-3 (formerly AN/FSQ-114) Ground-based Electro-Optical Deep Space Surveillance (GEODSS) System. The SPACETRACK Network provides data on near-earth and deep space objects to constantly update the CMC satellite catalog. The system also performs critical early warning and tracking of potential threats to North America, and assessment and characterization of potential atmospheric, ballistic missile, and space attacks.

A. AN/FSD-3 GROUND-BASED ELECTRO-OPTICAL DEEP SPACE SURVEILLANCE (GEODSS) SYSTEM. GEODSS is a segment of the SPACETRACK Network that provides metric track data and deep space object identification (SOI) to the CMC. More specifically, the primary mission of GEODSS is to provide the Space Control Center (SCC) with observational (metric) data on deep-space satellites and optical characteristic information as tasked by the Combined Intelligence Center (CIC). GEODSS also supports command mission responsibilities for cataloging and maintenance of deep-space satellite payloads and debris, new foreign launch (NFL) orbit determination, and mission assessment, and collision avoidance taskings.

(1) MOD #83679D, GEODSS CHARGE-COUPLED DEVICE (CCD) CAMERA: FY04 funds provide for production, testing, and fielding of 10 CCD cameras which replace Ebsicon tubes no longer manufactured or supported by any vendor. The current supply of Ebsicon

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** SPACE MODS SPACE

Description (continued):

tube spares will be exhausted during FY04. Funds also provide for sensor controller hardware and associated software modifications, and Modular Precision Absolute Control System (MPACS) replacement, critical to the CCD modification. The MPACS is the telescope mount control system that enables the tracking of space objects that have constant velocity or apparent acceleration. Replacement of the MPACS will improve reliability, maintainability, and supportability by replacing antiquated 1970's equipment with modern technology.

B. NAVY SPACE SURVEILLANCE SYSTEM (NSSS): NSSS includes both the Navy Space Surveillance Fence and the Alternate Space Control Center (ASCC). The NSSS is a segment of the SPACETRACK Network scheduled to be transferred from the Navy to the Air Force in FY04. The radar generates a radio frequency (RF) "fence" which can detect earth orbiting objects passing through it out to 15,000 nautical miles; it provides this data to the SCC in support of the space surveillance mission. The ASCC serves as the operational backup to the primary SCC in the CMC. The NSSS supports AF Space Command (AFSPC) mission responsibilities for cataloging and maintenance of satellite payloads and debris, new foreign launch (NFL) orbit determination, and collision avoidance.

(1) MOD #TBD, NAVY SPACE SURVEILLANCE SYSTEM (NSSS): FY04 funds will provide for transferral of the ASCC from the Navy to the Air Force.

Modifications requested in FY04 are identified on the following P-5 and are representative of configuration changes/deficiency corrections to be accomplished. Modifications procured during execution may change based on critical changes/corrections needed to support current Air Force mission requirements.

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)		DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** SPACE MODS SPACE	

WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY2002			FY2003			FY2004			FY2005		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
1. NAVSTAR GPS				{10,257}			{4,551}			{12,495}			{13,251}
A. MSTSE (MOD # T7215)	A			5,070									
B. VERSION V MCS UPGRADE (MOD # TBD)	A			5,187			3,370						
C. HPA (MOD #T7199)	A						1,181			6,107			
D. BLACK SHELTER EQUIP UPGRADE (MOD #S5000102401)	A									6,088			5,314
E. AMCS COMM INFRASTRUCTURE SPT UPGRADE (MOD #TBD)	A									300			
F. OCS V6 SITE MOD (MOD #TBD)	A												607
G. MONITOR STATION ENVIRONMENTAL SENSOR (MOD #TBD)	A												1,160
H. COTS INTEGRATION EQUIP UPGRADE (MOD #TBD)	A												6,170
2. 474N SLBM DETECTION AND WARNING SYSTEM				{9,506}			{3,899}			{3,630}			{3,680}
A. PARCS				{3,534}			{3,662}			{3,630}			{3,680}
(1) PARCS ITMS (MOD #S626182)				{1,165}			{379}						
PRODUCTION AND INSTALLATION	A			1,088			367						
INTERIM SUPPLY ACTIVITY				20									
PROGRAM SUPPORT				57			12						
(2) PARCS DISPLAY UPGRADE (MOD #S532492)				{2,369}			{1,009}			{507}			

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)		DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** SPACE MODS SPACE	

WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY2002			FY2003			FY2004			FY2005		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
PRODUCTION AND INSTALLATION	A			2,233			823			407			
INTERIM SUPPLY SUPPORT							85			50			
PROGRAM SUPPORT				136			101			50			
(3) PARCS M&DS UPGRADE (MOD #S532496)							{2,274}			{3,123}			{3,680}
PRODUCTION AND INSTALLATION	A						2,206			2,904			3,314
INTERIM SUPPLY SUPPORT										50			200
PROGRAM SUPPORT							68			169			166
B. PAVE PAWS				{5,972}			{237}						
SERVICE LIFE EXTENSION PROGRAM				5,412			41						
INTERIM SUPPLY SUPPORT				50									
PROGRAM SUPPORT				510			196						
3. 496L SPACETRACK NETWORK				{8,702}			{6,047}			{14,622}			
A. AN/FSD-3 GEODSS SYSTEM				{8,702}			{6,047}			{5,069}			
(1) GEODSS CCD CAMERA (MOD #83679D)	A			8,702			6,047			5,069			
B. NSSS (MOD #TBD)	A									9,553			
TOTALS:				28,465			14,497			30,747			16,931

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)		DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** SPACE MODS SPACE	

WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY2002			FY2003			FY2004			FY2005		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST

REMARKS:

INDIVIDUAL MODIFICATIONS (EXHIBIT P- 3A) | **DATE:** FEBRUARY 2003

Modification Title and No: High Power Amplifier (HPA) #T7199

Models of Systems Affected: Operational Control System (OCS)

Description/Justification: The GPS remote site Ground Antennas (GA) use a Klystron Tube amplifier to prepare the upload signal for transmission to the GPS satellites. These Klystrons are becoming increasingly unsupportable with a current Mean-Time-Between-Failures (MTBF) of 589 hours. This modification will replace the existing Klystrons and increase the MTBF to approximately 8,000 hours. If not funded, downtime due to Klystron failures will continue to increase, resulting in inability to upload navigation data and satellite commands to the GPS constellation. Inaccurate navigation data will be transmitted to worldwide civilian and military users resulting in potential loss of life and/or operational equipment, including multi-million dollar satellites. FY03 funds procure the design and lab kit. FY04 funds procure the remaining 5 kits and installation. .

Development Status/Major Development Milestones: Design Review - APR 03; Provisioning - JUN 03; Formal Qualification Testing (FQT) - DEC 03; Full Operational Capability - DEC 04.

Financial Plan $ (in Millions)	PY		FY2002		FY2003		FY2004		FY2005		FY2006		TOTAL	
	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost
RDT&E														
Ref. R-1 PE No:													0	
Procurement:														
Equipment Kits					1	0.500	5	2.500					6	3
Equipment Kits Non-recurring						0.118		1.176					0	1.294
Engineering Change Orders													0	
Data								0.563					0	0.563
Training Equipment													0	
Support Equipment								0.068					0	0.068
Software						0.563							0	0.563
Interim Contractor Support													0	
Other													0	
Total Procurement Costs:	0		0		1	1.181	5	4.307	0		0		6	5.488
Hardware Installation:														
(PY) Eqpt (Kits)													0	
(FY02) Eqpt (Kits)													0	
(FY03) Eqpt (1 Kits)							1	0.300					1	0.3
(FY04) Eqpt (5 Kits)							5	1.500					5	1.5
(FY05) Eqpt (Kits)													0	
(FY06) Eqpt (Kits)													0	
Total Installation Costs:	0		0		0		6	1.8	0		0		6	1.8
Total Modification Costs:	0		0		1	1.181	5	6.107	0		0		6	7.288

Method of Installation: CONTRACTOR, FIELD INSTALL

Administrative Lead-time (After 1 Oct): 2 Month(s)

Production Lead-time: 3 Month(s)

Contract Date:	PY		FY2002		FY2003	APR 03	FY2004	NOV 03	FY2005		FY2006	
Delivery Date:	PY		FY2002		FY2003	JUL 03	FY2004	FEB 04	FY2005		FY2006	

Installations:	PY	FY2002				FY2003				FY2004				FY2005				FY2006				Total
		1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	
Input									1		5											6
Output											2	2	2									6

P-1 ITEM NO: 67

PAGE NO: 198

INDIVIDUAL MODIFICATIONS (EXHIBIT P- 3A) | **DATE:** FEBRUARY 2003

Modification Title and No: Black Shelter Equipment Upgrade Mod # S5000102401 **Models of Systems Affected:** Operational Control System (OCS)

Description/Justification: This modification replaces obsolete, unsupportable electronic equipment (radio-frequency power meters, data acquisition control unit, command decoder, baseband assembly, distribution amplifier, Timing Frequency Standard (TFS) receiver, echo receiver, and servo contro unit) with Versabus-Module Eurocard (VME) based or simular equipment. VME based equipment increases compatibility with the new control equipment architecture and increases overall reliability and maintainability (R&M) of the individual components. If not funded, Ground Antenna (GA) downtime associated with failed black shelter components will continue to increase and lower operational availability. Uplink and downlink GA capability will also degrade and maintenance costs for repair of failed equipment items will increase. FY04 funds procure 7 kits and installation of 1 kit in lab. FY05 funds installation of remaining 6 kits at remote sites.

Development Status/Major Development Milestones: Design Review - JAN 04; Provisioning - APR 04; Formal Qualifiction Testing (FQT) - AUG 04; Full operational capability - DEC 05.

Financial Plan $ (in Millions)	PY		FY2002		FY2003		FY2004		FY2005		FY2006		TOTAL	
	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost
RDT&E														
Ref. R-1 PE No:														
Procurement:														
Equipment Kits							7	3.500					7	3.5
Equipment Kits Non-recurring								1.103		0.814			0	1.917
Engineering Change Orders														
Data										0.900			0	0.9
Training Equipment														
Support Equipment								0.135					0	0.135
Software								0.900		0.900			0	1.8
Interim Contractor Support														
Other													0	
Total Procurement Costs:	0		0		0		7	5.638	0	2.614	0		7	8.252
Hardware Installation:														
(PY) Eqpt (Kits)														
(FY02) Eqpt (Kits)														
(FY03) Eqpt (Kits)														
(FY04) Eqpt (7 Kits)							1	0.450	6	2.700			7	3.15
(FY05) Eqpt (Kits)													0	
(FY06) Eqpt (Kits)														
Total Installation Costs:	0		0		0		1	0.45	6	2.7	0		7	3.15
Total Modification Costs:	0		0		0		7	6.088	0	5.314	0		7	11.402

Method of Installation: CONTRACTOR, FIELD INSTALL **Administrative Lead-time (After 1 Oct):** 2 Month(s) **Production Lead-time:** 4 Month(s)

Contract Date:	PY		FY2002		FY2003		FY2004	JAN 04	FY2005	NOV 04	FY2006	
Delivery Date:	PY		FY2002		FY2003		FY2004	MAY 04	FY2005	MAR 05	FY2006	

Installations:	PY	FY2002				FY2003				FY2004				FY2005				FY2006				Total
		1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	
Input											7											7
Output												1		1	2	2	1					7

P-1 ITEM NO: 67 **PAGE NO:** 199 Page 1 of 1

INDIVIDUAL MODIFICATIONS (EXHIBIT P- 3A) | **DATE:** FEBRUARY 2003

Modification Title and No: Ground-based Electro-Optical Deep Sensor System (GEODSS), MOD# 83679D

Models of Systems Affected: AN/FSD-3, CCD Camera/MPACS

Description/Justification: GEODSS is a segment of the SPACETRACK network, which provides metric track data, deep Space Object Identification (SOI), and visible light photometry data to the Cheyenne Mountain Complex (CMC). GEODSS supports AFSPC mission responsibilities for cataloging and maintenance of deep-space satellite payloads, debris, new foreign launch orbit determination and collision avoidance. Funds provide for production, integration, testing and fielding of 10 Charge-Coupled Device (CCD) cameras, which replace Ebsicon tubes that are no longer manufactured or supported by any vendor. Funds also provide for Sensor Controller hardware, software modifications, and Modular Precision Absolute Control System (MPACS), critical to the CCD modification. 1st Article includes additional costs due to production line startup, integ and test. The CCD cameras will ensure GEODSS capability to meet operational requirements. Other costs include program office support (PMA).

Development Status/Major Development Milestones: Contract Awd: Mar 00 (R&D Funded); DR: Aug 00; Exercise Opt: Jan 01; 1st Art CCD Prod: Jan 03; FAT: May 03; DTE: Jul 03; Initial OTE: Aug 03; Kit Acceptance: Sep 03; System Acceptance: Apr 04.

Financial Plan $ (in Millions)	PY		FY2002		FY2003		FY2004		FY2005		FY2006		TOTAL	
	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost
RDT&E														
Ref. R-1 PE No:													0	
Procurement:														
Equipment Kits	1	2.7	6	5.0			3	2.6					10	10.3
Equipment Kits Non-recurring		4.4		1.9		1.3		.3					0	7.900001
Engineering Change Orders				1.1									0	1.1
Data		0.5											0	0.5
Training Equipment						0.1		.2					0	0.3
Support Equipment		0.2				0.1		.1					0	0.4
Software		0.5											0	0.5
Interim Contractor Support													0	
Other		0.3		0.7		0.2		.5					0	1.7
Total Procurement Costs:	1	8.6	6	8.7	0	1.7	3	3.7	0		0		10	22.7
Hardware Installation:														
(PY) Eqpt (1 Kits)					1	0.3							1	0.3
(FY02) Eqpt (6 Kits)					2	0.4	4	.8					6	1.2
(FY03) Eqpt (Kits)													0	
(FY04) Eqpt (3 Kits)							3	.6					3	0.6
(FY05) Eqpt (Kits)													0	
(FY06) Eqpt (Kits)													0	
Total Installation Costs:	0		0		3	0.7	7	1.4	0		0		10	2.1
Total Modification Costs:	1	8.6	6	8.7	0	2.4	3	5.1	0		0		10	24.8

Method of Installation: CONTRACTOR, FIELD INSTALL

Administrative Lead-time (After 1 Oct): 3 Month(s)

Production Lead-time: 15 Month(s)

Contract Date:	PY	JAN 01	FY2002	NOV 01	FY2003	NOV 02	FY2004	NOV 03	FY2005		FY2006	
Delivery Date:	PY	JUL 02	FY2002	FEB 03	FY2003	FEB 03	FY2004	FEB 04	FY2005		FY2006	

Installations:	PY	FY2002				FY2003				FY2004				FY2005				FY2006				Total
		1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	
Input								1	2	3	3	1										10
Output									1	2	6	1										10

P-1 ITEM NO: 67

PAGE NO: 200

INDIVIDUAL MODIFICATIONS (EXHIBIT P- 3A) | **DATE:** FEBRUARY 2003

Modification Title and No: Navy Space Surveillance Fence, MOD 83xxxx.

Models of Systems Affected:

Description/Justification: The Navy Space Surveillance Fence is a dedicated sensor scheduled to be transferred from the Navy to the Air Force in FY04 that can detect earth orbiting objects out to 15,000 nautical miles.

Development Status/Major Development Milestones:

Financial Plan $ (in Millions)	**PY**		**FY2002**		**FY2003**		**FY2004**		**FY2005**		**FY2006**		**TOTAL**	
	Qty	**Cost**	**Qty**	**Cost**	**Qty**	**Cost**	**Qty**	**Cost**	**Qty**	**Cost**	**Qty**	**Cost**	**Qty**	**Cost**
RDT&E														
Ref. R-1 PE No:														
Procurement:														
Equipment Kits								9.553					0	9.553
Equipment Kits Non-recurring														
Engineering Change Orders														
Data														
Training Equipment														
Support Equipment														
Software														
Interim Contractor Support														
Other														
Total Procurement Costs:	0		0		0		0	9.553	0		0		0	9.553
Hardware Installation:														
(PY) Eqpt (Kits)														
(FY02) Eqpt (Kits)														
(FY03) Eqpt (Kits)														
(FY04) Eqpt (Kits)														
(FY05) Eqpt (Kits)														
(FY06) Eqpt (Kits)														
Total Installation Costs:	0		0		0		0		0		0		0	
Total Modification Costs:	0		0		0		0	9.553	0		0		0	9.553

Method of Installation: CONTRACTOR, FIELD INSTALL | **Administrative Lead-time (After 1 Oct):** 3 Month(s) | **Production Lead-time:** 3 Month(s)

Contract Date:	PY		FY2002		FY2003		FY2004	JAN 04	FY2005		FY2006	
Delivery Date:	PY		FY2002		FY2003		FY2004	MAR 04	FY2005		FY2006	

Installations:	**PY**	**FY2002**				**FY2003**				**FY2004**				**FY2005**				**FY2006**				**Total**
		1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	
Input																						
Output																						

P-1 ITEM NO: 67 | **PAGE NO:** 201 | Page 1 of 1

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	P-1 NOMENCLATURE: TACTICAL C-E EQUIPMENT

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$99,083	$133,127	$158,322	$123,784	$152,113	$200,431	$292,266	$313,461

Description:

The Tactical Communications-Electronics (C-E) equipment procurement program acquires essential command, control, communications, and computer (C4) systems to satisfy requirements for Pacific Air Forces (PACAF), United States Air Forces in Europe (USAFE), Air Mobility Command (AMC), Air Force Special Operations Command (AFSOC), Air Combat Command (ACC), and the Air National Guard (ANG). These funds also replace or upgrade logistically unsupportable communications systems fielded in the Theater Air Control System (TACS) and combat communications units, and procure the next generation of lightweight tactical communications equipment that will support United States (US) flying operations worldwide.

1. THEATER DEPLOYABLE COMMUNICATIONS (TDC) PROGRAM: The TDC program provides telephone/computer networks and message service to deploying Air Force (AF) units. TDC will support a wide range of mission areas and users including: ACC, AMC, USAFE, PACAF, AFSOC, and the ANG. For both AMC and AFSOC, TDC provides new combat communications capability not previously available but critical to support Air Expeditionary Force (AEF) operations. In addition, TDC will support joint operations through its link into the joint tactical communications architecture. TDC will play a major role in the successful implementation of the Global Broadcast Service (GBS) to disseminate timely intelligence information to the warfighter. TDC will support the ground dissemination of GBS information.

TDC is composed of three components: The Lightweight Multiband Satellite Terminal (LMST), Integrated Communications Access Packages (ICAP), and Network Control Center - Deployed (NCC-D). Together, these three systems provide the communications infrastructure for deployed bare base environments. TDC connects all levels of users, from base up to the President and Secretary of Defense, using various C4 and intelligence (C4I) applications and the Tactical Internet. TDC funding supports Wing Initial Communications Packages (WICPs), Air Operations Centers (AOC), Air Support Operations Centers (ASOCs), Battlefield Control Center/Radar Control Center (BCC/RCC), as well as expeditionary and robusting units of the AEF. TDC is modular and adaptable--capable of supporting the war effort from deployment on day one to the buildup of a fully operational base. The program utilizes a continuous spiral process to upgrade fielded systems with updated

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** TACTICAL C-E EQUIPMENT

Description (continued):

communications capabilities and technologies to take advantage of commercial upgrades to meet evolving user requirements. The Other Than War (OTW) mission has also generated reconstitution requirements for deployed Air Expeditionary Force (AEF) TDC units to return without their equipment that remained in theater. FY04 funding provides for initial reconstitution and the upgrades described in subparagraphs below.

a. LIGHTWEIGHT MULTIBAND SATELLITE TERMINALS (LMSTs): LMSTs are a critical link providing the two-waycommunications connectivity between the deployed base and command authorities at other locations. LMSTs augment existing X-Band tactical satellite terminals and provide a significant increase in capability, leveraging not only military X-band satellite channels and military Ka-bands when available, but also bands available on commercial communications satellites. This alleviates many operational problems, since military X-band channels are nearing capacity. The LMST significantly reduces airlift, requiring just 25 percent of a C-130 load versus a full C-130 load to move the terminal it replaces. The LMST has two functional configurations, hub and spoke, as well as two package configurations, trailer and transit case. Funding includes implementation of a spiral upgrade process to incorporate new communications technologies and capabilities into the baseline. FY04 funds continue procurement of LMSTs and direct mission support.

b. INTEGRATED COMMUNICATIONS ACCESS PACKAGE (ICAP): The ICAP program provides modular and scaleable packages of hubs/routers, switches, multiplexers, on-base communications (lasers and microwave radios), crypto and timing equipment, secure voice conferencing, and secure and non-secure telephones. ICAP packages also include other accessories and configuration kits required to establish and maintain the deployed base infrastructure, forming the communications backbone for a deployed base. Users will plug in their computer, telephones, and faxes into the backbone the ICAP provides. ICAP provides significant advantages over the legacy system in the areas of bandwidth efficiency, adaptability, and airlift. ICAP employs "smart multiplexers" allowing sequencing of several messages over a single line, versus the multiple dedicated lines used in the legacy system. Additionally, ICAP packages come in multiple configurations varying in sizing/composition based on application. This allows for greater flexibility to meet different contingency operations. For example, the Wing Initial Communications Package is the smallest sized unit (C-130 load) designed to provide an immediate communications capability during the initial phase of deployment. As subsequent airlift becomes available, additional packages can be "added," building up to a full size, robust package. The legacy system lacked this flexibility, requiring a large portion (six to seven C-130 loads) to be in-place before the system became operational. Funding includes implementation of a Spiral upgrade process to incorporate new communications technologies and capabilities into the baseline. FY04 funds continue the procurement of ICAP and direct mission support.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** TACTICAL C-E EQUIPMENT

Description (continued):

c. NETWORK CONTROL CENTER - DEPLOYED (NCC-D): NCC-D, formerly known as Network Management System/Base Information Protection (NMS/BIP), provides the same network management/information protection and network planning capabilities for deployed operations that exist on fixed bases. Specific functions include data management, intrusion detection, and firewall capabilities for both the classified and unclassified networks. All equipment is packaged in transit cases for deployed operations. Formerly an integral part of the ICAP suite, this capability was separated for better management oversight. Funding includes implementation of a spiral upgrade process to incorporate new communications technologies and capabilities into the baseline. FY04 funds continue procurement of (NCC-D) capabilities and direct mission support.

d. INITIAL COMMUNICATIONS PACKAGE: No FY04 funding is requested.

2. TACTICAL AIR CONTROL PARTY (TACP) MODERNIZATION: The TACP Modernization Program enhances the ability of TACPs to interface with joint and multinational forces by replacing aging communications and information systems equipment utilized by ACC, USAFE, and PACAF TACPs. TACP's deploy with Army maneuver units and provide the command and control link for close air support (CAS), airlift, and reconnaissance. TACP Modernization provides ultra high frequency (UHF) satellite communications (SATCOM), data capabilities, process automation, and integrated capabilities to improve operational effectiveness and reduce the risk of fratricde. Without modernization, TACPs will not be interoperable with the US Army's digitized battlefield and processing close air support requests will be delayed, jeopardizing support of ground forces.

The TACP Modernization Program consists of four components. Components depicted on the P-5 are representative. Components procured during execution may change based on the most critical equipment needed to support Air Force mission critical requirements.

a. LASER RANGE FINDERS: No FY04 funding is requested.

b. COMPUTERS: Ruggedized computers with Global Positioning System (GPS) functionality along with information software to provide gateway functionality and to display situational awareness imagery and messages in the battlefield environment. FY04 funds continue computer procurement.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** TACTICAL C-E EQUIPMENT

Description (continued):

c. MANPACK RADIOS: No FY04 funding is requested.

d. VEHICULAR COMMUNICATIONS SYSTEMS. The associated Research, Development, Test, and Evaluation effort is under Program Element 27423. No FY04 funding is requested.

3. JOINT TACTICAL RADIO SYSTEM (JTRS): No FY04 funding is requested.

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)		DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** TACTICAL C-E EQUIPMENT	

WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY2002			FY2003			FY2004			FY2005		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
1. TDC PROGRAM				{76,179}			{121,194}			{155,708}			{114,378}
A. LMST	A			10,137			19,706			26,217			38,873
B. ICAP	A			56,150			92,613			113,920			69,970
C. NCC-D	A			1,592			8,875			15,571			5,535
D. ICE/USC-60	A			8,300									
2. TACP MODERNIZATION				{22,904}			{11,933}			{2,614}			{8,440}
A. LASER RANGE FINDERS	A			5,921									
B. COMPUTERS	A			8,196			7,779			2,614			2,000
C. MANPACK RADIOS	A			8,787			4,154						
D. VEHICULAR COMMUNICATIONS SYSTEMS	A												6,440
3. JTRS PROGRAM	A												966
TOTALS:				99,083			133,127			158,322			123,784

REMARKS:

	P-1 ITEM NO 69		PAGE NO: 206		Page 1 of 1

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** TACTICAL C-E EQUIPMENT

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
1. TDC PROGRAM									
A. LMST (1)									
FY02			AFMC/ESC	MIPR/OPT/FFP	ARMY/CECOM, L3, HAUPPAUGE, NY	DEC 01	DEC 01		
FY03			AFMC/ESC	MIPR/OPT/FFP	ARMY/CECOM, L3, HAUPPAUGE, NY	JAN 03	JAN 04		
FY04			AFMC/ESC	MIPR/OPT/FFP	ARMY/CECOM, L3, HAUPPAUGE, NY	JAN 04	JAN 05	Y	
FY05			AFMC/ESC	MIPR/OPT/FFP	ARMY/CECOM, L3, HAUPPAUGE, NY	JAN 05	JAN 06	Y	
B. ICAP (1)									
FY02			AFMC/ESC	C/FFP	GDDS, SCOTTSDALE, AZ AND REDCOM, VICTOR, NY	JUN 02	OCT 02		
FY03			AFMC/ESC	OPT/FFP	GDDS, SCOTTSDALE, AZ AND REDCOM, VICTOR, NY	DEC 02	JUN 03		
FY04			AFMC/ESC	OPT/FFP	GDDS, SCOTTSDALE, AZ AND REDCOM, VICTOR, NY	DEC 03	JUN 04	Y	
FY05			AFMC/ESC	OPT/FFP	GDDS, SCOTTSDALE, AZ AND REDCOM, VICTOR, NY	DEC 04	JUN 05	Y	
C. NCC-D (1)									
FY02			AFMC/ESC	C/FFP	MULTIPLE (3)	MAR 02	JUL 02		
FY03			AFMC/ESC	C/FFP	MULTIPLE (3)	FEB 03	JUL 03	Y	
FY04			AFMC/ESC	C/FFP	MULTIPLE (3)	FEB 04	JUL 04	Y	
FY05			AFMC/ESC	C/FFP	MULTIPLE (3)	FEB 05	JUL 05	Y	

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** TACTICAL C-E EQUIPMENT

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
D. ICE/USC-60 (1)									
FY02			AFMC/ESC	MIPR/FFP W/OPT	ARMY/CECOM, L3, HAUPPAUGE, NY AND GDDS, SCOTTSDALE, AZ	DEC 01	DEC 01		
2. TACP MODERNIZATION									
A. LASER RANGE FINDERS									
FY02			AFMC/ESC	SS/FFP	NORTHRUP GRUMMAN, LASER DIVISION, APOPKA, FL	AUG 02	MAR 03		
B. COMPUTERS									
FY02			AFMC/ESC	DO/FFP	ARMY TACTICAL COMMAND & CONTROL SYS, FT MONMOUTH, NJ	NOV 01	MAR 02		
FY03			AFMC/ESC	DO/FFP	ARMY TACTICAL COMMAND & CONTROL SYS, FT MONMOUTH, NJ	NOV 02	JAN 03		
FY04			AFMC/ESC	DO/FFP	TBD	NOV 03	JAN 04	Y	
FY05			AFMC/ESC	DO/FFP	TBD	NOV 04	JAN 05	Y	
C. MANPACK RADIOS									
FY02			AFMC/ESC	DO/FFP	HARRIS CORP, ROCHESTER, NY	MAR 01	APR 01		
FY03			AFMC/ESC	DO/FFP	HARRIS CORP, ROCHESTER, NY	MAR 01	APR 03		
D. VEHICULAR COMMUNICATIONS SYSTEMS (2)									

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** TACTICAL C-E EQUIPMENT

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
FY05			AFMC/ESC	MIPR/CPAF	ARMY, PM-TRCS, FT MONMOUTH, NJ	JUN 05	SEP 06	N	MAR 03
3. JTRS PROGRAM									
A. HAND-HELD/MANPACK RADIOS									
FY05			AFMC/ESC	MIPR/FFP	SOCOM, THALES COMMUNICATIONS, INC, CLARKSBURG, MD	OCT 04	SEP 05	Y	

REMARKS:

1. Quantity and unit cost vary because of different types/configurations being procured.
2. TACP Operational Requirements Document is the functional baseline. Joint Tactical Radio System (JTRS) Low Rate Initial Production (LRIP) contracts are priced Options on the FY02 System Design & Development (SD&D) contract with Boeing, Anaheim, CA awarded Jun 02. There will not be a new contract vehicle for the LRIP production.
3. Multiple contractors will be used. Examples of these contractors are: GTSI Corp., Chantilly, VA; TRW, San Antonio, TX; TAG, Dulles, VA.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** COMBAT SURVIVOR EVADER LOCATOR (CSEL)

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$0	$5,990	$8,839	$16,709	$27,403	$30,920	$31,481	$32,005

Description:

The Combat Survivor Evader Locator (CSEL) joint program, led by the Air Force, will replace existing PRC-90 and PRC-112 survival radios with a new end-to-end system providing enhanced Combat Search-and-Rescue capabilities. This system is composed of [1] a user segment featuring a new multi-function, software re-programmable hand-held radio that incorporates near-real-time Global Positioning System (GPS) geopositioning; [2] a satellite communications segment incorporating four Ultra High Frequency (UHF) Base Stations (UBSs) co-located with Navy command and control facilities to support secure two-way over-the-horizon data messaging; and [3] a ground segment containing a Joint Search and Rescue Center (JSRC) software application allowing command and control interfaces with other government systems.

In February 1996, a cost-plus-award-fee Research, Development, Test, & Evaluation (RDT&E) contract was awarded for CSEL Engineering and Manufacturing Development. (Reference the RDT&E Budget Justification Exhibits for Program Element 0305176F.) The first production option was awarded in July 1997, and the first Low Rate Initial Production (LRIP) radios were delivered in the third quarter of FY99. In February 2000 the Joint Requirements Oversight Council approved the updated CSEL Operational Requirements Document, which established an evolutionary two-block system development/fielding approach. LRIP radio production for Block 1, the current configuration, began in the fourth quarter of FY01 after an operational assessment and continues through FY03; full-rate production will begin in FY04. Ongoing Block 2 development will upgrade the JSRC application for Defense Information Infrastructure Common Operating Environment Level 7 interoperability and add Demand-Assigned Multiple Access compatibility to make more efficient use of UHF satellite communications resources. Ultimately, the Air Force, Army, and Navy will procure approximately 53,000 CSEL radios, including over 17,500 for the Air Force.

FY04 funding will continue Block I radio production and purchase Block II JSRC and UBS upgrades, associated support equipment as well as direct mission support. Failure to procure CSEL as expeditiously as possible extends the reliance of aircrews, recovery forces, and isolated personnel on dated survival radio technology.

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)		DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** COMBAT SURVIVOR EVADER LOCATOR (CSEL)	

WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY2002			FY2003			FY2004			FY2005		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
CSEL SYSTEM							{5,990}			{8,839}			{16,709}
CSEL RADIO (1)	B				307	9,494	2,915	520	7,974	4,146	1,163	7,456	8,671
PROGRAM SUPPORT EQUIPMENT (2)							1,096			1,611			2,924
PRODUCTION ENGINEERING							522			1,847			3,787
DIRECT MISSION SUPPORT (3)							1,457			1,235			1,327
TOTALS:							5,990			8,839			16,709

REMARKS:

1. Unit costs per fiscal year are contingent upon the total radio quantity purchased by all three services. A reduction in any service's procurement in a given fiscal year increases the unit cost for all radios funded in that year.
2. Program support equipment includes radio set adapters, mission planning software, batteries, antennas, earpieces, battery chargers, charger adapters, and training aids.
3. Includes Secret Internet Protocol Router Network (SIPRNET) connection/user fees, Federally Funded Research and Development Centers (FFRDC) support, Space & Naval Systems Command (SPAWAR) and Electronic Proving Ground support, and other government contractor/travel support.

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** COMBAT SURVIVOR EVADER LOCATOR (CSEL)

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
CSEL RADIO (1)									
FY03	307	9494	AFSPC/SMC	SS/FFP	BOEING, ANAHEIM, CA	MAY 03	NOV 03	Y	
FY04	520	7974	AFSPC/SMC	SS/FFP	BOEING, ANAHEIM, CA	NOV 03	AUG 04	N	OCT 03
FY05	1163	7456	AFSPC/SMC	SS/FFP	BOEING, ANAHEIM, CA	NOV 04	AUG 05	N	OCT 03

REMARKS:
(1) Unit costs per fiscal year are contingent upon the total radio quantity purchased by all three services. A reduction in any service's procurement in a given fiscal year increases the unit cost for all radios funded in that year.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** RADIO EQUIPMENT

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$13,764	$10,450	$8,750	$8,822	$8,627	$8,357	$8,499	$8,642

Description:

The Radio Equipment program procures new, high frequency (HF) radio equipment for the Air Force (AF) and upgrades or procures tactical/land mobile radio systems at various AF installations. Scope Command replaces the Legacy system HF radio stations located around the world that are more than 20 years old and increasingly difficult and costly to maintain. Due to a declining support posture, and efforts to collocate/close United States (US) facilities overseas, the Department of Defense (DoD) HF Mission Area Review directed Services/Agencies to reduce and collocate HF resources throughout the world. The Joint Chiefs of Staff (JCS) tasked the AF to be the executive agent for the DoD HF collocation effort.

1. SCOPE COMMAND HIGH FREQUENCY (HF) RADIO STATION REPLACEMENT: The Scope Command program provides for modernization of selected high power HF ground radio equipment which serves as the sole command and control resource for Air Mobility Command (AMC) cargo and tanker aircraft. This program supports Mystic Star, the United States Air Force Global HF System, Defense Communications Systems (DCS) HF Entry, US Navy High Command Communications Network (HICOM), and other high power HF networks. It also supports war plans and operational requirements for the following organizations: White House Communications Agency (WHCA), JCS, Defense Information Systems Agency (DISA), AMC, Air Combat Command (ACC), Air Intelligence Agency (AIA), Air Force Space Command (AFSPC), United States Air Forces in Europe (USAFE), and Pacific Air Forces (PACAF).

The Scope Command program upgrades 14 plus AF HF Global sites in accordance with DoD rightsizing direction with state-of-the-art, commercial-off-the-shelf (COTS) HF radio equipment. Scope Command is moving to a centralized net control capability with unmanned HF radio facilities (referred to as Lights Out). The increments are:

Phase A, Initial Scope Command (ISC), procured two HF radio levels for each station to provide an HF Automatic Link Establishment (ALE) capability to meet AMC's command and control requirements and aircraft modification schedules. ISC was completed Dec 98 with prior

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** RADIO EQUIPMENT

Description (continued):

year funding.

Phase B, Full Up, procures equipment for the full HF capability to satisfy all remaining AF HF mission requirements. Phase B includes the equipment, engineering, installation, and operational testing costs to achieve full operational capability.

Phase C, Lights Out, provides for remote control of Scope Command HF radios/equipment at other stations from a central control site at Andrews AFB, MD. Phase C includes definition, design, proof-of-concept, installation, and operational testing costs of the Centralized Net Control Station (CNCS) at Andrews AFB, MD, and the associated software and equipment necessary to install the Lights Out capability at other HF Global Stations. The current status of Scope Command is Phase C. FY04 funds will support post-phase efforts.

FY04 funding provides additional program efforts and costs including Scope Command HF-e-mail and HF antennas. HF-e-mail capability is required to provide the means to send and receive e-mail messages between aircraft and ground stations via the Scope Command HF Global Network. This capability will allow improved command, control, and mission safety through the transmission of pilot information, weather updates, and general mission information. HF e-mail includes engineering, integration, equipment, and installation for Scope Command ground stations and aircraft interfaces. Also included is selective replacement of older, degraded HF antennas as required to support the Scope Command Worldwide HF Communication Network.

In FY03 Congress added $1M for SCOPE COMMAND. Reference Appropriations Conference Report 107-732, October 9, 2002, page 219. FY03/04 funds provide for network modernization/improvement (including alternate/backup CNCS capability) efforts, engineering, integration, network management, and security IAW DoD directives. Procurement and installation of SCOPE Command HF antennas will continue in FY04.

2. AIR FORCE OFFICE OF SPECIAL INVESTIGATIONS (AFOSI) TACTICAL RADIO SYSTEM: This program is responsible for planning, acquisition, and implementation of AFOSI's Land Mobile Radios (LMR) command-wide. AFOSI's LMR equipment provides secure, two-way communications between AFOSI personnel conducting counterintelligence and criminal investigative operations, protective service operations, and surveillance detection operations in support of AF commanders and deployed DoD units at more than 170 worldwide locations.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** RADIO EQUIPMENT

Description (continued):

The goal of the LMR program is to procure standardized equipment to maximize interoperability throughout the command. Funding procures portable LMR equipment with narrowband capability.

3. AIR COMBAT COMMAND (ACC) TRUNKED LAND MOBILE RADIO (LMR) SYSTEM: In FY03 Congress added $250K for PRC-117F SATCOM Backpack Radios. Reference Appropriations Conference Report 107-732, October 9, 2002, page 219. FY04 funding purchases the required LMR trunking systems that ACC bases use as a primary command and control system. These systems are severely limited and will negatively impact mission operations unless ACC completely changes out all existing LMR networks. ACC approved LMR trunking as the best technical solution. LMR trunking systems consist mainly of consoles, channel banks, repeaters, controllers, modem racks and boards, and miscellaneous (installation, software, training). Implementation is phased with the installation of this infrastructure equipment. The National Telecommunications and Information Administration (NTIA) assigned all bases appropriate frequencies needed for LMR trunking. ACC must be narrow-band compliant by CY05.

4. 139TH AIR NATIONAL GUARD WING RADIO UPGRADES. In FY03 Congress added $500K for Radio Upgrades for the 139th Air National Guard Wing. These funds replace wideband Land Mobile Radio (LMR) equipment with narrowband equipment as mandated by the National Telecommunications Information Administration (NTIA). Reference Appropriations Conference Report 107-732, October 9, 2002, page 219. No FY04 funding is requested.

Items requested in FY04 are identified on the following P-5 and are representative of the items to be procured. Items procured during execution may change based on critical equipment needed to support current AF mission requirements.

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)		DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** RADIO EQUIPMENT	

WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY2002			FY2003			FY2004			FY2005		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
1. SCOPE COMMAND HF RADIO STATION REPLACEMENT				{13,356}			{8,133}			{7,293}			{7,336}
A. NETWORK MODERNIZATION/IMPROVEMENTS	A			6,491			5,671			4,632			2,312
B. ANTENNAS	A			1,372			1,736			1,845			2,113
C. ENGR/INTEGRATION/TNG				5,493			726			816			2,911
2. AFOSI TACTICAL RADIO SYSTEM	A			408			406			399			396
3. ACC TRUNKED LMR SYSTEM	A						1,416			1,058			1,090
4. 139TH AIR NATIONAL GUARD WING RADIO UPGRADES	A						495						
TOTALS:				13,764			10,450			8,750			8,822

REMARKS:

	P-1 ITEM NO 71		PAGE NO: 216		Page 1 of 1

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** RADIO EQUIPMENT

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
1. SCOPE COMMAND HF RADIO STATION REPLACEMENT									
A. NETWORK MODERNIZATION/IMPROVEMENTS									
FY02 (1)			AFMC/OC-ALC	DO/CPFF	ROCKWELL, RICHARDSON TX	AUG 02	MAR 03		
FY03 (1)			AFMC/OC-ALC	DO/CPFF	ROCKWELL, RICHARDSON TX	JUN 03	JAN 04	Y	
FY04 (1)			AFMC/OC-ALC	DO/CPFF	ROCKWELL, RICHARDSON TX	JUN 04	JAN 05	Y	
FY05 (1)			AFMC/OC-ALC	DO/CPFF	ROCKWELL, RICHARDSON TX	JAN 05	JAN 06	Y	
B. ANTENNAS									
FY02 (1)			AFMC/OC-ALC	MIPR (2)/FFP	NAVY/SYSTEMS INTEGRATION TECHNOLOGY, INC., SAN DIEGO CA	FEB 02	JUL 02		
FY03 (1)			AFMC/OC-ALC	MIPR (2)/FFP	NAVY/SYSTEMS INTEGRATION TECHNOLOGY, INC., SAN DIEGO CA	FEB 03	AUG 03	Y	
FY04 (1)			AFMC/OC-ALC	MIPR (2)/FFP	NAVY/SYSTEMS INTEGRATION TECHNOLOGY, INC., SAN DIEGO CA	FEB 04	AUG 04	Y	
FY05 (1)			AFMC/OC-ALC	MIPR (2)/FFP	NAVY/SYSTEMS INTEGRATION TECHNOLOGY, INC., SAN DIEGO CA	FEB 05	AUG 05	Y	
2. AFOSI TACTICAL RADIO SYSTEM									
FY02 (1)			HQ AFOSI	MIPR/FP	FEDSIM, FAIRFAX, VA	OCT 01	SEP 02		
FY03 (1)			HQ AFOSI	MIPR/FP	FEDSIM, FAIRFAX, VA	OCT 02	SEP 03		
FY04 (1)			HQ AFOSI	MIPR/FP	FEDSIM, FAIRFAX, VA	OCT 03	AUG 04	Y	
FY05 (1)			HQ AFOSI	MIPR/FP	FEDSIM, FAIRFAX, VA	OCT 04	AUG 05	Y	

	P-1 ITEM NO 71		PAGE NO: 217		Page 1 of 2

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** RADIO EQUIPMENT

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
3. ACC TRUNKED LMR SYSTEM									
FY03 (1)			HQ ACC	OPT/FFP	MULTIPLE (3)	MAR 03	DEC 03	Y	
FY04 (1)			HQ ACC	OPT/FFP	MULTIPLE (3)	MAR 04	DEC 04	Y	
FY05 (1)			HQ ACC	OPT/FFP	MULTIPLE (3)	MAR 05	DEC 05	Y	
4. 139TH AIR NATIONAL GUARD WING RADIO UPGRADES									
FY03			139TH AIRLIFT WING	DO/FFP	GSA, MOTOROLA, HANOVER MD.	MAR 03	MAY 03	Y	

REMARKS:
1. Quantities and unit costs vary due to site specific requirements.
2. Contract issued through the Navy via a Military Inter-Departmental Purchase Request (MIPR) against a Navy in-place contract.
3. Multiple options from existing ACC, AETC, and GSA schedule contracts. Award/delivery dates represent dates of first contract award and delivery.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** TV EQUIPMENT (AFRTV)

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$2,609	$2,596	$2,590	$2,620	$2,647	$2,690	$2,692	$2,737

Description:

This continuing program procures broadcasting equipment needed by the Air Force Broadcasting Service (AFBS) to support the worldwide mission of the Armed Forces Radio and Television Service (AFRTS). The Air Force (AF) operates radio and television facilities overseas in support of the internal information mission of United States Central Command, United States Pacific Command, Air Combat Command, Joint Space Command, Air Force Space Command, and United States European Command. This program also procures radio and television equipment for the Air Force News Agency (AFNEWS) Production Center, Lackland Air Force Base (AFB), TX. AFNEWS produces and distributes corporate AF radio and television news productions to AFRTS outlets, commercial stations and AF units throughout the world in support of the AF's Internal Information Program and the Army and Air Force Hometown News Service.

1. AFRTS EQUIPMENT PROCUREMENT: FY04 funds will procure electronic news gathering (ENG) equipment in support of Direct to Home Television funding in FY05. Equipment will allow local AFRTS to insert local information giving commanders instant communication with their people on and off-base. This will increase force protection and keep American military and their families overseas informed on local and world events.

2. AFNEWS PRODUCTION CENTER: FY04 funds will procure lifecycle replacement of digital video cameras and wireless microphone systems, upgrades to NT based non-linear editing systems, and digital backs for ENG camera systems. Funding of these items is critical to the converting of outdated analog cameral systems to digital.

Items requested in FY04 are identified on the following P-40a and are representative of items to be procured. Items procured during execution may change based on critical equipment needed to support current Air Force mission requirements.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** TV EQUIPMENT (AFRTV)

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		QTY.	COST	QTY.	COST	QTY.	COST	QTY.	COST
1. AFRTS EQ PROCUREMENT	A		$2,323		$2,312		$2,305		$2,330
2. AFNEWS PRODUCTION CENTER	A		$286		$284		$285		$290
Totals:			$2,609		$2,596		$2,590		$2,620

Remarks:

	P-1 ITEM NO 72		PAGE NO: 220		Page 1 of 1

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** CCTV/AUDIOVISUAL EQUIPMENT

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$3,237	$3,227	$3,238	$3,288	$3,329	$8,414	$9,627	$20,342

Description:

Closed Circuit Television (CCTV) and Audiovisual (AV) systems and their products are used throughout the Air Force to help manage, train and employ war fighters. Video and multimedia based products are developed for war fighter operations, readiness training, medical videography, public and internal information, testing and evaluation, and corporate communications. Combat video documentation is used for operational reporting and analysis, situational awareness, battle damage assessment, intelligence and operational analysis, casualty identification, and the historical record. These funds replace older video studio systems with newer and more capable equipment and systems for Air Force television production and combat/contingency documentation. Commanders recognize that imagery quickly conveys very accurate and unbiased information, and are requiring greater amounts of video imagery to help meet the challenges of a very active warfighting force. CCTV systems are centrally managed to establish and maintain standardization of systems, as well as to insure full interoperability with all other electronic image acquisition, transmission system formats and presentation systems used in the Air Force. FY02-04 CCTV/AV projects are described below.

1. IMAGE ACQUISITION/TELEVISION STUDIO EQUIPMENT: FY02-04 funds continue procurement of replacement equipment and upgrades for studio based closed circuit television equipment. Increased implementation of digitally based video systems for image signal capture, processing, editing and transmission enable Air Force TV centers to offer greater capability in image articulation and customer understanding. The equipment includes cameras, editing and duplication, and all accessories necessary for image capture, processing and distribution. This program funds 19 production centers and provides products for combat operations, education and training and corporate communications.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** CCTV/AUDIOVISUAL EQUIPMENT

Description (continued):

2. COMBAT CAMERA SYSTEMS: FY02-04 funding continues to replace heavily used and worn mobile combat documentation video cameras, portable video recorders and portable non-linear digital video editors for mobility tasked combat camera and Visual Information forces world-wide. This program provides for technology upgrades to portable video systems and includes lightweight digital video cameras and camcorders providing enhanced video quality to the war fighter. These newer systems reduce the transportation footprint, reduce work load, and enable combat camera personnel to transmit motion and still imagery across satellite and terrestrial systems providing war fighters with greater flexibility in decision-making with real-time operational and combat imagery.

Items requested in FY04 are identified on the following P-40a and are representative of items to be procured. Items procured during execution may change based on critical equipment needed to support current Air Force mission requirements.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** CCTV/AUDIOVISUAL EQUIPMENT

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		QTY.	COST	QTY.	COST	QTY.	COST	QTY.	COST
1. IMAGE ACQ/TV STUDIO EQUIP	A		$1,618		$1,614		$1,617		$1,640
2. COMBAT CAMERA SYSTEMS	A		$1619		$1,613		$1,621		$1,648
Totals:			$3,237		$3,227		$3,238		$3,288

Remarks:

	P-1 ITEM NO 73		PAGE NO: 223		Page 1 of 1

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** BASE COMMUNICATIONS INFRASTRUCTURE

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$74,509	$191,831	$160,558	$123,318	$133,998	$114,606	$146,943	$114,957

Description:

The Base Communications Infrastructure (BCI) program supports upward generated requirements from the Major Commands (MAJCOMs), their bases and the Air Force Reserves and their bases. MAJCOMs and bases need their own communications improvement funds to tailor the base communications environment to the specific operational missions supported by the base. Funds are also needed at MAJCOM and base level to react quickly to mission changes, support new Military Construction projects, and handle the multitude of smaller, individual communications, computer, Air Traffic Control, and weather instrumentation connectivity needs. The BCI program is also used by the Air National Guard to fund their entire communications infrastructure requirements. Air Force-wide downward directed efforts to provide base-wide fiber optic networks, modernize base control centers, and replace main base telephone switches are funded under Base Information Infrastructure (P-1 Line 58).

There are significant increases in FY03-FY05 funding to meet the National Telecommunications and Information Administration (NTIA) mandate to free-up radio frequencies and increase transmission capabilities by migrating from "wideband" to "narrowband" frequencies. This requires replacement of land mobile radios and installation of land mobile radio infrastructure upgrades.

1. HEADQUARTERS AIR FORCE COMMUNICATIONS AGENCY (HQ AFCA): This program procures communications and informationsystems equipment supporting the information technology (IT) mission. FY04 funding procures real-time video systems, satellite terminal upgrades, and high-speed data processing equipment that support models and simulations. This program also funds procurement of commercial off-the-shelf LMR equipment, which replaces current in-garrison wideband equipment with narrowband handhelds, mobile radios, base stations, and repeaters to meet the NTIA narrowband mandate.

2. AIR NATIONAL GUARD (ANG): FY04 funding supports expansion and modernization of information transmission systems and base information and communications infrastructure at 88 ANG flying wings and over 200 geographically separated units. Procurement includes

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** BASE COMMUNICATIONS INFRASTRUCTURE

Description (continued):

wide and local area network hardware (servers, routers, hubs, and network management systems for information management from central, regional locations); fiber optic and copper cabling; antenna structures; and upgrades and replacements for secure/nonsecure telephone switches. Funding ensures ANG systems are technologically viable, compatible, and interoperable with the Department of Defense (DoD) and AF command, control, communications, computer, information and intelligence architecture.

3. HEADQUARTERS AIR FORCE SPACE COMMAND (HQ AFSPC): FY04 funds support AFSPC base communications command-widemodernization and life cycle replacement of information transmission systems, base information infrastructure, Command Engineering and Installation (E&I) program, and base communications infrastructure. Procurements include wide and local area network hardware (servers, routers, hubs, and network management systems for information management from central locations) and software, upgrades and replacements for secure/nonsecure telephone switches at main bases and remote geographically separate units, and life cycle replacement of base communications infrastructure. Additionally, funds support Chief Information Officer, IT Summit, and Command Initiatives e.g. Server Consolidation, and the Command Enterprise. FY04 funding provides for two major command programs; the command-wide LMR program to meet the NTIA narrowband initiative and the relocation of Los Angeles Air Force Base (AFB) facilities currently located in earthquake prone areas. The cost to make these facilities "earthquake safe" is greater than the cost to relocate the facilities to a safer location on the same base.

4. HQ US AIR FORCE EUROPE (HQ USAFE): FY04 funding supports engineering, procurement, and installation of infrastructure expansion and modernization by purchasing network equipment, network servers, fiber, metallic wiring, fiber optic transceivers, network hubs, and voice and data switching equipment not covered by the CITS program. FY04 will also continue to fund communications upgrades in direct support of the AF CIO Initiative to consolidate servers on both the Unclassified Sensitive Internet Protocol Router Network (NIPRNET) and Secret Internet Protocol Router Network (SIPRNET). Included in these requirements are the needs to re-home and consolidate multiple geographically separated units behind single consolidated servers at main operating bases. FY04 funding will also continue to support the transfer of the Rhein-Main Air Base (AB), Germany, airlift mission to Ramstein and Spangdahlem ABs in Germany. The Rhein-Main relocation allows USAFE to continue as an en-route hub to support South West Asia (SWA) and other contingency efforts, and the Air Force to fully support airlift operations throughout Europe. Finally, the expansion of SIPRNET capability within USAFE remains a top priority requiring the continual funding of classified networking infrastructure at all locations.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** BASE COMMUNICATIONS INFRASTRUCTURE

Description (continued):

5. HEADQUARTERS AIR EDUCATION AND TRAINING COMMAND (HQ AETC): FY04 funds support various distinct programs for AETC, each detailed below.

a. TECHNICAL TRAINING MANAGEMENT SYSTEM (TTMS, formerly ADVANCED TRAINING SYSTEM (ATS)): FY04 funds provide Automatic Data Processing Equipment modernization systems, to include workstations, servers, software, and secure communications for TTMS between the technical training bases and their respective field training detachments, operating locations, and basic military training organizations. TTMS is a tool for the management of all technical training students and resources, design & development of courses, evaluation of training to include testing and critiques, and management of employee records. This hardware is required to meet advanced technical training requirements for 175,000 trainees per year in 20 different career fields.

b. COMMUNICATIONS ENGINEERING AND INSTALLATION (EI) PROGRAM: FY04 funding provides for the needed connectivity (fiber optic cable or copper wiring) for a variety of communications systems, air traffic and control systems and towers, land mobile radio antennas, base security systems, and weather instrumentation devices. FY04 funding also provides for internal communications equipment needed to support new Military Construction and minor construction projects .

6. HQ AIR FORCE MATERIEL COMMAND (HQ AFMC): FY04 funding supports engineering, procurement and installation/upgrades, and management/protection of network infrastructure which provide high speed connections to Defense Information Systems Agency (DISA) classified and unclassified networks. These funds will supplement funding provided by the Air Force Systems Networking (AFSN) and Air Force CITS programs by providing critical base-level network connectivity to facilities not funded under the AFSN and CITS programs. FY04 funding continues these efforts with upgrades to telecommunication infrastructure and beginning development of regional enterprise network architecture. The regional enterprise network architecture aims to capitalize on new data storage and management tools to generate further efficiencies and provide enhanced reliability/business continuity through mirrored operations. Examples of the consolidation efficiencies to date include a reduction of AFMC electronic mail servers from 482 to 218, elimination of over 2500 domain controllers and 1200 NT domains, and a requirement for 1200 administrators of these services reduced to 150.

7. HQ PACIFIC AIR FORCE (HQ PACAF): This program procures communications and information systems equipment supporting the

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** BASE COMMUNICATIONS INFRASTRUCTURE

Description (continued):

Information Technology (IT) mission. FY04 funding enables procurement of mission critical Command Post Consoles at six PACAF wings as well as LMRs to meet Korean and NTIA mandates. Funding also supports engineering, procurement, and installation of infrastructure expansion and modernization by purchasing network equipment, network servers, fiber, metallic wiring, fiber optic transceivers, network hubs, and voice and data switching equipment not covered by the CITS program. Expansion of the PACAF-wide secret-level network to improve the warfighters' network access and upgrade switches remains a top priority.

8. HQ AIR COMBAT COMMAND (HQ ACC): FY04 funding procures and maintains standardized communications and information systems throughout ACC, providing MAJCOMs, Numbered AFs, and Combat AFs means to defend, control, manage, modify, and monitor AF communications networks.

FY04 funding supports the Command E&I program and AF base-level infrastructure upgrades to provide all core and non-core facilities communication network access within the FYDP; provides C2 connectivity to all key base facilities, organizations, and war fighting forces; and supports Network Operational Security Centers (NOSC), which manage, maintain, and improve reliability, security, and efficiency of command information transport systems.

FY04 funds communications upgrades in direct support of the AF CIO Initiative to consolidate servers on both the NIPRNET and SIPRNET. Infrastructure upgrades include transition to high speed/high data rate connectivity, establishment of digital switching capabilities, etc.

This program procures commercial, off-the-shelf LMR equipment, which replaces current in-garrison wideband equipment, on a one-for-one basis, with narrowband handhelds, base stations, and repeaters to meet the NTIA narrowband mandate. Program procures handheld LMRs -- personal, portable, low power line-of-sight (LOS) communication devices providing secure, flexible, and versatile means of relaying information between troops in the field and wing command post personnel and infrastructure -- includes the high power base stations and repeaters, normally at fixed sites, capable of providing extended coverage LOS communications for troops in the field and wing command post personnel.

This program also allows ACC to move closer to providing efficient high-speed information management transport systems vital to the daily

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** BASE COMMUNICATIONS INFRASTRUCTURE

Description (continued):

operation of headquarters staff and imperative to combat forces operations. Procurements include engineering and installation of infrastructure expansion and modernization of network equipment, network servers, fiber, metallic wiring, fiber optic transceivers, network hubs, and voice and data switching equipment not covered by the CITS program

9. HQ AIR MOBILITY COMMAND (HQ AMC): FY04 funding provides connectivity (fiber optic cable or copper wiring) for a variety of communication systems, air traffic and control systems and towers, land mobile radio antennas, base security systems, and weather instrumentation devices. This program also modernizes existing IT infrastructure supporting AMC's global mobility forces; extend the secret-level network to improve classified access to specific operational users and facilities based on mission needs.

10. HQ AIR FORCE GEOBASE INTEGRATION OFFICE (GIO): HAF GIO was established July 2001 to deliver Geobase capability to USAF operations and serve as installation focal point for geospatial information and services. The Geobase program provides installation situational awareness across garrison and expeditionary bases by combining information, technology, and processes. Geobase enhances agile combat support through easy access to an authoritative, digital base map linked to legacy mission information systems. This will reduce a commander's decision risk through improved control and also enhance force protection and homeland defense through integrated base support planning.

In FY03, Congress added $10.8M for GeoBase. Reference Appropriations Conference Report 107-732, October 9, 2002, page 219. Funds will help provide organic contracted services support to all MAJCOMs, Direct Reporting Units, Air Force Civil Engineer Support Agency, Air Force Center for Environmental Excellence, Air Force Command Control Intelligence Surveillance and Reconnaissance Center, and the Air Force Safety Center.

Each MAJCOM will develop their own internal Geobase capabilities across their mission scope to complement legacy mapping capabilities already present across their headquarters and installations. MAJCOMs will modify existing geospatial Information Technology architectures to the new USAF Geobase architecture endorsed by the AF Chief Information Officer. This new architecture is compatible with national, federal, and defense data and network standards, and existing geospatial information hardware, software, and database investments across their mission domains to minimize redundant purchases and maximize leveraging of present resources.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** BASE COMMUNICATIONS INFRASTRUCTURE

Description (continued):

Funds will be used to acquire approved hardware and commercial off-the-shelf software and databases to meet Spiral 1 capabilities. Spiral 1 capability is defined in the Geobase Concept of Operations (CONOPS) as initial operational capabilities. This initial operational capability focuses on development of the Common Installation Picture (CIP) for each installation. The CIP will serve as the one, integrated, current authoritative map of the installation that will be accessed and shared both across the many installation functions as well as by all Air Force echelons and nationwide homeland defense security organizations that are seeking controlled access to the map of the installation. Experience has shown that building such a CIP will cost on the order of about $300,000 per installation, if none already exists.

11. HQ AIR FORCE SPECIAL OPERATIONS COMMAND (HQ AFSOC): No FY04 funding is requested.

12. HQ AIR AND SPACE OPERATIONS (HQ USAF/XO): No FY04 funding is requested.

Items requested in FY04 are identified on the following P-40a and are representative of items to be procured. Items procured during execution may change based on critical equipment needed to support current Air Force mission requirements.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** BASE COMMUNICATIONS INFRASTRUCTURE

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		QTY.	COST	QTY.	COST	QTY.	COST	QTY.	COST
BASE COMMUNICATIONS INFRASTRUCTURE									
1. HQ AFCA (1)(3)	A		$416		$107,696		$49,280		$5,023
2. ANG (1)(3)	A		$23,021		$16,650		$24,984		$28,919
3. HQ AFSPC (1)(2)(3)	A		$6,673		$5,492		$24,880		$9,309
4. HQ USAFE (1)(2)(3)	A		$17,485		$14,605		$25,857		$32,509
5. HQ AETC (1)(2)(3)	A		$4,479		$2,060		$6,192		$10,204
6. HQ AFMC (1)(2)(3)	A		$8,709		$17,130		$15,127		$19,696
7. HQ PACAF (1) (2)	A		$5,738		$8,656		$6,449		$7,241
8. HQ ACC (1)(2)	A		$5,552		$6,682		$5,374		$5,907
9. HQ AMC (1)(2)	A		$2,436		$2,164		$2,415		$2,728
10. HQ AF GIO	A				$10,696				
11. HQ AFSOC (1)	A								$58
12. HQ USAF AIR AND SPACE OPS	A								$1,724
Totals:			$74,509		$191,831		$160,558		$123,318

Remarks:

1. Quantities and unit costs vary due to different site configurations.
2. Options were used to procure multiple pieces of equipment from the GSA Schedule, AF Minicomputer multi-user system, AFCAC 308, Unified local area network architecture (Ulana) II, and Desktop IV contracts.
3. Options to various competitive, fixed/firm fixed price contracts are available through the following vendors for execution of BAse Communicatiosn Infrastructure funding: AT&T Federal Communications Systems, Silver Springs, MD; AT&T, Engelwood, CO; Tennmark, Nashville, TN; Sun Micro Systems, Alexandria, VA; GTE Government Systems and Dichroma, Falls Church, VA; Amerind INC, Alexandria, VA; Presidio, Lanham, MD; Digicom, Bethesda, MD; NORTEL, Richardson, TX; DELL, Dallas, TX; STI, Rosslyn, VA; and GTSI, Chantilly, VA

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** ITEMS LESS THAN $5 MILLION

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$8,515	$6,391	$5,960	$5,980	$15,477	$16,224	$18,331	$18,584

Description:

The "Items Less Than $5M" line funds various procurements that support the missions of all Air Force (AF) Commands. This program contains numerous miscellaneous items of electronics and telecommunications equipment. The major procurement activities in this line are the Allowance Source (AS) Equipment and replacement Power Conditioning and Continuation Interface Equipment (PCCIE). Miscellaneous AS authorizations provide new and/or replacement equipment items to organizational units in the field. PCCIE systems are used to back up and protect power sensitive/dependent computer systems. All items have an annual procurement value of less than $5,000,000 and are Code A.

1. ALLOWANCE SOURCE (AS) AUTHORIZATIONS: Requirements funded in this program are generated as the result of condemnations of existing equipment, an increase in the basis of issue on an individual item, or a change in the basing structure. Units requisition items based on AS authorizations which match support equipment authorizations to unit missions. The Equipment Item Requirements Computation generates a total net buy requirement based on a comparison of authorizations and on-hand assets. Examples of equipment procured are: special electronics atmospheric equipment, electronic warfare and bombing gunnery range equipment, equipment for communications evaluation/maintenance teams, and ground radar special mission and support equipment.

2. POWER CONDITIONING AND CONTINUATION INTERFACING EQUIPMENT (PCCIE): PCCIE consists of commercial power quality equipment. This equipment is fielded as a complete system and, once installed, provides 100 percent uninterrupted power to critical AF installations. This program procures replacement PCCIE for all AF, Air National Guard, and AF Reserve units. Examples include the Air Defense Center at Cheyenne Mountain Air Station (AS), CO, perimeter acquisition radar sites at Cavalier AS, ND, and Beale AF Base (AFB), CA, all regional air defense sector radar sites, combat communications centers worldwide, radar sites in Middle Eastern countries, satellite tracking stations worldwide, numerous information processing sites, and Next Generation Radar (NEXRAD) sites. Without the equipment, the sites will experience power outages, brownouts, power surges, and sags, all of which will cause loss of mission capability.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** ITEMS LESS THAN $5 MILLION

Description (continued):

Items requested in FY04 are identified on the following P-40A-IL and are representative of items to be procured. Items procured during execution may change based on the most critical equipment needed to support Air Force mission critical requirements.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A-IL)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** ITEMS LESS THAN $5 MILLION

PROCUREMENT ITEMS	NSN	FY2004		FY2005	
		QTY.	COST	QTY.	COST
1. ALLOWANCE SOURCE AUTHORIZATIONS		,	$3,576		$3,332
2. POWER CONDITIONING AND CONTINUATION INTERFACING EQUIPMENT			$2,384		$2,648
TOTALS:			$5,960		$5,980

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** COMM ELECT MODS

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$41,579	$60,024	$38,732	$23,838	$25,168	$22,806	$40,188	$41,762

Description:

Permanent modifications are configuration changes to in-service systems and equipment which correct materiel or other deficiencies, or which add or delete capability. Safety modifications correct deficiencies which would produce hazards to personnel, systems, or equipment. This budget line encompasses both new and on-going communications-electronic modification efforts for ground based systems. Modification installation funding is budgeted in the year the installation will occur.

1. BATTLE CONTROL SYSTEM (BCS): The BCS, formerly known as the Ground Theater Air Control System (GTACS), also known as the Control and Reporting Center (CRC), is a low density/high demand deployable ground command and control (C2) asset conducting both theater and homeland defense operations. The BCS strategy supports the modernization of the current Control and Reporting Center (CRC to become the Battle Control Center (BCC) with forward deployed Radar/Communications Cells (RCC)). The CRC will continue to provide capability until all phases of BCS are accomplished. The CRC provides the Joint Task Force (JTF)/Joint Force Air Component Commander (JFACC) with a deployable Theater Battle Management C2 capability. The CRC conducts worldwide C2 missions ranging from tactical-level operations supporting Continental United States (CONUS) homeland defense, military-operations-other-than-war, and peacetime contingencies to projecting decisive force into one or more major regional conflicts in support of strategic war. The CRC deploys into a theater with its operations contingent located on or near a main operating base (MOB) with organic AN/TPS-75 deployed radars (DRs), Link 16-capable AN/TSC-147 Joint Tactical Information Distribution System, (JTIDS) Modules, and secure ground-air-ground communications placed forward in-theater. In addition to the AN/TPS-75, the CRC must be capable of integrating sensors of opportunity (USAF, Joint, Continental US (CONUS) Federal Aviation Administration, and host nation radars) that may be located within its assigned area of operations.

a. MOD #M00020, Antenna Bearing Redesign: No FY04 funding is requested.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** COMM ELECT MODS

Description (continued):

b. MOD # Miscellaneous Low Cost Mods: No FY04 funding is requested.

2. BALLISTIC MISSILE EARLY WARNING SYSTEM: The Ballistic Missile Early Warning System (BMEWS) primary mission is to provide the Commander, United States Space Command at Cheyenne Mountain Complex, CO, with timely, accurate, and unambiguous tactical warning/attack assessment data on intercontinental ballistic missiles penetrating the coverage area. BMEWS has the additional mission of providing space vehicle surveillance, tracking, and identification to space control centers. BMEWS consists of three operational sites: Site I at Thule Air Base (AB), Greenland; Site II at Clear Air Force Station (AFS), AK; and Site III at Royal Air Force (RAF) Fylingdales, UK.

BMEWS SERVICE LIFE EXTENSION PROGRAM (SLEP): The legacy Mission Critical Computer Resources (MCCR) at the BMEWS sites are obsolete and becoming unsustainable. FY04 funds provide for continued sustainability, reliability, and maintainability modifications for the MCCR sub-systems most at risk of becoming unsupportable by 2005. Sustainability risk analysis for the computer processors was completed Sep 02 and contracts awarded to sustain the identified unsupportable components. To mitigate the risk, mission software will be emulated in FY03 to operate with new processors.

3. AIR TRAFFIC CONTROL AND LANDING SYSTEMS (ATCALS): ATCALS is a combination of USAF ground facilities and equipment, both fixed and tactical, with associated avionics, personnel, and procedures that provide air traffic control to USAF/DoD flying missions worldwide. ATCALS provides en route and terminal navigation control and separation, approach, departure, and landing guidance. ATCALS also provides equipment required to ensure interoperability with systems operated by the North Atlantic Treaty Organization, the US National Airspace System, and the International Civil Aviation Organization. The following modifications are in support of the ATCALS mission:

a. AN/GRN-30 INSTRUMENT LANDING SYSTEM (ILS) ANTENNA/DISTRIBUTION UNIT: No FY04 funds are requested.

b. AN/TRN-41 TECHNICAL UPGRADE: Existing equipment design and construction is of 1970s technology, and contains obsolete components that can no longer be procured. This equipment is projected to be the only deployable Tactical Air Navigation (TACAN) in the AF inventory and this modification will extend the service life of the system. In addition, existing tripods will not support long term deployments and must be replaced. FY04 funds procure this modification.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** COMM ELECT MODS

Description (continued):

c. AN/TPN-19, LANDING CONTROL CENTRAL (LCC) RESHELTER: No FY04 funds are requested.

d. MISCELLANEOUS LOW COST MODIFICATIONS: Flight Data Input/Output system is used by Federal Aviation Administration (FAA) & DoD facilities for flight plan information in the National Airspace System. Current Central Processing Units (CPUs) and printers are no longer supportable by FAA. FY04 funding procures CPUs and printers developed by FAA to ensure continued FAA 2nd level engineering support.

e. DIGITAL BRIGHT RADAR INDICATOR TOWER EQUIPMENT (DBRITE) Flat Panel Display: The current DBRITE display weighs 165 pounds and is mounted in the Air Traffic Control Tower by suspension from the ceiling. Due to its heavy weight and the mounting scheme utilized, the DBRITE Display requires excessive time in preparation for maintenance actions. In addition, the current display is exhibiting increased failure of the power supply assembly. FY04 funding procures a lighter and almost maintenance free flat panel display.

f. AN/GRN-29, INSTRUMENT LANDING SYSTEM GROUNDING MODIFICATION: The incoming AC power distribution within the AN/GRN-29 does not meet the requirement of the National Electric Code, Military Standard (MIL-STD) 188-124, and T.O. 31-10-24. Specifically, the incoming AC power neutral wire is connected to the chassis ground throughout the shelter. This wiring configuration, which places AC current on the grounding system, creates several current loops which can contribute to equipment malfunctions (especially during inclement weather) and presents a potential personnel safety hazard. This modification brings the AN/GRN-29 grounding configuration into compliance with the National Electric Code. FY04 funding provides for this modification.

g. AN/GPN-22(V), RADAR SET GROUP TRANSMITTER MODIFICATION: The AN/GPN-22(V), Radar Set Group, is a fixed base precision approach radar system that provides critical mission support at locations requiring precision approach air traffic control during inclement weather for aircraft recovery. The AN/GPN-22 utilizes 27-year old technology to develop and radiate radar signals. The transmitter experienced an extremely high failure rate that reduced operational availability to an average of 82%, well below the Air Force Standard of 97%. Modification of the transmitter will improve maintainability and reliability. FY04 funding provides for this modification.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** COMM ELECT MODS

Description (continued):

h. AN/GSH-59, AUTOMATED TERMINAL INFORMATION SYSTEM (ATIS) MODIFICATION: Parts for the ATIS are no longer available for procurement and the cost to reverse engineer would exceed the unit acquisition cost tenfold. ATIS is composed of two major components: the recorder and the radio. FY04 funding modifies and upgrades the ATIS recorder. This modification provides, on a continuous basis, recorded local terminal conditions, including weather, as well as other pertinent information for broadcast to aircraft in the terminal and en route environments.

i. AN/GPN-12/20, AIR SURVEILLANCE RADAR (ASR) ANTENNA DRIVE MOTOR MODIFICATION: No FY04 funding is requested.

j. AN/GRN-30/31 METERS/SYNTHESIZERS UPGRADE: No FY04 funding is requested.

k. AN/TPN-19 LANDING CONTROL CENTRAL (LCC)-FLAT PANEL DISPLAY: No FY04 funding is requested.

4. WEATHER OBSERVATION AND FORECAST SYSTEM: This system consists of meteorological and space environmental equipment needed to provide information to support the worldwide missions of the AF, Army, Special Operations Forces (SOF), Unified Commands, and other government agencies. Fixed and transportable equipment provides warfighters at in-garrison, contingency, and deployed locations with accurate, timely terrestrial and space weather observations and forecasts.

a. GROUND WEATHER: The ground weather mission provides timely, mission-critical support by observing, analyzing, and forecasting terrestrial weather phenomena impacting the warfighter's ability to operate on the ground and in the air. Worldwide weather products are generated and distributed to AF and Army forces and other customers. The following modifications are in support of this mission:

(1) MOD# 94-003B, NEXRAD OPEN RADAR DATA ACQUISITION (ORDA): FY04 funding continues replacement of proprietary hardware and software in the NEXRAD radar transmitter and migrate them to open systems standards. Replacement will decrease recurring maintenance costs and eliminate components failing at higher than expected rates.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** COMM ELECT MODS

Description (continued):

(2) MOD# 94-004A, NEXRAD RADAR PRODUCT GENERATOR (RPG) MIGRATION: No FY04 funding is requested.

(3) MOD# 94-004B, NEXRAD PRINCIPLE USER PROCESSOR (PUP) GROUP REPLACEMENT: No FY04 funding is requested.

(4) MOD# 98-001, AIR FORCE WEATHER AGENCY (AFWA) DISSEMINATION SUBSYSTEM: No FY04 funding is requested.

(5) MOD# 98-002, PRODUCT TAILORING/WARFIGHTER APPLICATIONS (PT/WA): No FY04 funding is requested.

(6) MOD# 98-003, WEATHER FORECASTING: FY04 funding continues upgrades of computer hardware and supporting software providing fine-scale weather and cloud model forecasts at the AF Weather Strategic Center. The current subsystem cannot support the number of theaters/areas of interest necessary for worldwide AF and Army operations, including SOF support. Information Technology refresh will allow the current infrastructure to meet the AF spatial and temporal weather and cloud model forecast resolution requirements, provide capacity to handle extremely large data files, and improve capability for classified fine-scale modeling.

(7) MOD# 00-002, TACTICAL WEATHER RADAR (TWR): FY04 funding continues modification of Doppler weather radars at fixed and semi-fixed locations. Modifications will upgrade display/control computers to run improved operating systems, enhance remote control capabilities, generate enhanced radar products, and distribute products in formats compatible with warfighter C2 systems.

(8) MOD# 00-004, AIR FORCE COMBAT CLIMATOLOGY CENTER - REPLACEMENT UPGRADE (AFCCCR-U): FY04 funding continues upgrades of hardware, software, and communications infrastructure within the AF Combat Climatology Center to support ingest, archiving, and retrieval of observational weather data and fine-scale cloud model analysis and forecast data. The upgrade includes network attached storage devices, disk drives, and central processing units for additional data ingest, storage, and retrieval capabilities.

(9) MOD# 02-002, AUTOMATED SURFACE OBSERVING SYSTEM (ASOS): Beginning in FY04, the AF will pay a proportional share of modification costs for this airfield sensor system as part of a tri-agency agreement between the Department of Transportation, Department of Commerce, and Department of Defense. The tri-agency agreement will ensure AF-owned ASOS units maintain baseline

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** COMM ELECT MODS

Description (continued):

configuration with units in other agencies. Participation in the Pre-Planned Product Improvement (P3I) program will enhance long-term supportability of ASOS. FY04 funding will acquire ice-free wind sensor modification kits.

b. SPACE WEATHER: The Space Environmental Support System (SESS) mission is to provide timely space weather support through observation, analysis, and forecasting of solar phenomena and the state of the magnetosphere and ionosphere inhibiting or enhancing DoD's ability to operate in the air and space environment. The Air Force Weather Agency (AFWA) collects, processes, and analyzes data on solar activity. Alerts, warnings, and forecasts are then produced and distributed to users worldwide. Those products allow warfighters to mitigate the impact of space weather on activities such as high frequency radio communications, the accuracy of global positioning system navigation, satellite anomaly resolution, and space operations.

(1) MOD# 93-003, IONOSPHERIC MEASURING SYSTEM (IMS) COMMUNICATIONS: No FY04 funding is requested.

(2) MOD# 93-004, IONOSPHERIC MEASURING SYSTEM (IMS) SCINTILLATION: No FY04 funding is requested.

(3) MOD# 93-005, RADIO SOLAR TELESCOPE NETWORK (RSTN) MODIFICATION FOR SOLAR RADIO BURST LOCATOR (SRBL): FY04 funding continues the modification of the SRBL network. Modification will replace outdated technology for detecting solar flare activity.

(4) MOD# 96-031, IMPROVED SOLAR OBSERVING OPTICAL NETWORK (ISOON): No FY04 funding is requested.

5. JOINT SURVEILLANCE SYSTEM (JSS): The JSS is a combined USAF/Federal Aviation Administration (FAA) network providing air surveillance data through a distributed network of radars around the perimeter of the continental US, Alaska, Hawaii, and Puerto Rico. The surveillance data also directly supports the North American Air Defense Commander's Integrated Tactical Warning and Attack Assessment (ITW/AA) mission as well as air traffic control missions of the FAA and other multi-national air traffic control agencies. FY04 funds will be used to replace FPS-117 Long Range Radar interrogator set beacons, environmental control units, and fire suppression systems throughout the network. These components are logistically unsupportable in their current configurations.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** COMM ELECT MODS

Description (continued):

6. NORTH WARNING SYSTEM (NWS): The NWS is a combined US/Canadian effort providing surveillance and ITW/AA coverage of northern approaches to the US and Canada as part of the Atmospheric Early Warning System. The radar interrogator set (RIS) beacons, fire suppression systems, and environmental control units (ECU) are at the end of their useful life and suffer from reliability and supportability problems. The beacon is no longer in production and replacement parts are virtually exhausted. The ECU provides heating and cooling to radar components; however, the units are leaking refrigerant into the atmosphere. Loss of either the beacon or ECU will cause the radar to shut down and make it impossible for NORAD to accomplish its air defense and Homeland Security missions. FY04 funds this reliability/sustainability modification by replacing the radar interrogator set beacons, fire suppression systems, and ECUs to prevent any gaps in the North American Defense System.

7. SHARED EARLY WARNING SYSTEM (SEWS): FY04 funds continue equipment upgrades for the Centralized Distribution Facility (CDF) at Peterson AFB, CO, where data is initially received, filtered, and then transmitted to SEWS customers and other foreign partner locations.

8. COMBATANT COMMANDER MOBILE CONSOLIDATED COMMAND CENTERS (MCCCs): The Combatant Commander MCCC provides contingency reconstitution and continuity of command capabilities to accomplish directed Combatant Commander missions in the event primary command and control facilities are incapacitated. FY04 funds will provide continuous upgrade and support to computers for communication systems on the United States Space Command (USSPACECOM) MCCC platform. These systems include: Spooler, Defense Automated Warning System (DAWS) Message Front End (DMFE), Nuclear Planning Execution System (NPES), Global Command and Control System (GCCS), Global Command and Control System-Top Secret (GCCS-T), Nuclear Detection System (NDS) gateway, etc., and any other transitional computer capabilities implemented through the Future Years Defense Plan (FYDP).

Items requested in FY04 are identified on the following P-5 and are representative of items to be procured. Items procured during execution may change based on critical equipment needed to support current Air Force mission requirements.

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)		DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** COMM ELECT MODS	

WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY2002			FY2003			FY2004			FY2005		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
1. BATTLE CONTROL SYSTEM (BCS) (1)				{2,381}			{586}						
A. MOD# M00020, ANTENNA BEARING REDESIGN	A			2,295			586						
B. MISCELLANEOUS LOW COST MODS	A			86									
2. BALLISTIC MISSILE EARLY WARNING SYSTEM (BMEWS) SERVICE LIFE EXTENSION PROGRAM (SLEP)				{17,688}			{19,350}			{3,947}			
HARDWARE/SOFTWARE	A			15,503			16,093			3,452			
INTERIM SUPPLY SUPPORT				1,674			2,654						
PROGRAM MANAGEMENT SUPPORT				511			603			495			
3. AIR TRAFFIC CONTROL LANDING SYSTEM (ATCALS)				{8,649}			{13,036}			{9,564}			{10,671}
A. MOD# N/A, AN/GRN-30 INSTRUMENT LANDING SYSTEM ANTENNA/DU	A			4,914			3,000						
B. AN/TRN-41 TECHNICAL UPGRADE	A						4,490			4,465			
C. AN/TPN-19 RESHELTER	A			1,941			1,544						
D. MISCELLANEOUS LOW COST MODS	A			1,544						704			3,216
E. DIGITAL BRIGHT RADAR INDICATOR TOWER EQUIPMENT (DBRITE)	A									2,200			
F. AN/GRN-29, INSTRUMENT LANDING SYSTEM GROUNDING	A									802			3,800

	P-1 ITEM NO 77		PAGE NO: 241		Page 1 of 4

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)		DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** COMM ELECT MODS	

WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY2002			FY2003			FY2004			FY2005		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
G. AN/GPN-22(V) RADAR SET GROUP TRANSMITTER	A									793			3,655
H. AN/GSH-59 AUTOMATED TERMINAL INFORMATION SYSTEM (ATIS)	A						300			600			
I. AN/GPN-12/20 ASR ANTENNA DRIVE MOTOR	A			250			780						
J. AN/GRN-30-31 METERS/SYNTHESIZERS UPGRADE	A						500						
K. AN/TPN-19 FLAT PANEL DISPLAY MOD	A						2,422						
4. WEATHER OBSERVATION & FORECAST SYSTEM				{5,145}			{9,016}			{8,932}			{11,260}
A. GROUND WEATHER				{4,680}			{8,708}			{6,123}			{8,964}
(1) MOD# 94-003B, NEXRAD OPEN RADAR DATA ACQUISITION (ORDA)	A						2,136			2,387			1,804
(2) MOD# 94-004A, NEXRAD RADAR PRODUCT GENERATOR (RPG) MIGRATION	A			1,370									
(3) MOD# 94-004B, NEXRAD PRINCIPAL USER PROCESSOR (PUP) GROUP REPLACEMENT	A			730									
(4) MOD# 98-001, AIR FORCE WEATHER AGENCY (AFWA) DISSEMINATION SUBSYSTEM	A			479			1,693						657
(5) MOD# 98-002, PRODUCT TAILORING/ WARFIGHTER APPLICATIONS	A												550
(6) MOD# 98-003, WEATHER FORECASTING	A			1,751			3,721			2,779			4,086
(7) MOD# 00-002, TACTICAL WEATHER RADAR (TWR)	A						604			200			850

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)		DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** COMM ELECT MODS	

WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY2002			FY2003			FY2004			FY2005		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
(8) MOD# 00-004, AIR FORCE COMBAT CLIMATOLOGY CENTER - REPLACEMENT UPGRADE (AFCCCR-U)	A			350			554			500			500
(9) MOD# 02-002, AUTOMATED SURFACE OBSERVING SYSTEM (ASOS)	A									257			517
B. SPACE WEATHER				{465}			{308}			{2,809}			{2,296}
(1) MOD# 93-003, IONOSPHERIC MEASURING SYSTEM (IMS) COMMUNICATIONS	A			39			39						
(2) MOD# 93-004, IONOSPHERIC MEASURING SYSTEM (IMS) SCINTILLATION	A			61			93						
(3) MOD# 93-005, RADIO SOLAR TELESCOPE NETWORK (RSTN) MOD FOR SOLAR RADIO BURST LOCATOR (SRBL)	A			40			176			2,809			2,296
(4) MOD# 96-031, IMPROVED SOLAR OBSERVING OPTICAL NETWORK (ISOON)	A			325									
5. JOINT SURVEILLANCE SYSTEM				4,442			8,361			8,022			1,151
6. NORTH WARNING SYSTEM				2,377			7,543			7,611			
7. SHARED EARLY WARNING ACQUISITION				897			1,673			193			288

	P-1 ITEM NO 77		PAGE NO: 243		Page 3 of 4

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)		DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/ELECTRONICS & TELECOMMUNICATION EQUIPMENT	**P-1 NOMENCLATURE:** COMM ELECT MODS	

WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY2002			FY2003			FY2004			FY2005		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
8. COMBATANT COMMANDERS MOBILE CONSOLIDATED COMMAND CENTERS (MCCC)							459			463			468
TOTALS:				41,579			60,024			38,732			23,838

REMARKS:

1. Formerly known as Control and Reporting Center (CRC).

	P-1 ITEM NO 77		PAGE NO: 244		Page 4 of 4

INDIVIDUAL MODIFICATIONS (EXHIBIT P- 3A) | **DATE:** FEBRUARY 2003

Modification Title and No: Digital Bright Radar Indicator Tower Equipment (DBRITE) Flat Panel Display

Models of Systems Affected: Comm-Electronic-Air Traffic Control and Landing Systems (ATCALS)

Description/Justification: The current Digital Bright Radar Indicator Tower Equipment (DBRITE) Display weighs 165 pounds and is mounted in the Air Traffic Control Tower by suspension from the ceiling. Due to its heavy weight and mounting scheme utilized, the DBRITE Display requires excessive time in preparation for maintenance actions. In addition, the current display is exhibiting increased failure of the power supply assembly. A lighter and almost maintenance free flat panel display has been located for this mod.

Development Status/Major Development Milestones: TPRS & SOO: Sep 03 Contract Award: Mar 04 Delivery: 4 mo ARO

Financial Plan $ (in Millions)	PY		FY2002		FY2003		FY2004		FY2005		FY2006		TOTAL	
	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost
RDT&E														
Ref. R-1 PE No:														
Procurement:														
Equipment Kits							105	2.200					105	2.2
Equipment Kits Non-recurring														
Engineering Change Orders														
Data														
Training Equipment														
Support Equipment														
Software														
Interim Contractor Support														
Other														
Total Procurement Costs:	0		0		0		105	2.2	0		0		105	2.2
Hardware Installation:														
(PY) Eqpt (Kits)														
(FY02) Eqpt (Kits)														
(FY03) Eqpt (Kits)														
(FY04) Eqpt (105 Kits)							105	0					105	
(FY05) Eqpt (Kits)														
(FY06) Eqpt (Kits)														
Total Installation Costs:	0		0		0		105		0		0		105	
Total Modification Costs:	0		0		0		105	2.2	0		0		105	2.2

Method of Installation: UNIT, FIELD INSTALL

Administrative Lead-time (After 1 Oct): 6 Month(s)

Production Lead-time: 10 Month(s)

Contract Date:	PY		FY2002		FY2003		FY2004	MAR 04	FY2005		FY2006	
Delivery Date:	PY		FY2002		FY2003		FY2004	JUL 04	FY2005		FY2006	

Installations:	PY	FY2002				FY2003				FY2004				FY2005				FY2006				Total
		1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	
Input											105											105
Output													105									105

P-1 ITEM NO: 77

PAGE NO: 245

INDIVIDUAL MODIFICATIONS (EXHIBIT P- 3A) | **DATE:** FEBRUARY 2003

Modification Title and No: Joint Surveillance System Radar Interrogator Set Upgrade, TCT31P6-2FPS117-528, Data Code 31183

Models of Systems Affected: FPS-117 version 1,4,5

Description/Justification: An Air Force/FAA joint project. Funds replace radar interrogator sets (beacons), environmental control units (ECU) and the Fire Suppression System. The latter two assemblies are listed in the Non-recurring Equipment line. Their installation cost is included in the interrogator set installation cost. These components for the FPS-117 Long Range Radars have become logistically unsupportable. RDT&E is being funded by the FAA per a previous agreement. The beacons have a higher possibility of failure than do the ECUs, and will be replaced first. Because the ECU cost is higher than the Fire Suppression System, the Non-recurring Equipment cost in 2004 and 2005 is higher than 2003.

Development Status/Major Development Milestones: The FAA funded developmental costs; the Air Force will fund production. There are no required acquisition milestones for this mature system.

Financial Plan $ (in Millions)	PY		FY2002		FY2003		FY2004		FY2005		FY2006		TOTAL	
	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost
RDT&E														
Ref. R-1 PE No:													0	
Procurement:														
Equipment Kits			5	4.178	7	6.751	6	5.333					18	16.262
Equipment Kits Non-recurring					17	.658	10	1.858	6	1.151			33	3.667
Engineering Change Orders													0	
Data						.300		.200					0	0.5
Training Equipment				.100		.200		.200					0	0.5
Support Equipment						.200		.100					0	0.3
Software				.055		.100		.200					0	0.355
Interim Contractor Support													0	
Other													0	
Total Procurement Costs:	0		5	4.333	24	8.2090	16	7.891	6	1.151	29	6.6	51	21.584
Hardware Installation:														
(PY) Eqpt (Kits)													0	
(FY02) Eqpt (5 Kits)			5	.1091									5	0.1091
(FY03) Eqpt (7 Kits)					7	.152							7	0.152
(FY04) Eqpt (6 Kits)							6	.1312					6	0.1312
(FY05) Eqpt (Kits)													0	
(FY06) Eqpt (Kits)													0	
Total Installation Costs:	0		5	0.1091	7	0.152	6	0.1312	6	1.7	6	1.7	18	0.3923
Total Modification Costs:	0		5	4.4421	24	8.361	16	8.0222	6	2.851	29	8.3	51	21.9763

Method of Installation: CONTRACTOR, FIELD INSTALL

Administrative Lead-time (After 1 Oct): 5 Month(s)

Production Lead-time: 4 Month(s)

Contract Date:	PY		FY2002	FEB 02	FY2003	FEB 03	FY2004	FEB 04	FY2005		FY2006	
Delivery Date:	PY		FY2002	JUN 02	FY2003	JUN 03	FY2004	JUN 04	FY2005		FY2006	

Installations:	PY	FY2002				FY2003				FY2004				FY2005				FY2006				Total
		1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	
Input				2	3	1	2	2	2	1	1	2	2									18
Output					2	3	1	2	2	2	1	1	2	2								18

	P-1 ITEM NO: 77		**PAGE NO:** 246	Page 1 of 1

INDIVIDUAL MODIFICATIONS (EXHIBIT P- 3A) | **DATE:** FEBRUARY 2003

Modification Title and No: North Warning System Interrogator Set Upgrade
TCT31P6-2FPS117-528, Data Code 31,183

Models of Systems Affected: FPS-117 version 1,4,5

Description/Justification: An Air Force/FAA joint project. Funds replace radar interrogator sets (beacons), environmental control units (ECU) and fire suppression units. The latter two equipment sets are listed in the Equipment Kits Non-recurring. Their installment cost is contained within the interrogator installment cost. These components for the FPS-117 Long Range Radars have become logistically unsupportable. RDT&E is being funded by the FAA per a previous agreement. The beacons have a higher possibility of failure than do the ECUs, and will be replaced first. The cost of the ECUs is higher than the fire suppresion units. Consequently, the Non-Recurring equipment cost is higher in 2004 and 2005 than in 2003.

Development Status/Major Development Milestones: The FAA funded developmental costs, the Air Force will fund production. There are no required acquisition milestones for this mature system

Financial Plan $ (in Millions)	PY		FY2002		FY2003		FY2004		FY2005		FY2006		TOTAL	
	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost
RDT&E														
Ref. R-1 PE No:														
Procurement:														
Equipment Kits			2	1.933	7	6.30	6	4.838					15	13.071
Equipment Kits Non-recurring					15	.584	12	2.181					27	2.765
Engineering Change Orders														
Data				.100		.200		.100					0	0.4
Training Equipment				.100		.100		.100					0	0.3
Support Equipment				.100		.100		.100					0	0.3
Software				.100		.100		.100					0	0.3
Interim Contractor Support								.068					0	0.068
Other														
Total Procurement Costs:	0		2	2.333	22	7.384	18	7.487	17	6.4	24	6.6	42	17.204
Hardware Installation:														
(PY) Eqpt (Kits)														
(FY02) Eqpt (2 Kits)			2	.044									2	0.044
(FY03) Eqpt (7 Kits)					7	.159							7	0.159
(FY04) Eqpt (6 Kits)							6	.124					6	0.124
(FY05) Eqpt (Kits)													0	
(FY06) Eqpt (Kits)													0	
Total Installation Costs:	0		2	0.044	7	0.159	6	0.124	7	1.3	7	1.3	15	0.327
Total Modification Costs:	0		2	2.377	22	7.543	18	7.611	17	7.7	24	7.9	42	17.531

Method of Installation: CONTRACTOR, FIELD INSTALL

Administrative Lead-time (After 1 Oct): 5 Month(s)

Production Lead-time: 4 Month(s)

Contract Date:	PY		FY2002	FEB 02	FY2003	FEB 03	FY2004	FEB 04	FY2005		FY2006	
Delivery Date:	PY		FY2002	JUN 02	FY2003	JUN 03	FY2004	JUN 04	FY2005		FY2006	

Installations:	PY	FY2002				FY2003				FY2004				FY2005				FY2006				Total
		1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	1ST	2ND	3RD	4TH	
Input				1	1	1	2	2	2	1	1	2	2									15
Output					1	1	1	2	2	2	1	1	2	2								15

P-1 ITEM NO: 77

PAGE NO: 247

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** BASE/ALC CALIBRATION PACKAGE

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$11,918	$13,675	$13,528	$15,386	$15,631	$15,955	$16,244	$16,515

Description:

1. The Base/ALC Metrology and Calibration (METCAL) equipment program provides calibration standards grouped in a series of generic measurement packages (Electrical, Mechanical, and Systems equipment) to all major Air Force activities having a base Precision Measurement Equipment Laboratory (PMEL). PMELs calibrate and repair equipment used to maintain aircraft, missiles, communications, and other ground systems. The PMEL links calibration standards between the weapon system, the Air Force Primary Standards Laboratory (AFPSL), and the National Institute of Standards and Technology (NIST). This link ensures that systems used by operational forces perform their primary mission of delivering weapons on target. Presently, there are 76 Type II and III PMELs, two Rapid Assistance Support for Calibration (RASCAL) systems, 57 Transportable Field Calibration Unit (TFCU) systems, and 180 Portable Automatic Test Equipment Calibrator (PATEC) systems worldwide. All major aircraft depend heavily on offensive and defensive avionics that must be calibrated to function properly for mission success in wartime and in training environments. All aircraft engines and airframes require PMEL calibration support. This budget line also supports space and airborne communications/electronics systems such as Military Satellite Communications (MILSATCOM).

2. Each base PMEL requires a group of certified calibration standards to assure accurate, traceable measurements of the basic parameters recognized by the NIST. These calibration standards enable each Air Force activity to attain traceable measurements and optimum self-sufficiency in the calibration and maintenance of critical precision measurement equipment required for daily base operational capability. The standards packages must be constantly surveyed and upgraded to stay current with technological advances in metrology. In addition, as new and sophisticated systems enter the Air Force inventory, selected PMELs must be augmented with special calibration standards or auxiliary equipment, critical to the characteristics of systems supported.

3. The following support is provided by these measurement packages:

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** BASE/ALC CALIBRATION PACKAGE

Description (continued):

a. The Electrical and Mechanical Packages consist of equipment for calibration of common test, measurement, and diagnostic equipment (TMDE). Equipment procured as part of these packages is normally used by PMEL technicians in a laboratory environment. The equipment and standards provided will establish new or upgrade existing calibration capabilities.

b. The Electrical Package also provides the PMELs with standards and ancillary equipment used in electro-optical, radiofrequency (RF)/microwave, electrical, radiation detection identification and computation technologies, as well as equipment required for precise time and frequency measurement. It supports items such as meter calibrators, automated resistance measurement systems, and peak power meters. Additionally, the Mechanical Package includes standards and ancillary equipment for the mass, dimensional, optical, force, vibration, flow, and environmental measurement areas, supporting items such as humidity generators and hydraulic pressure gauge calibrators.

c. The Systems Package consists of equipment for calibrating common TMDE and automatic test equipment (ATE) outside of a normal PMEL facility. Systems package equipment facilitates on-site and/or in-place calibration to reduce the time of equipment non-availability to the user, eliminate the need to disassemble test stations, reduce transportation of delicate equipment, and calibrate to the user's minimum requirement. When not used for calibration outside the PMEL, this equipment is available for calibration of routine PMEL workload.

4. A reduction of requested funding levels will affect the ability of the Air Force to support current weapon system measurements, thus jeopardizing the accuracy of Air Force subsystems that provide navigation, weapons delivery, communication, and other mission support requirements. Calibration traceability will also be compromised due to lack of state-of-the-art measurement standards.

5. Items requested in FY04 are identified on the following P-40a and are representative of items to be procured. Items procured during execution may change based on the most critical equipment needed to support current Air Force mission requirements.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** BASE/ALC CALIBRATION PACKAGE

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		OTY.	COST	OTY.	COST	QTY.	COST	QTY.	COST
1. ELECTRICAL PACKAGE									
A. PHASE NOISE/AMPLITUDE NOISE MEASUREMENT SYSTEM	A	20	$3,695						
B. OSCILLOSCOPE CALIBRATION SYSTEM (1)	A	33	$2,096	25	$1,673	26	$1,740		
C. AC MEASUREMENT STANDARD	A	40	$942						
D. MULTI-PRODUCT CALIBRATOR	A	37	$700						
E. PROGRAMABLE CAPACITANCE BRIDGE SYSTEM (2) (3)	A	25	$605	25	$674	53	$1,454		
F. RESISTANCE STANDARDS SET (2)	A	93	$911						
G. WATTMETER CALIBRATOR	A			38	$988	38	$988		
H. NOISE SOURCE CALIBRATION SYSTEM	A			24	$1,800				
I. KELVIN-VARLEY VOLTAGE DIVIDER	A			38	$836	38	$836		
J. SYNCHRO-RESOLVER STANDARD, PROGRAMMABLE (4)	A			70	$1,643				
K. AC DETECTOR SYSTEM	A					25	$600	25	$600
L. ATTENUATION RECEIVER	A					25	$1,500	25	$1,500
M. SYNTHESIZED LEVEL GENERATOR	A							76	$1,140
N. SYNTHESIZED SIGNAL GENERATOR	A							76	$3,040
O. PROJECTS LESS THAN $500K	A		$941		$1,658		$190		$55

	P-1 ITEM NO 78		PAGE NO: 3		Page 1 of 2

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** BASE/ALC CALIBRATION PACKAGE

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		QTY.	COST	QTY.	COST	QTY.	COST	QTY.	COST
2. MECHANICAL PACKAGE									
A. LOW FLOW LIQUID STANDARD (4)	A			5	$570				
B. PNEUMATIC PRESSURE GAGE CALIBRATOR	A					25	$750	25	$750
C. FLOW TRANSFER STANDARD, JET ENGINE CAL VAN	A							60	$600
D. VERTICAL/HORIZONTAL 12 INCH INDEXING TABLE	A							25	$500
E. HIGH CAPACITY TOP LOAD BALANCE	A							72	$576
F. PROJECTS LESS THAN $500K	A		$1,359		$2,077		$445		$45
3. SYSTEMS PACKAGE									
A. PATEC UNIVERSAL COUNTER W/RUBIDIUM FREQ STANDARD (5)	A			105	$1,365	100	$1,300		
B. PATEC OSCILLOSCOPE CALIBRATOR/DIGITIZER	A					70	$3,500	70	$3,500
C. PATEC METER CALIBRATOR	A							70	$2,450
D. PATEC POWER METER/MICROWAVE COUNTER	A							70	$630
E. PROJECTS LESS THAN $500K	A		$669		$391		$225		
Totals:			$11,918		$13,675		$13,528		$15,386

Remarks:

	P-1 ITEM NO 78		PAGE NO: 4		Page 2 of 2

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** BASE/ALC CALIBRATION PACKAGE

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
1. ELECTRICAL PACKAGE (1)									
A. PHASE NOISE/AMPLITUDE NOISE MEASUREMENT SYSTEM									
FY02	20	184,754	AFMETCAL	DO/FFP	GSA / AGILENT TECHNOLOGES, ENGLEWOOD, CA	MAR 02	AUG 02		
B. OSCILLOSCOPE CALIBRATION SYSTEM									
FY02 (3)	33	63,515	AFMETCAL	DO/FFP	GSA / FLUKE CORP, EVERETT, WA	APR 02	JUL 02		
FY03 (3)	25	66,925	AFMETCAL	C/FFP W/OPT	UNKNOWN	MAY 03	AUG 03	Y	
FY04 (3)	26	66,925	AFMETCAL	OPT/FFP	UNKNOWN	MAR 04	JUL 04	Y	
C. AC MEASUREMENT STANDARD									
FY02	40	23,539	AFMETCAL	DO/FFP	GSA / FLUKE CORP, EVERETT, WA	MAR 02	JUL 02		
D. MULTI-PRODUCT CALIBRATOR									
FY02	37	18,928	AFMETCAL	DO/FFP	GSA / FLUKE CORP, EVERETT, WA	MAR 02	AUG 02		
E. PROGRAMABLE CAPACITANCE BRIDGE SYSTEM (4)									
FY02	25	24,200	AFMETCAL	OPT/FFP	ANDEEN-HAGERLING INC, CLEVELAND, OH	SEP 02	JUN 03		
FY03	25	26,972	AFMETCAL	OPT/FFP	ANDEEN-HAGERLING INC, CLEVELAND, OH	APR 03	JUN 03	Y	
FY04	53	27,440	AFMETCAL	OPT/FFP	ANDEEN-HAGERLING INC, CLEVELAND, OH	MAR 04	JUN 04	Y	
F. RESISTANCE STANDARDS SET									
FY02	93	9,800	AFMETCAL	C/FFP	MEASUREMENTS INTERNATIONAL INC, OGDENSBURG, NY	SEP 02	JUN 03		

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** BASE/ALC CALIBRATION PACKAGE

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
G. WATTMETER CALIBRATOR									
FY03	38	26,000	AFMETCAL	C/FFP W/OPT	UNKNOWN	MAY 03	NOV 03	N	MAR 03
FY04	38	26,000	AFMETCAL	OPT/FFP	UNKNOWN	MAR 04	SEP 04	N	MAR 03
H. NOISE SOURCE CALIBRATION SYSTEM									
FY03	24	75,000	AFMETCAL	C/FFP W/OPT	UNKNOWN	MAY 03	NOV 03	N	MAR 03
I. KELVIN-VARLEY VOLTAGE DIVIDER									
FY03	38	22,000	AFMETCAL	C/FFP W/OPT	UNKNOWN	APR 03	OCT 03	N	FEB 03
FY04	38	22,000	AFMETCAL	OPT/FFP	UNKNOWN	APR 04	OCT 04	N	FEB 04
J. SYNCHRO-RESOLVER STANDARD, PROGRAMMABLE									
FY03	70	23,471	AFMETCAL	C/FFP W/OPT	UNKNOWN	MAR 03	JUL 03		
K. AC DETECTOR SYSTEM									
FY04	25	24,000	AFMETCAL	C/FFP W/OPT	UNKNOWN	APR 04	OCT 04	N	FEB 04
FY05	25	24,000	AFMETCAL	OPT/FFP	UNKNOWN	APR 05	OCT 05	N	FEB 05
L. ATTENUATION RECEIVER									
FY04	25	60,000	AFMETCAL	C/FFP W/OPT	UNKNOWN	MAY 04	NOV 04	N	MAR 04
FY05	25	60,000	AFMETCAL	OPT/FFP	UNKNOWN	MAY 05	NOV 05	N	MAR 05
M. SYNTHESIZED LEVEL GENERATOR									
FY05	76	15,000	AFMETCAL	C/FFP	UNKNOWN	MAR 05	AUG 05	N	JAN 05

	P-1 ITEM NO 78		PAGE NO: 6		Page 2 of 5

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A) | **DATE:** FEBRUARY 2003

APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT

P-1 NOMENCLATURE: BASE/ALC CALIBRATION PACKAGE

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
N. SYNTHESIZED SIGNAL GENERATOR									
FY05	76	40,000	AFMETCAL	C/FFP	UNKNOWN	APR 05	OCT 05	N	FEB 05
O. PROJECTS LESS THAN $500K (1)									
FY02			AFMETCAL	C/FFP	MULTIPLE (2)	APR 02	AUG 02		
FY03			AFMETCAL	C/FFP	MULTIPLE (2)	APR 03	AUG 03	Y	
FY04			AFMETCAL	C/FFP	MULTIPLE (2)	APR 04	NOV 04	Y	
FY05			AFMETCAL	C/FFP	MULTIPLE (2)	APR 05	NOV 05	Y	
2. MECHANICAL PACKAGE (1)									
A. LOW FLOW LIQUID STANDARD (5)									
FY03	5	114,000	AFMETCAL	C/FFP W/OPT	FLOW DYNAMICS INC, SCOTTSDALE, AZ	NOV 02	MAY 03		
B. PNEUMATIC PRESSURE GAGE CALIBRATOR									
FY04	25	30,000	AFMETCAL	C/FFP W/OPT	UNKNOWN	MAR 04	SEP 04	N	JAN 04
FY05	25	30,000	AFMETCAL	OPT/FFP	UNKNOWN	MAR 05	SEP 05	N	JAN 05
C. FLOW TRANSFER STANDARD, JET ENGINE CAL VAN									
FY05	60	10,000	AFMETCAL	C/FFP	UNKNOWN	APR 05	OCT 05	N	FEB 05
D. VERTICAL/HORIZONTAL 12 INCH INDEXING TABLE									
FY05	25	20,000	AFMETCAL	C/FFP	UNKNOWN	MAR 05	JUL 05	N	JAN 05

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** BASE/ALC CALIBRATION PACKAGE

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
E. HIGH CAPACITY TOP LOAD BALANCE									
FY05	72	8,000	AFMETCAL	C/FFP	UNKNOWN	APR 05	OCT 05	N	FEB 05
F. PROJECTS LESS THAN $500K (1)									
FY02			AFMETCAL	C/FFP	MULTIPLE (2)	APR 02	AUG 02		
FY03			AFMETCAL	C/FFP	MULTIPLE (2)	APR 03	AUG 03	Y	
FY04			AFMETCAL	C/FFP	MULTIPLE (2)	APR 04	AUG 04	Y	
FY05			AFMETCAL	C/FFP	MULTIPLE (2)	APR 05	AUG 05	Y	
3. SYSTEMS PACKAGE (1)									
A. PATEC UNIVERSAL COUNTER W/RUBIDIUM FREQUENCY STANDARD (6)									
FY03	105	13,000	AFMETCAL	C/FFP W/OPT	UNKNOWN	MAY 03	SEP 03	N	MAR 03
FY04	100	13,000	AFMETCAL	OPT/FFP	UNKNOWN	MAY 04	SEP 04	N	MAR 04
B. PATEC OSCILLOSCOPE CALIBRATOR/DIGITIZER									
FY04	70	50,000	AFMETCAL	DO/FFP	UNKNOWN	FEB 04	JUN 04	N	DEC 03
FY05	70	50,000	AFMETCAL	DO/FFP	UNKNOWN	FEB 05	JUN 05	N	DEC 04
C. PATEC METER CALIBRATOR									
FY05	70	35,000	AFMETCAL	C/FFP W/OPT	UNKNOWN	MAR 05	JUL 05	N	JAN 05
D. PATEC POWER METER/MICROWAVE COUNTER									

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** BASE/ALC CALIBRATION PACKAGE

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
FY05	70	9,000	AFMETCAL	C/FFP W/OPT	UNKNOWN	MAR 05	JUL 05	N	JAN 05
E. PROJECTS LESS THAN $500K (1)									
FY02			AFMETCAL	DO/FFP	MULTIPLE (2)	MAR 02	MAY 02		

REMARKS:

1. Quantity/unit costs vary because of different types/configuration of equipment being procured.
2. Various contracts are available through the following vendors: Flow Dynamics, Scottsdale, AZ; Tektronix Corp, Beaverton, OR; Fluke Corp, Everett, WA; Agilent Technologies, Englewood, CO; and others. Multiple award and delivery dates to existing contracts; award/delivery date reflect date of first award and delivery.
3. FY02 quantity adjusted to field this item in response to PMEL needs. 5-year extended warranty is no longer available on GSA, so FY03/04 acquisitions will be Full & Open. Estimated unit cost adjusted per latest market survey data.
4. FY02 delayed delivery of first article (270 days) negotiated during contract award. FY03/04 option deliveries will be 45 days post award. Cost reflects actual awarded price and/or option year prices. Quantity adjusted to provide rotational calibration support through the AF Primary Standards Lab (AFPSL).
5. Quantity adjusted to meet current field PMEL requirements. Unit cost reflects actual award price.
6. PATEC Universal Counter, and PATEC Rubidium Frequency Standard are now available from vendor(s) as a single instrument: PATEC Universal Counter with Rubidium Frequency Standard.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** PRIMARY STANDARDS LABORATORY PACKAGE

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$1,058	$1,097	$1,074	$1,113	$1,129	$1,151	$1,173	$1,192

Description:

1. The Primary Standards Laboratory Package consists of measurement standards required by the Air Force Primary Standards Laboratory (AFPSL). These standards and equipment enable the AFPSL to maintain a disciplined system of measurement control to assure standardized calibration of all precision measurement equipment at Precision Measurement Equipment Laboratories (PMELs) which in turn support aircraft, missiles, and ground communications and space systems.

2. FY 04 AFPSL funding supports all Air Force PMELs by providing the master calibration capability traceable to the National Institute of Standards and Technology (NIST) or other approved sources, as well as specialized test and calibration support needed for Air Force research and development. Measurement standards and auxiliary measurement equipment are grouped in three packages: (a) the Electrical, Photonics, and Nucleonics Package, (b) the Mechanical and Physical Package, and (c) the Systems Package.

(a) The Electrical, Photonics, and Nucleonics Package includes equipment to measure electrical units such as alternating current (AC) and direct current (DC) volts; resistance, and precise time and frequency; microwave/millimeter wave; radio frequency (RF) power, modulation, and phase noise; photonics/nucleonics quantities such as fiber optic power, spectral radiance, and infrared thermometry; and laser power.

(b) The Mechanical and Physical Package includes equipment to measure pressure, force, flow, and vibration, and dimensional quantities such as length, flatness, and angle.

3. Although AFPSL calibration services and the generation of calibration technical orders are performed by a private contractor, funding for new and enhanced calibration standards equipment remain an Air Force responsibility. Management of the Air Force Metrology and Calibration (AFMETCAL) Program remains an Air Force organic program. Air Force responsibilities include the identification and development of Air Force metrology and calibration requirements, calibration procedures development and management, and budgeting and acquisition of

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** PRIMARY STANDARDS LABORATORY PACKAGE

Description (continued):

calibration standards equipment. The operating contractor is provided Air Force government furnished equipment (GFE). As the Air Force places more reliance on high technology weapons systems for our national security, the need for accurate and precise measurements becomes increasingly important. The accuracy, precision, and safety of Air Force systems are all traced back to the measurement standards of the AFPSL.

4. Items requested in FY 04 are identified on the following P-40a and are representative of items to be procured. Items procured during execution may change based on the most critical equipment needed to support current Air Force mission requirements.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** PRIMARY STANDARDS LABORATORY PACKAGE

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		OTY.	COST	OTY.	COST	QTY.	COST	QTY.	COST
A. ELECTRICAL, PHOTONICS & NUCLEONICS PACKAGE									
ITEMS LESS THAN $500,000	A		$941		$633		$472		$592
B. MECHANICAL & PHYSICAL PACKAGE									
ITEMS LESS THAN $500,000	A		$117		$464		$602		$521
Totals:			$1,058		$1,097		$1,074		$1,113

Remarks:

	P-1 ITEM NO 79		PAGE NO: 12		Page 1 of 1

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** ITEMS LESS THAN $5,000,000 (TEST EQUIPMENT)

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$8,471	$7,982	$9,382	$10,298	$14,054	$14,578	$16,808	$17,087

Description:

1. This program includes hundreds of test and measurement equipment items used throughout the Air Force. The equipment is used in Precision Measurement Equipment Laboratories (PMELs), Avionics Integrated Support Facilities (AISFs), Automated Test Support Facilities, Centralized Radio Shops, Radio/Radar Repair Shops, and Maintenance Shops. This equipment also supports calibration of aircraft Avionics Intermediate Shop equipment. Failure to procure this equipment will inhibit performance of detailed analysis investigations, impair the maintenance, repair and calibration of state-of-the-art measurement devices leading to increased avionics and communications equipment downtime, and may impair safety of flight or grounding of aircraft, directly impacting Air Force missions.

2. There are approximately 7,500 individual test items procured in this line. FY04 funding procures both initial shortages as well as replacement equipment which currently face obsolescence. All items have an annual procurement value of less than $5,000,000 and are Code A. Items requested in FY04 are identified on the following P-40a and are representative of items to be procured. Items procured during execution may change based on the most critical equipment needed to support current Air Force mission requirements.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A-IL) | **DATE:** FEBRUARY 2003

APPROP CODE/BA:
OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT

P-1 NOMENCLATURE:
ITEMS LESS THAN $5,000,000 (TEST EQUIPMENT)

PROCUREMENT ITEMS	NSN	FY2004 QTY.	FY2004 COST	FY2005 QTY.	FY2005 COST
ELECTRONIC TEST SET GROUP	6625011545040	4	$1290	8	$2337
SIGNAL GENERATOR	6625012486748	36	$758	58	$1244
SPECTRUM ANALYZER	6625012890854	31	$933	8	$245
SIGNAL GENERATOR	6625013449277	36	$728	23	$474
RADIO FREQUENCY TEST SET	6625014076262	48	$1243	110	$2669
OSCILLOSCOPE	6625012415276	108	$1950	115	$2114
SEMICONDUCTOR TEST SET	6625014811988	94	$945	14	$144
FSC 5855 - NIGHT VISION EQUIPMENT			$389		$238
FSC 5998 - ELECTRICAL AND ELECTRONICS ASSEMBLIES, BOARDS			$17		$0
FSC 6625 - ELECTRICAL AND ELECTRONIC PROPERTIES MEASURING & TESTING EQUIP			$909		$689
FSC 6685 - PRESSURE, TEMPERATURE, AND HUNIDITY MEASURING AND CONTROLLING INSTRUMENTS			$220		$144
TOTALS:			$9,382		$10,298

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** NIGHT VISION GOGGLES

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$3,713	$9,422	$5,340	$5,449	$4,515	$19,646	$20,485	$22,248

Description:

1. Modern warfare resulted in an increase in airborne combat under the cover of darkness. Night missions include ground operations, encompassing preparation of the aircraft for takeoff and landings in complete darkness, lights-off air refueling, and visual identification of enemy targets hidden under the night sky. Night Vision Goggles (NVGs) provide the capability to see in night/low visibility conditions, are essential for combat rescue and special operations missions, and reduce the possibility of mid-air collisions during combat/non-combat missions. The goggles are helmet-mounted, battery and/or aircraft powered, and weigh approximately 12 to 30 ounces. There are two versions of the NVG: aircrew goggles used by pilots and ground crew goggles used by security police in air defense, counter-narcotics, and anti-terrorist operations.

2. The lack of NVGs will significantly impact combat capability in ever increasing night operations by decreasing flight safety and increasing the risk of fratricide. HH-60 helicopters, HC-130, F-16, and special mission C-130 aircraft operate primarily in covert night operations, frequently in a low-altitude environment. Use of NVGs is vital to the success of these missions, providing a dramatic increase in safety, situational awareness, and survivability by allowing the use of near daytime tactics, including visual formation criteria. The proliferation of NVG equipped adversaries highlights the urgent need to supply critical night vision equipment.

3. FY04 funding continues procurement of the following aircrew and ground crew goggles plus test equipment:

a. AN/PVS-14 Groundcrew Goggle. The Monocular Night Vision Device is a hand-held, head mounted, helmet mounted, or weapon mounted night vision system that enables walking, weapon firing, short-range surveillance, map reading, vehicle maintenance, and administering first aid in both moonlight and starlight. Each unit allows for vertical adjustment (by using head strap), fore-and-aft adjustment, objective lens focus, and diopter adjustment. The monocular is also equipped with an IR source, a low-battery indicator, gain control, and third-generation image intensifier.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** NIGHT VISION GOGGLES

Description (continued):

b. AN/PVS-7D Groundcrew Goggle. These ground crew goggles are used primarily by security police in conducting air base defense, counter-narcotics, and anti-terrorist operations. The units are also used by the base recovery after-attack teams and by some non-cockpit aircrew members. The goggles are monocular with a third-generation image intensifier.

c. Panoramic Night Vision Goggle (PNVG). Emerging panoramic night vision capability provides the user with a greatly expanded field of view, which enhances situational awareness and confidence to maneuver safely at night.

d. Test Set, Infinity Focus. NVGs require an operational checkout prior to flying. The infinity focus test set (ANV-20/20) is a portable instrument, which allows proper evaluation and adjustment of all goggle parameters to be done quickly and accurately.

e. Test Set, Infrared Viewer - ANV126A. The manufacturer, Hoffman Engineering Corporation, is making this transition from the ANV-126 to the ANV-126A due to part obsolescence problems. This change provides enhanced capabilities beneficial to the user. The 126A will perform the same operational tests required to maintain the goggles. This is a commercial item and any change to the tester is at the discretion of Hoffman Engineering.

4. The following project was added by Congress in the FY03 appropriation. Reference Appropriation Conference Report 107-732, Oct 9, 2002, page 219:

Panoramic Night Vision Goggles ($5.7M)

5. Items requested in FY04 are identified on the following P-40a and are representative of items to be procured. Items procured during execution may change based on the most critical equipment needed to support current Air Force mission requirements.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** NIGHT VISION GOGGLES

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		OTY.	COST	OTY.	COST	QTY.	COST	QTY.	COST
1. GROUNDCREW GOGGLES			${1,335}		${540}		${986}		${1,518}
AN/PVS-14 GROUNDCREW GOGGLES	A	47	$158	9	$30	22	$71	19	$61
AN/PVS-7D GROUNDCREW GOGGLES	A	278	$848	157	$510	281	$915	447	$1,457
AN/PVS-15 GROUNDCREW GOGGLES	A	46	$329						
2. AIRCREW GOGGLES			${1,758}		${8,534}		${4,072}		${3,100}
F-4949G AIRCREW GOGGLES	A	255	$1,679						
F-4949H AIRCREW GOGGLES	A	12	$79						
PANORAMIC NIGHT VISION GOGGLES (1)	A			141	$8,534	59	$4,072	43	$3,100
3.TEST SETS			${620}		${348}		${282}		${831}
TEST SET, INFINITY FOCUS	A	11	$61	19	$105	7	$39	25	$138
TEST SET, INFRARED VIEWER-ANV126	A	24	$559	10	$243				
TEST SET, INFRARED VIEWER-ANV126A	A					10	$243	30	$693
Totals:			$3,713		$9,422		$5,340		$5,449

Remarks:

1. FY03 includes Congressional Add for Panoramic Night Vision Goggles

	P-1 ITEM NO 81		PAGE NO: 17		Page 1 of 1

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** NIGHT VISION GOGGLES

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
1. GROUNDCREW GOGGLES									
AN/PVS-14 GROUNDCREW GOGGLES									
FY02	19	3,320	AFMC/WR-ALC	MIPR/FFP W/OPT	ARMY/CECOM/LITTON//TEMPE AZ	MAR 02	JUL 03		
FY02	28	3,393	AFMC/WR-ALC	MIPR/FFP W/OPT	ARMY/CECOM/ITT//ROANOKE VA	AUG 02	SEP 02		
FY03	9	3,320	AFMC/WR-ALC	MIPR/FFP W/OPT	ARMY/CECOM/ITT//ROANOKE VA	JAN 03	JUL 03		
FY04	10	3,297	AFMC/WR-ALC	MIPR/FFP W/OPT	ARMY/CECOM/LITTON//TEMPE AZ	DEC 03	SEP 04	Y	
FY04	12	3,132	AFMC/WR-ALC	MIPR/FFP W/OPT	ARMY/CECOM/ITT/ROANOKE VA	DEC 03	SEP 04	Y	
FY05	11	3,137	AFMC/WR-ALC	MIPR/FFP W/OPT	ARMY/CECOM/ITT/ROANOKE VA	DEC 04	SEP 05	Y	
FY05	8	3,297	AFMC/WR-ALC	MIPR/FFP W/OPT	ARMY/CECOM/LITTON//TEMPE AZ	DEC 04	SEP 05	Y	
AN/PVS-7D GROUNDCREW GOGGLES									
FY02	139	3,046	AFMC/WR-ALC	MIPR/FFP W/OPT	ARMY/CECOM/ITT/ROANOKE VA	MAR 02	MAY 02		
FY02	139	3,054	AFMC/WR-ALC	MIPR/FFP W/OPT	ARMY/CECOM/LITTON/TEMPE AZ	MAR 02	AUG 03		
FY03	98	3,196	AFMC/WR-ALC	MIPR/FFP W/OPT	ARMY/CECOM/LITTON/TEMPE AZ	JAN 03	SEP 03		
FY03	59	3,343	AFMC/WR-ALC	MIPR/FFP W/OPT	ARMY/CECOM/LITTON/TEMPE AZ	JAN 03	DEC 03		
FY04	195	3,211	AFMC/WR-ALC	MIPR/FFP W/OPT	ARMY/CECOM/ITT/ROANOKE AZ	DEC 03	SEP 04	Y	
FY04	86	3,355	AFMC/WR-ALC	MIPR/FFP W/OPT	ARMY/CECOM/LITTON/TEMPE AZ	DEC 03	SEP 04	Y	
FY05	298	3,208	AFMC/WR-ALC	MIPR/FFP W/OPT	ARMY/CECOM/ITT/ROANOKE VA	DEC 04	SEP 05	Y	
FY05	149	3,365	AFMC/WR-ALC	MIPR/FFP W/OPT	ARMY/CECOM/LITTON/TEMPE AZ	DEC 04	SEP 05	Y	

	P-1 ITEM NO 81		PAGE NO: 18		Page 1 of 3

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** NIGHT VISION GOGGLES

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
AN/PVS-15 GROUNDCREW GOGGLES									
FY02	46	7,158	AFMC/WR-ALC	MIPR/FFP W/OPT	NAVY/LITTON/TEMPE AZ	SEP 02	NOV 02		
2. AIRCREW GOGGLES									
F-4949G AIRCREW GOGGLES									
FY02	255	6,586	AFMC/WR-ALC	MIPR/FFP W/OPT	ARMY/CECOM/ITT/ROANOKE VA	MAR 02	JUL 02		
F-4949H AIRCREW GOGGLES									
FY02	12	6,578	AFMC/WR-ALC	MIPR/FFP W/OPT	ARMY/CECOM/ITT/ROANOKE VA	MAR 02	AUG 02		
PANORAMIC NIGHT VISION GOGGLES									
FY03	141	60,528	AFMC/ASC	SS/FFP W/OPT	AF/INSIGHT TECH/LONDONDERRY NH	JUL 03	AUG 03	Y	
FY04	59	69,025	AFMC/ASC	SS/FFP W/OPT	AF/INSIGHT TECH/LONDONDERRY NH	DEC 03	JUN 04	Y	
FY05	43	72,091	AFMC/ASC	SS/FFP W/OPT	AF/INSIGHT TECH/LONDONDERRY NH	OCT 04	APR 05	Y	
3.TEST SETS									

	P-1 ITEM NO 81		PAGE NO: 19		Page 2 of 3

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A) | **DATE:** FEBRUARY 2003

APPROP CODE/BA:
OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT

P-1 NOMENCLATURE:
NIGHT VISION GOGGLES

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
TEST SET, INFINITY FOCUS									
FY02	10	5,500	AFMC/WR-ALC	SS/IDIQ	HOFFMAN ENG/STAMFORD CT	NOV 01	FEB 02		
FY02	1	5,500	AFMC/WR-ALC	SS/IDIQ	HOFFMAN ENG/STAMFORD CT	JUN 02	JUL 02		
FY03	19	5,500	AFMC/WR-ALC	SS/IDIQ	HOFFMAN ENG/STAMFORD CT	FEB 03	JUN 03	Y	
FY04	7	5,500	AFMC/WR-ALC	SS/IDIQ	HOFFMAN ENG/STAMFORD CT	FEB 04	JUN 04	Y	
FY05	25	5,500	AFMC/WR-ALC	SS/FFP W/OPT	HOFFMAN ENG/STAMFORD CT	FEB 05	JUN 05	Y	
TEST SET, INFRARED VIEWER-ANV126									
FY02	23	23,100	AFMC/WR-ALC	SS/IDIQ	HOFFMAN ENG/STAMFORD CT	NOV 01	DEC 01		
FY02	1	27,500	AFMC/WR-ALC	SS/IDIQ	HOFFMAN ENG/STAMFORD CT	JUN 02	JUL 02		
FY03	10	24,250	AFMC/WR-ALC	SS/IDIQ	HOFFMAN ENG/STAMFORD CT	FEB 03	JUN 03	Y	
TEST SET, INFRARED VIEWER-ANV126A									
FY04	10	24,345	AFMC/WR-ALC	SS/FFP W/OPT	HOFFMAN ENG/STAMFORD CT	FEB 04	JUN 04	Y	
FY05	30	23,100	AFMC/WR-ALC	SS/FFP W/OPT	HOFFMAN ENG/STAMFORD CT	FEB 05	JUN 05	Y	

REMARKS:
Split procurements are in accordance with Army contract procedures of 60/40 split.

	P-1 ITEM NO 81		**PAGE NO:** 20		Page 3 of 3

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** ITEMS LESS THAN $5,000,000 (PERSONAL SAFETY & RESCUE)

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$7,908	$17,145	$7,435	$4,338	$5,627	$5,749	$5,853	$5,948

Description:

1. This program contains numerous items of safety and rescue equipment used throughout the Air Force for protection of Air Force personnel, equipment and facilities. Representative items include laser eye protection, survival radio test sets, life rafts, life preservers, breathing equipment, water demineralizers, parachutes, and anti-exposure coveralls. Personal safety and rescue equipment is essential for the safety, rescue and protection of critical Air Force resources.

2. FY04 funding procures initial shortages as well as replacement equipment currently approaching obsolescence. All items have an annual procurement value of less than $5,000,000 and are Code A. Items requested in FY 04 are identified on the following P-40a and are representative of items to be procured. Items procured during execution may change based on the most critical equipment needed to support current Air Force mission requirements.

3. The following projects were added by Congress in the FY03 appropriation. Reference Appropriation Conference Report 107-732, Oct 9, 2002, page 219:

Replacement of Inertia Reels for Fixed Wing and Rotary Aircraft ($1.0M)
Thinpack Parachutes ($3.0M)
Replacement of Transport Aircraft Troop Seats ($3.0M)
Replacement of Tactical Aircrew Life Preservers with the Navy's LPU-36 ($1.0M)

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A-IL) | **DATE:** FEBRUARY 2003

APPROP CODE/BA:
OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT

P-1 NOMENCLATURE:
ITEMS LESS THAN $5,000,000 (PERSONAL SAFETY & RESCUE)

PROCUREMENT ITEMS	NSN	FY2004		FY2005	
		QTY.	COST	QTY.	COST
LASER EYE PROTECTION	NSL	3976	$3920	1392	$1400
RADIO TEST SET	6625014759885MH	25	$1025	24	$1044
LIFE PRESERVER, MB-1	4220006061994MH	1195	$708	1515	$914
F-22 ANTI-GRAVITY SUIT	NSL	200	$800	200	$800
FSC 4220 MARINE LIFESAVING AND DIVING EQUIPMENT			$301		$6
FSC 4240 SAFETY AND RESCUE EQUIPMENT			$511		$68
FSC 4610 WATER PURIFICATION EQUIPMENT			$103		$71
FSC 8475 SPECIALIZED FLIGHT CLOTHING & ACCESSORIES			$67		$35
TOTALS:			$7,435		$4,338

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MECHANIZED MATERIAL HANDLING EQUIPMENT

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$19,271	$30,911	$13,919	$14,324	$14,555	$14,855	$15,110	$15,328

Description:

1. The Mechanized Material Handling Equipment P-1 line provides funding for Mechanized Material Handling Systems (MMHS), Storage Aids Systems (SAS), and Automatic Identification Technology (AIT) projects.

a. MMHS/SAS PROGRAMS: MMHS and SAS programs provide bases worldwide with automated and static equipment for storing, receiving, and shipping material. MMHS and SAS equipment involves the design and acquisition of mechanized and non-mechanized material handling systems such as receiving, storage, and distribution systems (RSDS); high density storage systems (HDSS); pneumatic tube systems (PTS); conveyors (CONV); and a variety of SAS equipment including racks, bin shelving, modular cabinets, and mezzanines. Transportation systems generally include equipment such as aircraft passenger loading bridges and inbound/outbound baggage conveyor systems (BCONV) for passenger terminals (PAX); heavy duty freight handling conveyors, pallet build-up/breakdown lift conveyor stations, cargo staging racks, and overhead bridge cranes (OH CRN) for air freight terminal (AFT) systems; roller conveyors, overhead cranes, and hoists for aerial delivery facilities (ADF); and external aircraft fuel tank storage systems (EAFTSS). Adequately equipped facilities are essential to the storage and handling of weapon system components and the processing of personnel, baggage, and freight, to reduce pipeline time and provide Air Force capability to respond to crises and threats whenever they occur in the world. MMHS/SAS equipment increases the productivity of Air Force support personnel, enhances management control of assets, reduces multiple handling of logistics materials, increases flexibility at a minimum investment cost, enhances safe operations, reduces losses due to damage of materials in transport, and reduces congestion and delays in supply, passenger, and air freight terminal operations.

b. AIT PROGRAMS: AIT is a collection of enabling technologies including linear and two-dimensional bar codes, radio frequency identification, smart cards, memory cards, laser cards, touch memory, and voice and biometrics identification. These technologies provide timely and accurate automatic capture, aggregation, and transfer of data to management information systems with minimal human involvement. Project funding enables compatibility of Air Force and industry standards in the core areas of supply, transportation, and maintenance as well as

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MECHANIZED MATERIAL HANDLING EQUIPMENT

Description (continued):

weaving commercial AIT business practices and standards into Air Force logistics infrastructure. AIT management information systems include, but are not limited to: Standard Asset Tracking System (SATS), Point of Maintenance Initiative (POMX), Mobility Inventory Control Accountability System (MICAS), Combat Ammunition System (CAS), Contact Memory Button Tracking (CMB), Bare Base Reconstitution & Management System (BBRMS), Civil Engineering Integration (CEI), Voice Application in Depots (VAD), Aircraft Ground Equipment (AGE) tracking, Real Time Locator System (RTLS), Online Vehicles Information Management System (OLVIMS), Air Force Equipment Management System (AFEMS), Medical Logistics Patient Tracking (MLPT), Integrated Electronic Technical Manuals (IETM), Civil Engineering Readiness System (CERS), Civil Engineering Furnishings Management (CEFM), and Afloat Prepositioned Fleet (APF).

2. The following project was added by Congress in the FY03 appropriation. Reference Appropriation Conference Report 107-732, Oct 9, 2002, page 219:

Point of Maintenance Initiative ($5.6M)

3. MMHS/SAS/AIT equipment by major command and individual projects are listed on the following P-40a document. Items requested for procurement in FY04 are identified on the following P-40a and are representative of items to be procured. Items procured during execution may change based on the most critical equipment needed to support current Air Force mission requirements.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MECHANIZED MATERIAL HANDLING EQUIPMENT

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		OTY.	COST	OTY.	COST	QTY.	COST	QTY.	COST
1. AIR COMBAT COMMAND (ACC)			${917}		${450}		${800}		${1,018}
SAS	A		${507}		${450}				${618}
MINOT AFB, ND			$153						$118
MT HOME AFB, ID									$250
EGLIN AFB, FL			$150						
HOLLOMAN AFB, NM			$138						
SEYMOUR JOHNSON AFB, NC			$66						
BARKSDALE AFB, LA					$200				
CANNON AFB, NM					$150				
LANGLEY AFB, VA					$100				
DAVIS-MONTHAN AFB, AZ									$250
RSDS	A		${410}						
BARKSDALE AFB, LA			$410						
EAFTSS	A						${800}		${400}
LANGLEY AFB, VA									$400
NELLIS AFB, NV							$800		
2. AIR EDUCATION & TRAINING COMMAND (AETC)			${1,038}		${1,500}		${190}		${99}
COLLATOR SYSTEM			${1,038}						

	P-1 ITEM NO 83		PAGE NO: 25		Page 1 of 11

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MECHANIZED MATERIAL HANDLING EQUIPMENT

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		OTY.	COST	OTY.	COST	QTY.	COST	QTY.	COST
MAXWELL AFB, AL	A		$1,038						
RSDS	A				${550}				
ALTUS AFB, OK					$550				
EAFTSS	A				${800}				
TYNDALL AFB, FL					$800				
SAS	A				${150}		${190}		${99}
VANCE AFB, OK							$190		
TYNDALL AFB, FL					$150				
VARIOUS									$99
3. AF CIVIL ENGINEERING & SUPPORT ACTIVITY (AFCESA)			${117}		${650}		${428}		${782}
SAS	A		${117}		${300}		${428}		${782}
SPANGDAHLEM AB, GE			$117						$527
YOKOTA AB, JA					$300				
SHAW AFB, SC							$225		
LANGLEY AFB, VA							$203		
RAF CROUGHTON, UK									$135
RAF MILDENHALL, UK									$120

	P-1 ITEM NO 83		PAGE NO: 26		Page 2 of 11

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MECHANIZED MATERIAL HANDLING EQUIPMENT

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		OTY.	COST	OTY.	COST	QTY.	COST	QTY.	COST
RSDS	A				${350}				
HILL AFB, UT					$350				
4. AIR FORCE MATERIEL COMMAND (AFMC)			${616}		${970}		${438}		${248}
RSDS	A		${196}				${88}		
ROBINS AFB, GA			$196				$88		
SAS	A		${220}		${300}		${350}		${248}
ROBINS AFB, GA			$110		$250				
KIRTLAND AFB, NM									$248
DAVIS MONTHAN AFB, AZ					$50				
TINKER AFB, OK			$110						
HILL AFB, UT							$350		
OH CRN	A				${350}				
ROBINS AFB, GA					$350				
PTS	A		${200}		${320}				
HILL AFB, UT			$200		$320				
5. AIR FORCE RESERVE COMMAND (AFRC)							${190}		${74}

	P-1 ITEM NO 83		PAGE NO: 27		Page 3 of 11

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MECHANIZED MATERIAL HANDLING EQUIPMENT

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		OTY.	COST	OTY.	COST	QTY.	COST	QTY.	COST
SAS	A						${190}		${74}
MPL-ST PAUL IAP, MN							$190		
VARIOUS									$74
6. AIR FORCE SPACE COMMAND (AFSPC)					${150}		${476}		${1,117}
RSDS	A								${1,117}
PETERSON AFB, CO									$1117
SAS	A				${150}				
CAVALIER AS, ND					$150				
OH CRN	A						${476}		
FE WARREN AFB, WY							$476		
7. AIR MOBILITY COMMAND (AMC)			${7,483}		${17,483}		${7,657}		${7,718}
AFT	A		${6,670}		${15,533}		${4,235}		${7,000}
KADENA AB, JA					$8750		$4235		
AVIANO AB, IT					$300				
RAMSTEIN AB, GE			$6670		$5883				
SIGONELLA NAS, IT					$300				
DOVER AFB, DE					$300				
YOKOTA AB, JA									$7000

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MECHANIZED MATERIAL HANDLING EQUIPMENT

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		OTY.	COST	OTY.	COST	QTY.	COST	QTY.	COST
SAS	A		${201}		${1,600}		${100}		${218}
MCCONNELL AFB, KS					$150				
ANDREWS AFB, MD					$150				
DYESS AFB, TX			$49		$200				
LITTLE ROCK AFB, AR			$59		$100				
LAJES FIELD, AZORES			$93						
ROBINS AFB, GA					$200				
GRAND FORKS AFB, ND					$350				
MCGUIRE AFB, NJ							$100		
DOVER AFB, DE					$125				
AF WIDE					$325				
TRAVIS AFB, CA									$218
HDSS	A		${338}				${1,822}		
CHARLESTON AFB, SC			$338						
MCGUIRE AFB, NJ							$1,222		
POPE AFB, NC							$600		
BCONV	A		${274}		${350}				
YOKOTA AB, JA			$274						
NSA BAHRAIN					$150				

	P-1 ITEM NO 83		PAGE NO: 29		Page 5 of 11

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MECHANIZED MATERIAL HANDLING EQUIPMENT

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		OTY.	COST	OTY.	COST	QTY.	COST	QTY.	COST
INCIRLIK AB, TU					$200				
PAX	A						${1,500}		
RAMSTEIN AB, GE							$1,500		
RSDS	A								${500}
CHARLESTON AFB, SC									$500
8. AIR NATIONAL GUARD (ANG)			${1,809}		${780}		${905}		${1,154}
RSDS	A		${1,442}		${550}		${750}		${760}
CHARLOTTE ANGB, NC			$432						
BURLINGTON ANGB, VT			$150						
PUERTO RICO ANGB, PR			$435						
KIRTLAND ANGB, NM			$127						
SAVANNAH IAP, GA			$250						
JOHNSTOWN-CAMBIA ANGB, PA			$48						
RENO ANGB, NV									$260
JACKSON ANGB, MS					$300				
NEW ORLEANS ANGB LA							$250		
PEASE ANGB, NH							$250		
MCCONNELL ANGB, KS							$250		
TOLEDO ANGB, OH									$200

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MECHANIZED MATERIAL HANDLING EQUIPMENT

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		OTY.	COST	OTY.	COST	QTY.	COST	QTY.	COST
HILO ANGB, HI									$300
ELLINGTON FIELD ANG, TX					$250				
SAS	A		${100}		${230}		${155}		
FORT INDIANTOWN GAP ANGB, PA							$155		
MANSFIELD ANGB, OH					$230				
DELAWARE ANGB, DE			$100						
ADF	A		${267}						${250}
RENO/TAHOE ANGB, NV			$87						
CHEYENNE ANGB, WY									$250
PUERTO RICO ANGB, PR			$180						
CONV	A								${144}
CAMP BLANDLING ANGB, FL									$144
9. US AIR FORCES EUROPE (USAFE)			${300}		${551}		${285}		${99}
HDSS	A		${300}						
AVIANO AB, IT			$300						
RSDS	A						${285}		${99}
INCIRLIK AB, TU							$285		

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MECHANIZED MATERIAL HANDLING EQUIPMENT

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		QTY.	COST	QTY.	COST	QTY.	COST	QTY.	COST
RAF MILDENHALL, UK									$99
SAS	A				${551}				
RAF MILDENHALL, UK					$551				
10. PACIFIC AIR FORCES (PACAF)					${850}		${619}		${99}
SAS	A								${99}
VARIOUS									$99
RSDS	A				${850}		${619}		
EIELSON AFB, AK					$600				
KADENA AB, JA					$250		$619		
11. USAF-WIDE/AIT			${6,991}		${7,527}		${1,931}		${1,916}
C17 BAR CODE	A		${91}		${100}				
MCCHORD AFB, WA			$91		$100				
CAS	A				${600}				
AVIANO AB, IT					$400				
CANNON AFB, NM					$200				
H-53 HELO CMB TRACKING	A				${100}				

P-1 ITEM NO	PAGE NO:	
83	32	Page 8 of 11

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MECHANIZED MATERIAL HANDLING EQUIPMENT

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		OTY.	COST	OTY.	COST	QTY.	COST	QTY.	COST
HURLBURT FIELD AFB, FL					$100				
MICAS	A		${100}		${180}		${100}		
AF WIDE			$100		$180		$100		
BBRMS	A				${600}				
THUMRAIT, OMAN					$400				
HOLLOMAN AFB, NM					$200				
VAD	A						${500}		
HILL AFB, UT							$500		
AGE TRACKING RTLS	A						${831}		
LANGLEY AFB, VA							$831		
OLVIMS	A						${500}		
ROBINS AFB, GA							$500		
CEI	A		${800}						
TYNDALL AFB, FL			$800						
POMX	A		${200}						

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MECHANIZED MATERIAL HANDLING EQUIPMENT

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		OTY.	COST	OTY.	COST	QTY.	COST	QTY.	COST
EGLIN AFB, FL			$200						
AFEMS	A								${216}
AF WIDE									$216
MLPT	A								${500}
TINKER AFB, OK									$500
IETM	A								${400}
TINKER AFB, OK									$400
CERS	A								${800}
AF WIDE									$800
CEFM	A				${200}				
TYNDALL AFB, FL					$200				
RTLS	A		${800}						
ROBINS AFB, FL			$800						
APF	A				${200}				
HILL AFB, UT					$200				

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MECHANIZED MATERIAL HANDLING EQUIPMENT

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		OTY.	COST	OTY.	COST	QTY.	COST	QTY.	COST
11A. USAF-WIDE/SATS/POMX			${5,000}		${5,547}				
WORLDWIDE CONGRESSIONAL ADD	A		$5,000		$5,547				
Totals:			$19,271		$30,911		$13,919		$14,324

Remarks:

	P-1 ITEM NO 83		PAGE NO: 35		Page 11 of 11

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** ITEMS LESS THAN $5,000,000 (BASE INDUSTRIAL SUPPORT EQ)

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$9,393	$12,137	$11,702	$11,809	$12,485	$12,742	$12,973	$13,189

Description:

1. This program provides a wide range of industrial equipment for base-level industrial shops used in support of aircraft, communications, welding shops, electronic components, and paint shops. This equipment is used in the repair of engines, hydraulic/pneudraulic systems, landing gear, airframe components and instruments. Also included in this program is state-of-the-art equipment required to upgrade and replace the antiquated metalworking equipment in Air Force base maintenance shops. As this type of equipment reaches its life expectancy, it must be replaced to prevent work stoppage in the repair and manufacture of critical weapon system components. Replacement of this type of equipment is a continual, proactive process necessary to prevent out-of-tolerance conditions that lead to excessive downtimes for the equipment and the components they repair.

2. FY04 funding procures both initial shortages as well as replacement equipment which is facing obsolescence. All items have an annual procurement value of less than $5,000,000 and are Code A. Items requested in FY04 are identified on the following P-40a and are representative of items to be procured. Items procured during execution may change based on the most critical equipment needed to support current Air Force mission requirements.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A-IL)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** ITEMS LESS THAN $5,000,000 (BASE INDUSTRIAL SUPPORT EQ)

PROCUREMENT ITEMS	NSN	FY2004		FY2005	
		QTY.	COST	QTY.	COST
FSC 3220 - WOODWORKING MACHINES			$491		$241
FSC 3405 - SAWS AND FILING MACHINES			$1042		$1159
FSC 3408 - MACHING CENTERS AND WAY TYPE MACHINES			$753		$625
FSC 3410 - ELECTRICAL AND ULTRASONIC EROSION MACHINES			$22		$88
FSC 3411 - BORING MACHINES			$256		$312
FSC 3413 - DRILLING MACHINES			$120		$450
FSC 3415 - GRINDING MACHINES			$1032		$705
FSC 3416 - LATHES			$2611		$2247
FSC 3417 - MILLING MACHINES			$977		$750
FSC 3418 - PLANERS			$60		$190
FSC 3419 - MISCELLANEOUS MACHINE TOOLS			$215		$206
FSC 3424 - METAL HEAT TREATING EQUIPMENT			$436		$517
FSC 3426 - METAL FINISHING EQUIPMENT			$9		$142
FSC 3431 - ELECTRIC ARC WELDING EQUIPMENT			$73		$264
FSC 3432 - ELECTRIC RESISTANCE WELDING EQUIPMENT			$346		$337
FSC 3441 - BENDING AND FORMING MACHINES			$2483		$2687
FSC 3445 - PUNCHING AND SHEARING MACHINES			$398		$458
FSC 3470 - MACHINE SHOP SETS, KITS, AND OUTFITS			$312		$318

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A-IL)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** ITEMS LESS THAN $5,000,000 (BASE INDUSTRIAL SUPPORT EQ)

PROCUREMENT ITEMS	NSN	FY2004		FY2005	
		QTY.	COST	QTY.	COST
FSC 4430 - INDUSTRIAL FURNACES, KILNS AND OVENS			$66		$113
TOTALS:			$11,702		$11,809

	P-1 ITEM NO		PAGE NO:		Page 2 of 2
	84		38		

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** FLOODLIGHTS

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$9,536	$10,917	$5,616	$4,423	$1,926	$1,929	$1,925	$1,924

Description:

1. Floodlights are one of the most valuable and versatile pieces of support equipment in the Air Force inventory. They support many facets of maintenance operations including night maintenance on aircraft, loading and unloading cargo, and providing essential emergency lighting. They play a critical role in perimeter defense, emergency disaster coverage and aircraft accident on-site investigations as well as provide auxiliary power for air conditioners and portable x-ray equipment.

2. The Air Force procured the current NF-2 floodlights as early as 1960; some of these earliest units are still in the inventory. As such, all currently fielded NF-2 and unmodified NF-2D floodlights have exceeded their useful service life by approximately 13 years. Spare parts are no longer available through contract sources for repair of the floodlight sets. The FL-1D floodlight replaces these unsupportable models. The FL-1D, consists of a tower for mounting two 1,000 watt floodlights, power distribution equipment, and a diesel engine driven generator set, permanently mounted on a 4-wheel trailer type chassis. By virtue of being 50 percent smaller than previously fielded models, FL-1Ds dramatically reduce airlift requirements assisting in the Air Force's increasing mission role as an expeditionary force. FY04 continues funding for procurement of floodlights.

3. Items requested in FY04 are identified on the following P-40a and are representative of items to be procured. Items procured during execution may change based on the most critical equipment needed to support current Air Force mission requirements.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A) | **DATE:** FEBRUARY 2003

APPROP CODE/BA:
OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT

P-1 NOMENCLATURE:
FLOODLIGHTS

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		OTY.	COST	OTY.	COST	QTY.	COST	QTY.	COST
FL1D FLOODLIGHTS	A	636	$9,536	715	$10,917	357	$5,616	276	$4,423
Totals:			$9,536		$10,917		$5,616		$4,423

Remarks:

	P-1 ITEM NO		PAGE NO:		Page 1 of 1
	85		40		

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A) | **DATE:** FEBRUARY 2003

APPROP CODE/BA:
OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT

P-1 NOMENCLATURE:
FLOODLIGHTS

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
FL1D FLOODLIGHTS									
FY02	466	14,380	AFMC/WR-ALC	MIPR/OPT/FFP	UNICOR, BIG SPRINGS, TX	JAN 02	JUL 02		
FY02	170	16,676	AFMC/WR-ALC	MIPR/OPT/FFP	UNICOR, BIG SPRINGS, TX	AUG 02	DEC 02		
FY03	715	15,269	AFMC/WR-ALC	MIPR/OPT/FFP	UNICOR, BIG SPRINGS, TX	JAN 03	JUL 03		
FY04	357	15,731	AFMC/WR-ALC	MIPR/OPT/FFP	UNICOR, BIG SPRINGS, TX	JAN 04	JUL 04	Y	
FY05	276	16,025	AFMC/WR-ALC	C/FFP W/OPT	UNKNOWN	JAN 05	JUL 05	Y	

REMARKS:
FY02 was a split procurement. Unit costs vary due to contract option year and price bands. FY04 is last option year to an Aug 1997 contract.

	P-1 ITEM NO		PAGE NO:		Page 1 of 1
	85		41		

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** ITEMS LESS THAN $5,000,000 (ELECTRICAL EQUIPMENT)

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$6,033	$6,141	$9,570	$10,086	$10,045	$10,053	$10,232	$10,407

Description:

1. This program includes electrical power generators, switches, transformers and controls, connectors and portable lighting equipment for power distribution for use throughout the Air Force. These items support communications systems, radar systems, aircraft maintenance shops, hospitals, maintenance shelters, civil engineering functions and test ranges. This equipment supports daily operations as well as contingencies, natural disasters and requirements for war reserve material. Lack of funding will not only affect the operational readiness capability of aircraft, communications and base support missions, but will also degrade implementation of DoD directives for fuel standardization and emissions control.

2. FY04 funding procures initial shortages as well as replacement equipment which is currently approaching obsolescence. All items have an annual procurement value of less than $5,000,000 and are Code A. Items requested in FY04 are identified on the following P-40a and are representative of items to be procured. Items procured during execution may change based on the most critical equipment needed to support current Air Force mission requirements.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A-IL) | **DATE:** FEBRUARY 2003

APPROP CODE/BA:
OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT

P-1 NOMENCLATURE:
ITEMS LESS THAN $5,000,000 (ELECTRICAL EQUIPMENT)

PROCUREMENT ITEMS	NSN	FY2004		FY2005	
		QTY.	COST	QTY.	COST
GENERATOR, MOBILE ELECTRICAL POWER (MEP) 805B	6115014619335	73	$1692	54	$1274
GENERATOR, MEP 806B	6115014620291	52	$1623	50	$1591
GENERATOR, MEP 831A	6115012853012	100	$882	166	$1492
GENERATOR, MEP 809A, 200KW	6115012961462	27	$1942	36	$2667
PRIME POWER UNIT, MEP-PU 810A	6115014864033	1	$374		
GENERATOR, MEP 809A 100KW	6115012961463	35	$1928	30	$1702
POWER PLANT, AN/MJQ-1632	6115013640157	9	$877		
MINOR PROJECTS					
FSC 6110 - ELECTRICAL CONTROL EQUIPMENT			$83		$541
FSC 6115 - GENERATORS - PWR PLANTS			$115		$620
FSC 6130 - ELECTRICAL RECTIFYING EQUIPMENT			$54		$199
TOTALS:			$9,570		$10,086

	P-1 ITEM NO		PAGE NO:		Page 1 of 1
	86		43		

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** BASE PROCURED EQUIPMENT

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$11,800	$14,677	$9,617	$8,654	$18,205	$10,971	$10,243	$10,719

Description:

1. To reduce costs, federal policy relieves the services from wholesale management of non-military or commercial items. Bases and units throughout the Air Force acquire authorized equipment of this nature directly from the General Services Administration (GSA), Defense Logistics Agency (DLA), one of the other services, or from commercial sources. Base Procured Equipment (BPE) provides funds for local procurement of equipment costing $100,000 or more, which is not centrally managed and procured. Typical applications for BPE include roads and grounds maintenance; vehicle maintenance shops; vehicle corrosion control facilities; specialized tool kits and test equipment, civil engineering maintenance equipment, electrical and carpenter shops; specialized laboratories; kitchen and dining facilities; printing plants; air conditioning; heating requirements; microfilm and graphics support facilities.

2. The equipment described above is needed for day-to-day maintenance and operation of bases, weapons and support systems assigned to both active and air reserve forces. The program supports installations at multiple major commands. Requirements and priorities are affected by assignment and conversion of new equipment; beddown of new weapon systems; reorganizations; natural disasters; new operational methods to increase efficiency and safety; and energy conservation initiatives.

3. BPE resources programmed by Air Force major commands and/or field operating agencies are displayed on the following P-40a Budget Exhibit.

4. The following project was added by Congress in the FY03 appropriation. Reference Appropriation Conference Report 107-732, Oct 9, 2002, page 219:

Combat Arms Training System ($3.5M)

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** BASE PROCURED EQUIPMENT

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		OTY.	COST	OTY.	COST	QTY.	COST	QTY.	COST
PACIFIC AIR FORCES	A		$586		$580		$565		$560
AIR FORCE SPECIAL OPERATIONS COMMAND	A		$227		$597		$589		$585
AIR COMBAT COMMAND	A		$2879		$2903		$2827		$2803
US AIR FORCES EUROPE	A		$772		$3071		$657		$645
AIR FORCE SPACE COMMAND	A		$619		$462		$462		$467
AIR MOBILITY COMMAND	A		$0		$0		$427		$0
AIR EDUCATION & TRAINING COMMAND	A		$5309		$2072		$2828		$2334
US AIR FORCE ACADEMY	A		$1173		$1293		$1262		$1260
AIR FORCE CIVIL ENGINEER SUPPORT AGENCY	A		$223		$233		$0		$0
AIR NATIONAL GUARD	A		$0		$3466		$0		$0
AIR FORCE COMMUNICATION AGENCY	A		$12		$0		$0		$0
Totals:			$11,800		$14,677		$9,617		$8,654

Remarks:

	P-1 ITEM NO 87		PAGE NO: 45		Page 1 of 1

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MEDICAL/DENTAL EQUIPMENT

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$15,302	$13,857	$13,889	$14,093	$14,634	$14,933	$15,205	$15,457

Description:

1. Medical/Dental War Reserve Material (WRM) Equipment supports Air Force medical expeditionary and contingency requirements. Medical WRM allows the Air Force to rapidly deploy medical capability to forward operating locations. Adequate deployable medical capability is required for force protection. During the Cold War, the Air Force maintained large contingency hospitals throughout Europe, ready to receive casualties during a conflict with Warsaw Pact countries. Current doctrine and diminished forward basing requires the Air Force to maintain medical readiness assets in CONUS which can be rapidly transported via cargo aircraft to any location in the world, and upon arrival, be quickly set up and prepared to treat casualties. In many cases, typical hospital equipment cannot be used because it is too fragile, too heavy, or incompatible with operating in a cold, humid or contaminated environment. The major function of medical WRM equipment is to provide preventive medical capabilities, to keep wounded in action (WIA) personnel alive until definitive care can be provided, and to return less critically injured personnel to their units as quickly as possible.

2. The following WRM equipment items/projects are funded by this program:

a. Theater Medical Information Program (TMIP): TMIP incorporates all DOD medical information systems that have a theater application. Wartime medical communication requirements differ radically from peacetime requirements. Commanders require real-time situational awareness information such as WIA personnel and their treatment--type, numbers, location; reports detailing casualty location and medical status ranging from the front line to rear echelons; logistical data--resource consumption information, supply inventories, logistical pipeline data, material delivery information, what materiel can be diverted to satisfy a higher priority; and medical personnel--matching medical/surgical capability and availability/locations with WIA requirements.

The current medical wartime communications infrastructure consists of readily available land lines and radio technology that dates from the late 1950s. TMIP will provide inter/intra-unit medical communications systems for Air Force theater medical units through use of secure

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MEDICAL/DENTAL EQUIPMENT

Description (continued):

and non-secure telephone lines, wireless, and satellite media. The result will be a deployable, organic medical information infrastructure which is capable of transmitting voice, electronic mail, data and images, and is interoperable with other services/communications systems. It will integrate new and existing high frequency and ultra high frequency radios, satellite communications, and computer systems. Funding provides information management hardware required for the TMIP system in our medical assemblies.

b. Modernization and Replacement: This program provides for replacement and modernization of centrally managed and procured WRM equipment items. This funding procures equipment items and components using a mission-based priority system. Funding constraints often dictate procuring less than the inventory objective of each item. To maximize the number of 100% deployable units, some of each of the following requirements are being procured:

(1) Alaskan Shelters (New Family of Portable Shelters)
(2) Communications Equipment
(3) Environmental Control Units
(4) Generators, Power Distribution Panels

c. Patient Support Pallet (PSP): The Aeromedical Evacuation (AE) mission is to provide air transport and care-in-the-air for varying combinations of ambulatory, litter and critical care patients on intra- and inter-theater missions ranging up to 14 hours in duration. Air Mobility Command and the theater commands require a flexible, modular capability that can reconfigure opportune airlift aircraft rapidly for use in transporting various numbers and combinations of patients. The PSP is the basic roll-on/off building block of an Aeromedical Evacuation Palletized System (AEPS). The PSP base occupies the footprint of a 463L aircraft pallet.

d. Collective Protection for Expeditionary Medical Support (CP-EMEDS): Current Defense Planning Guidance (DPG) and operations plans (OPlans) place significant emphasis on the ability of forces to sustain operations before, during, and after chemical-biological (chem-bio) attacks due to the widespread proliferation of chem-bio weapons and missiles by potentially hostile states. As such, the Air Force Medical Service (AFMS) has a need for a field-deployable hospital with chem-bio collective protection capability. The Expeditionary Medical Support (EMEDS) is the primary tool of the Air Expeditionary Force (AEF) "light and lean with capability" construct for the AFMS. It meets Combatant

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MEDICAL/DENTAL EQUIPMENT

Description (continued):

Commander requirements across the full spectrum of military operations as a highly mobile hospital system designed to be airlifted to the front lines of the battlefield to provide medical care. An increased probability of operating in a chem-bio threat environment prompted design efforts to integrate chem-bio protection elements into EMEDS to allow medical personnel to operate without the use of mission-oriented protective posture (MOPP) gear. The result is CP-EMEDS. The deployment of CP-EMEDS meets current Air Force Combat Support Doctrine and significantly reduces airlift requirements from the older chem-bio hardened Air Transportable Hospital (CHATH). Significant savings in set-up time and manpower required to erect CP-EMEDS was demonstrated.

e. Deployable Oxygen System (DOS): DOS will provide United States Pharmacopoeia (USP) 93% or greater therapeutic medical grade oxygen in deployed scenarios including wartime operations, deterrence and contingency operations, peacetime engagement, crisis response, and humanitarian relief operations. Aeromedical evacuation (AE) and ground-based medical missions require an oxygen generating system capable of providing therapeutic oxygen to patients and oxygen-driven support equipment in-flight and on the ground. The current methods employed to meet these requirements are becoming logistically unsupportable.

DOS is a 3-component system comprised of an oxygen generator, oxygen liquefier, and oxygen storage vessel. Requirements exist for individual DOS components as well as for the entire system. For example, the oxygen generator can supply the oxygen required for a ground medical assembly and some aeromedical evacuation assemblies require the entire system or at least the storage vessel in order to provide oxygen in-flight depending on the availability of forward deployed liquid oxygen.

The oxygen generator is presently commercially available as a non-development item. Research and development (R&D) funds have been used to design the oxygen storage vessel and production will begin in mid FY03. The oxygen liquefier component begins its R&D phase in FY03 and production is projected for FY07. Reference PE 64617F for R&D funds associated with the DOS program.

3. Items requested on the following P-40a are representative of items to be procured. Items procured during execution may change based on the most critical equipment needed to support current Air Force mission requirements.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MEDICAL/DENTAL EQUIPMENT

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		OTY.	COST	OTY.	COST	QTY.	COST	QTY.	COST
A. TMIP	A		$2,530		$1,500		$1,500		$1,500
B. MODERNIZATION & REPLACEMENT	A		$6,342		$3,157		$5,489		$6,493
C. PSP	A	25	$1,760						
D. CP-EMEDS	A		$4,670		$2,200				
E. DOS	A				${7,000}		${6,900}		${6,100}
OXYGEN GENERATOR	A			70	$2310	114	$3862	90	$2950
OXYGEN STORAGE VESSEL	A			168	$4690	113	$3038	126	$3150
Totals:			$15,302		$13,857		$13,889		$14,093

Remarks:

	P-1 ITEM NO 88		PAGE NO: 49		Page 1 of 1

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MEDICAL/DENTAL EQUIPMENT

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
A. TMIP									
FY02 (1)			AFMC/HSC	C/FFP	MULTIPLE (2)	JAN 02	MAR 02		
FY03 (1)			AFMC/HSC	C/FFP	MULTIPLE (2)	JAN 03	MAR 03		
FY04 (1)			AFMC/HSC	C/FFP	MULTIPLE (2)	JAN 04	MAR 04	Y	
FY05 (1)			AFMC/HSC	C/FFP	MULTIPLE (2)	JAN 05	MAR 05	Y	
B. MODERNIZATION & REPLACEMENT									
FY02 (1)			AFMLO	C/FFP	MULTIPLE (3)	JAN 02	MAR 02		
FY03 (1)			AFMLO	C/FFP	MULTIPLE (3)	JAN 03	MAR 03		
FY04 (1)			AFMLO	C/FFP	MULTIPLE (3)	JAN 04	MAR 04	Y	
FY05 (1)			AFMLO	C/FFP	MULTIPLE (3)	JAN 05	MAR 05	Y	
C. PSP									
FY02	25	70,400	AFMC/HSC	C/FFP	ARINC ENG. SVCS LLC, OK CITY, OK	OCT 02	FEB 03		
D. CP-EMEDS									
FY02 (1)			AFMC/HSC	C/FFP	MULTIPLE (4)	FEB 02	JUN 02		
FY03 (1)			AFMC/HSC	C/FFP	MULTIPLE (4)	FEB 03	JUN 03	Y	

	P-1 ITEM NO 88		PAGE NO: 50		Page 1 of 2

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MEDICAL/DENTAL EQUIPMENT

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
E. DOS									
FY03 (1)			AFMC/HSC	C/FFP	UNKNOWN	FEB 03	AUG 03	Y	
FY04 (1)			AFMC/HSC	C/FFP	UNKNOWN	NOV 03	JAN 04	Y	
FY05 (1)			AFMC/HSC	C/FFP	UNKNOWN	NOV 04	JAN 05	Y	

REMARKS:

1. Quantities and unit costs vary based on medical assemblage configuration and components required.
2. AFMLO (Air Force Medical Logistics Office, Fort Detrick, Maryland) MIPRs funds to AFMC/HSC, who will act as the oversight office and integration facility for the Air Force. AFMC/HSC will also use various contracts with GSA to purchase additional TMIP items which do not require system integration.
3. AFMLO uses various contracts at multiple ALCs such as RACAL Communications, Rockville, MD; Alaska Industrial Resources, Anchorage, Alaska; and EASI Engineered Air Systems Inc, Saint Louis, MO. The award date and date of first delivery represent the first award of funding and the initial delivery of equipment.
4. AFMC/HSC will use various methods to procure over 60 CP-EMEDS components. The majority of the components are procured via the base supply requisition system. 11 components are procured from SBCCOM Natick Center (Army). Four components (CP Liners) are C/FFP from Production Products Manufacturing and Sales, St Louis MO and Intellitec, Deland FL. Five components (CP Liner Flooring) are C/FFP from Alaska Industrial Resources Inc.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** ENVIRONMENTAL PROJECTS

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$932	$809	$664	$819	$833	$850	$866	$880

Description:

1. The Air Force Materiel Command (AFMC) Pollution Prevention (P2) Environmental Projects Program procures equipment necessary to ensure compliance with environmental laws, executive orders, regulations, and Department of Defense (DoD) directives. This program provides equipment that reduces the Air Force's (AF) environmental compliance burden through hazardous waste minimization, wastewater pretreatment, air pollutant emission reduction, and solid waste recycling. Equipment purchases provide improvements to the day-to-day operations at AF installations and result in increased capability to support the AF.

2. Following are descriptions of FY04 individual projects:

a. Cametizing System, Hill AFB, UT: This project will fund the purchase of a system that will provide the capability to deposit and remove deposited metals from outer and internal diameter surfaces of landing gear components. This process has the advantage of being able to manufacture any metal/metal alloy specification and deposit it on any other metal or ceramic/glass surface. Process will provide reduction in environmental costs when compared to the present wet plating process. Reference Program Element 63859F, Pollution Prevention of the Air Force Research and Development (R&D) Descriptive Summaries. FY03 R&D funds under Resource Conservation and Recovery Act (RCRA) Subtitle C - Hazardous Waste line includes funds for Cametizing project.

b. A-LIX Treatment System, Robins AFB, GA: Funds will purchase Anion Liquid Ion Exchange (A-LIX) equipment to remove chromium from the chrome plating line wastewater, without generating a sludge. The end product is a concentrated chrome solution that can be reused in the plating shop or sold back to the vendor.

3. Items requested in FY04 are identified on the following P-40a and are representative of items to be procured. Items procured during execution may change based on critical equipment needed to support current Air Force mission requirements.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** ENVIRONMENTAL PROJECTS

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		OTY.	COST	OTY.	COST	QTY.	COST	QTY.	COST
A. INDUSTRIAL WASTEWATER TREATMENT PLANT SLUDGE FILTER PRESS, ROBINS AFB, GA	A	1	$314						
B. DEWATERING & DRYING OF FINAL INDUSTRIAL WASTEWATER TREATMENT PLANT SLUDGE, HILL AFB, UT	A	1	$487						
C. ELECTRONIC IMAGING SYSTEM, WRIGHT-PATTERSON AFB, OH	A	1	$131						
D. INDUSTRIAL WASTEWATER TREATMENT PLANT SLUDGE FILTER PRESS, TINKER AFB, OK	A			1	$464				
E. ABC-150 BATTERY CHARGING SYSTEM, ROBINS AFB, GA	A			1	$163				
F. AIRCRAFT RINSE WATER RECYCLING SYSTEM, EGLIN AFB, FL	A			1	$182				
G. CAMETIZING SYSTEM, HILL AFB, UT	B					1	$300		
H. ANION LIQUID ION EXCHANGE TREATMENT SYSTEM, ROBINS AFB, GA	A					1	$364		
I. ELECTROSPARK DEPOSITION (ESD), TINKER AFB, OK (1)	B							1	$185
J. HANDHELD LASER PAINT STRIPPER, EGLIN AFB, FL (2)	B							1	$195
K. HANDHELD LASER PAINT STRIPPER, ROBINS AFB, GA (2)	B							1	$195
L. POWDER COATING PROCESS, EGLIN AFB, FL	A							1	$244
Totals:			$932		$809		$664		$819

Remarks:

1. DoD Propulsion Environmental Working Group (PEWG) partnered with the Environmental Security Technology Certification Program (ESTCP) to demonstrate/validate this project.

	P-1 ITEM NO 89		PAGE NO: 53		Page 1 of 2

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** ENVIRONMENTAL PROJECTS

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		OTY.	COST	OTY.	COST	QTY.	COST	QTY.	COST

2. DoD Joint Group on Pollution Prevention (JGPP) partnered with ESTCP to demonstrate/validate this project.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** AIR BASE OPERABILITY

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$5,923	$5,646	$5,502	$5,461	$5,440	$5,432	$6,263	$6,538

Description:

1. Air Base Operability (ABO), a subset of Agile Combat Support, provides integrated capabilities to support aircraft deployment, launch, recovery and regeneration at air bases worldwide. ABO and Air Force Civil Engineering Readiness top priorities are to safely perform reconnaissance, locate and neutralize unexploded ordnance (UXO), and accomplish damage assessment. Force protection capabilities, including explosive ordnance disposal (EOD) operations, are increasingly vital in protecting personnel, aircraft, and other critical resources, both at home and abroad. In addition to wartime operations, EOD supports global contingencies for force protection, relief efforts, and special operations. ABO capabilities provided by robotics programs are crucial in reducing time and danger when investigating and eliminating explosive hazards.

A. All-purpose Remote Transport System (ARTS) is a low cost survivable platform capable of remote operations at distances of up to three miles. ARTS was designed as a delivery platform for further development of detector, sensor, and Explosive Ordnance Disposal (EOD) tools. It supports a multitude of contingency operations and is a vital component of Operation Enduring Freedom and Homeland Defense initiatives. Air Force Wright Laboratory developed this multi-purpose tool under the direction/funding of the Office of Science and Technology (OST) Joint Robotics Program. OST through Wright Laboratory worked with a vendor to take initial prototypes of this tool directly from the laboratory to the field. FY04 funds continue procurement of the ARTS. Reference Program Element 64617F of the Air Force Research and Development (R&D) Descriptive Summaries.

B. ARTS Attachments/EOD Support Equipment dramatically improves response time when neutralizing explosive hazards, thus saving lives and reducing damage. The Navy Explosive Ordnance Technology Division (NAVEODTECHDIV) is the OSD Executive Agent for joint service EOD R&D. Production funding is provided by individual services (reference PE 64617F of the Air Force R&D Descriptive Summaries). The Air Force requires the following equipment for the safety of deployed personnel and expedient removal of unexploded ordnance hazards.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** AIR BASE OPERABILITY

Description (continued):

1) 90MM Water Cannons: ARTS attachments which neutralize improvised explosive devices (IEDs) in mid-size sedans and vans.

2) Recoilless, Multidirectional Water Cannon Mount: Recoilless capability provides spring action to reduce wear and tear on water cannon mount. The multidirectional capability affords operations in confined spaces such as alleyways and areas where it is either impractical or impossible to realign the ARTS platform to discharge the water cannon.

3) ARTS Alternate Control System: Provides alternate control capability where RF remote control cannot be used or when RF link is lost.

4) Remote Ordnance Neutralization System (RONS): Medium-sized EOD robot includes a tele-operated platform and robotics manipulator that can be controlled by an operator at the operator control station (OCS) up to a distance of 650 meters. Remote control results in greater safety during performance of hazardous/high risk tasks such as reconnaissance, access, pick up and carry away (PUCA), and disposal.

5) RONS Advanced Radiographic System(ARS) Upgrade: Provides enhanced capability to investigate small-sized suspected terrorist devices such as pipe bombs or briefcase bombs. The ARS upgrade will also provide EOD operators a better means of assessing threats and determining the best neutralization method.

6) EOD Small Robots (include MK-VI and commercially available equivalents, such as F6A): Small, narrow robot equipped with multiple television cameras for remote viewing and a dexterous manipulator for hazardous tasks. It is designed to allow operations in confined spaces.

2. In FY02, Air Base Operability received $8.316M as part of the Defense Emergency Relief Fund (DERF). Funding was used to procure critical Explosive Ordnance Disposal equipment in support of Operation ENDURING FREEDOM.

3. Items requested in FY04 are identified on the following P-5 and are representative of items to be procured. Items procured during execution may change based on the most critical equipment needed to support current Air Force mission requirements.

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)		DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** AIR BASE OPERABILITY	

WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY2002			FY2003			FY2004			FY2005		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
A. ARTS				{1,844}			{1,441}			{1,881}			{1,551}
ARTS HARDWARE	A	6	182,973	1,098	7	205,891	1,441	6	213,509	1,281	7	221,509	1,551
INTERIM CONTRACTOR SUPPORT (ICS)				458									
CRITICAL ITEM SETS (1)		4	72,000	288									
ENGINEERING CHANGE ORDER - RADIOS								24	25,000	600			
OTHER ECOS				996			40			11			30
B. ARTS ATTACHMENTS/EOD SUPPORT EQUIPMENT				{3,083}			{4,165}			{3,610}			{3,880}
90MM WATER CANNON	A	10	10,000	100									
RECOILLESS, MULTIDIRECTIONAL WATER CANNON MOUNT	A				21	25,500	536	24	26,792	643	17	29,000	493
ARTS ALTERNATE CONTROL SYSTEM	A				21	52,700	1,107	22	46,900	1,032	19	44,900	853
ARTS MANIPULATOR ARMS	A										2	664,034	1,328
ARTS WATER CUTTER	A										2	169,485	339
TELEOPERATED REMOTE AIMING PLATFORM (TRAP)	A										15	57,800	867
RONS (2)	A	28	106,525	2,983	3	183,333	550						
RONS ARS SYSTEM UPGRADE	A				81	12,000	972						
EOD SMALL ROBOTS	A				8	125,000	1,000	15	129,000	1,935			

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)		DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** AIR BASE OPERABILITY	

WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY2002			FY2003			FY2004			FY2005		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
TOTALS:				5,923			5,646			5,502			5,461

REMARKS:

1. CRITICAL ITEM SETS CONSIST OF A CENTRAL PROCESSOR UNIT, FIXED CAMERA ASSEMBLY, ANTENNA SET, OPERATOR CONTROL STATION, AND BACKHOE ACTUATOR CONTROL NODE.
2. FY03 UNIT COST INCREASE DUE TO PROCUREMENT OF NEXT GENERATION OF RONS WITH IMPROVED CAPABILITY.

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** AIR BASE OPERABILITY

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
A. ARTS									
ARTS HARDWARE									
FY02	6	182,973	AFMC/AAC	SS/FFP W/OPT	APPLIED RESEARCH ASSOCIATES, SOUTH ROYALTON, VT	MAR 02	JUL 02		
FY03 (1)	7	205,891	AFMC/AAC	OPT/FFP	APPLIED RESEARCH ASSOCIATES, SOUTH ROYALTON, VT	FEB 03	JUN 03	Y	
FY04 (1)	6	213,509	AFMC/AAC	OPT/FFP	APPLIED RESEARCH ASSOCIATES, SOUTH ROYALTON, VT	FEB 04	JUN 04	Y	
FY05 (1)	7	221,509	AFMC/AAC	OPT/FFP	APPLIED RESEARCH ASSOCIATES, SOUTH ROYALTON, VT	FEB 05	JUN 05	Y	
B. ARTS ATTACHMENTS/EOD SUPPORT EQUIPMENT									
90MM WATER CANNON									
FY02	10	10,000	AFMC/AAC	SS/FFP	NAVY/NAVEODTECHDIV, INDIANHEAD, MD	FEB 02	JUN 02		
RECOILLESS, MULTIDIRECTIONAL WATER CANNON MOUNT									
FY03 (1)	21	25,500	AFMC/AAC	OPT/FFP	APPLIED RESEARCH ASSOCIATES, SOUTH ROYALTON, VT	FEB 03	MAY 03	Y	
FY04 (1)	24	26,792	AFMC/AAC	OPT/FFP	APPLIED RESEARCH ASSOCIATES, SOUTH ROYALTON, VT	FEB 04	MAY 04	Y	
FY05 (1)	17	29,000	AFMC/AAC	OPT/FFP	APPLIED RESEARCH ASSOCIATES, SOUTH ROYALTON, VT	FEB 05	MAY 05	Y	

	P-1 ITEM NO 90		PAGE NO: 59		Page 1 of 3

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** AIR BASE OPERABILITY

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
ARTS ALTERNATE CONTROL SYSTEM									
FY03 (1)	21	52,700	AFMC/AAC	OPT/FFP	APPLIED RESEARCH ASSOCIATES, SOUTH ROYALTON, VT	APR 03	SEP 03	Y	
FY04 (1)	22	46,900	AFMC/AAC	OPT/FFP	APPLIED RESEARCH ASSOCIATES, SOUTH ROYALTON, VT	FEB 04	APR 04	Y	
FY05 (1)	19	44,900	AFMC/AAC	OPT/FFP	APPLIED RESEARCH ASSOCIATES, SOUTH ROYALTON, VT	FEB 05	APR 05	Y	
ARTS MANIPULATOR ARMS									
FY05 (1)	2	664,034	AFMC/AAC	OPT/FFP	APPLIED RESEARCH ASSOCIATES, SOUTH ROYALTON, VT	FEB 05	JUN 05	Y	
ARTS WATER CUTTER									
FY05 (1)	2	169,485	AFMC/AAC	OPT/FFP	APPLIED RESEARCH ASSOCIATES, SOUTH ROYALTON, VT	FEB 05	JUL 05	Y	
TELEOPERATED REMOTE AIMING PLATFORM (TRAP)									
FY05 (1)	15	57,800	AFMC/AAC	OPT/FFP	APPLIED RESEARCH ASSOCIATES, SOUTH ROYALTON, VT	FEB 05	JUL 05	Y	
RONS									
FY02	28	106,525	AFMC/AAC	MIPR/FFP	NAVY/NAVEODTECHDIV, INDIANHEAD, MD REMOTEC, OAK RIDGE, TN	FEB 02	JUL 02		

	P-1 ITEM NO 90		PAGE NO: 60		Page 2 of 3

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** AIR BASE OPERABILITY

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
FY03	3	183,333	AFMC/AAC	MIPR/FFP	NAVY/NAVEODTECHDIV, INDIANHEAD, MD REMOTEC, OAK RIDGE, TN	FEB 03	JUL 03	Y	
RONS ARS SYSTEM UPGRADE									
FY03	81	12,000	AFMC/AAC	MIPR/FFP	NAVY/NAVEODTECHDIV, INDIANHEAD, MD REMOTEC, OAKRIDGE, TN	FEB 03	JUL 03	Y	
EOD SMALL ROBOTS									
FY03	8	125,000	AFMC/AAC	C/FFP W/OPT	UNKNOWN	FEB 03	JUL 03	Y	
FY04	15	129,000	AFMC/AAC	OPT/FFP	UNKNOWN	FEB 04	JUL 04	Y	

REMARKS:
1. Options to Sole Source (SS) contract awarded Mar 2002.

	P-1 ITEM NO 90		PAGE NO: 61		Page 3 of 3

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** PHOTOGRAPHIC EQUIPMENT

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$5,778	$5,836	$5,708	$5,908	$6,004	$6,127	$6,237	$6,343

Description:

1. The Photographic Equipment program procures still photography, motion photography, graphic and multimedia imaging equipment and systems. These items support Air Force reconnaissance and intelligence programs, Air Force test ranges, combat camera still photographic documentation and deployable image management teams, and Base Multimedia Centers by replacing obsolete equipment that has either reached or exceeded maximum useful life or is unable to meet speed and quality of resolution that provides the critical visual information necessary for rapid and accurate command decisions. Multimedia Centers support requirements for commanders at all levels including the Secretary of Defense, the Chairman, Joint Chiefs of Staff, and installation commanders. The Multimedia Centers provide: education and training; public and internal information; and still, graphic and multimedia imaging. Equipment includes conventional and digital still cameras and processors, motion cameras, developing and finishing equipment and video/data projection systems.

a. Photo Projection Equipment (Federal Stock Class (FSC) 6730): FY04 funding continues procurement of primarily electronic imaging and data projection systems. The program is designed to incorporate the use of electronic imaging systems where appropriate. Electronic presentation eliminates the necessity of transferring images to film or acetate based materials. The transition to electronic presentation is a result of technological growth and a need to reduce film/chemical based systems in the interest of protecting the environment.

b. Photo Equipment and Accessories (FSC 6760): FY04 continues to procure specialized film-based photographic systems that cannot be replaced with electronic photography. These newer systems comply with or exceed federal and state environmental regulations and are required because of their ability to provide full resolution capability or rapid high speed imaging that electronic imaging cannot yet meet.

c. Electronic Imaging Center Conversions: FY04 initiates phase II of The Electronic Imaging Center program, which will replace film and chemical based technology with electronic and digital cameras, multimedia systems, digital photographic processing, digital graphic systems, image data banks, image network hubs and presentation systems. Phase II begins replacement of the original Electronic Imaging systems in

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** PHOTOGRAPHIC EQUIPMENT

Description (continued):

Base Multimedia at all Air Force bases. This program promotes standards based systems to insure inter-operability and to reduce training costs from installation to installation. Digital technology enhances exportability of imagery and provides commanders with near real-time images from anywhere in the world.

2. Items requested in FY04 are identified on the following P-40a and are representative of items to be procured. Items procured during execution may change based on critical equipment needed to support current Air Force mission requirements.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** PHOTOGRAPHIC EQUIPMENT

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		OTY.	COST	OTY.	COST	QTY.	COST	QTY.	COST
A. PHOTO PROJ EQ (FSC 6730)	A		$225		$225		$225		$225
B. PHOTO EQ AND ACC (FSC 6760)	A		$3000		$3000		$2800		$2500
C. ELECTRONIC IMAGING CENTER CONVERSIONS	A		$2553		$2611		$2683		$3183
Totals:			$5,778		$5,836		$5,708		$5,908

Remarks:

	P-1 ITEM NO 91		PAGE NO: 64		Page 1 of 1

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** PRODUCTIVITY ENHANCING CAPITAL INVESTMENTS

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$7,866	$7,730	$6,210	$5,698	$5,495	$5,690	$193	$192

Description:

1. This P-1 line (previously called Productivity Investments) funds the Air Force Productivity Enhancing Capital Investment (PECI) projects in the Productivity Investment Fund (PIF) and the Fast Payback Capital (FASCAP) investment programs. Investment funds are available to all Air Force organizations to encourage productivity enhancements for more efficient operations and focus on labor cost savings and reduction in unit cost of operations. These programs conserve critical resources, enhance unit capability, and improve combat effectiveness. The users which are the Major Commands (MAJCOMs) provide their own offsets from projected savings to sustain future investments for these programs. Elimination of this funding would reduce the capability to implement productivity improvements and enhancements in the work place and throughout the Air Force. FY 04 funding provides support for FASCAP projects, only.

a. To qualify for the PIF program, projects must cost over $200,000 and amortize in less than four years. Projects are approved by the Air Force based on shortest payback and highest rate of return on investment. To date, projects have yielded life cycle savings of over $6 for every $2 invested.

b. To qualify for the FASCAP program, projects must cost less than $200,000 and amortize in less than two years. Projects are approved by MAJCOMs based on the shortest amortization period and best return on investment. To date, projects have yielded life cycle savings of over $7 for every $4 invested.

2. Items requested on the following P-40a are representative of items to be procured. Items procured during execution may change based on the most critical equipment needed to support current Air Force mission requirements.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** PRODUCTIVITY ENHANCING CAPITAL INVESTMENTS

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		OTY.	COST	OTY.	COST	QTY.	COST	QTY.	COST
1. PIF									
A. K-838 TEST STAND (ACC)	A		$330						
B. PURCHASE TUB GRINDER (ACC)	A		$207						
C. COMMERCIAL POWER TO LAJES, AZORES (ACC)	A		$3,199		$227				
D. UPGRADE MSL-100 SWITCH (AFMC)	A		$255						
E. SUPPLY ASSET TRACKING SYSTEM (SATS), LUKE AFB, ARIZONA (AETC)	A		$295						
F. SUPPLY ASSET TRACKING SYSTEM (SATS), LITTLE ROCK AFB, ARKANSAS (AETC)	A		$295						
G. SUPPLY ASSET TRACKING SYSTEM (SATS), ALTUS AFB, OKLAHOMA (AETC)	A		$286						
H. GILABEND AIR FORCE AUXILIARY FIELD (AFAF) INFORMATION TECHNOLOGY UPGRADE (AETC)	A		$1,312						
2. FASCAP			$1,687		$7,503		$6,210		$5,698
Totals:			$7,866		$7,730		$6,210		$5,698

Remarks:

ACC is HQ Air Combat Command.
AFMC is HQ Air Force Materiel Command
AETC is HQ Air Education and Training Command

	P-1 ITEM NO 92		PAGE NO: 66		Page 1 of 1

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** PRODUCTIVITY ENHANCING CAPITAL INVESTMENTS

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
PIF									
A. K-838 TEST STAND (ACC)									
FY 02			HQ ACC	SS/FFP	AVTRON MANUFACTURING, INDEPENDENCE, OH	JUN 02	MAR 03		
B. PURCHASE TUB GRINDER (ACC)									
FY 02 (1)			HQ ACC	OTH/FFP	PUBLIC WORKS EQUIPMENT AND SUPPLY, INC., MONROE, NC	JUL 02	SEP 02		
C. COMMERCIAL POWER TO LAJES, AZORES (ACC)									
FY 02			HQ ACC	DO/FP	ELECTRICIDADE DOS ACORES, ISLAND OF TERCEIRA	SEP 02	SEP 02		
FY 03			HQ ACC	DO/FP	ELECTRICIDADE DOS ACORES, ISLAND OF TERCEIRA	SEP 03	SEP 03	Y	
D. UPGRADE MSL-100 SWITCH (AFMC)									
FY 02			AFMC/AAC	DO/FFP	GENERAL DYNAMICS GOVERNMENT SYSTEMS, NEEDHAM, MA	SEP 02	SEP 03		
E. SUPPLY ASSET TRACKING SYSTEM (SATS), LUKE AFB, ARIZONA (AETC)									
FY 02			HQ AETC	SS/FFP	MULTIPLE (2)	NOV 02	DEC 02		

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** PRODUCTIVITY ENHANCING CAPITAL INVESTMENTS

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
F. SUPPLY ASSET TRACKING SYSTEM (SATS), LITTLE ROCK AFB, ARKANSAS (AETC)									
FY 02			HQ AETC	SS/FFP	MULTIPLE (2)	NOV 02	DEC 02		
G. SUPPLY ASSET TRACKING SYSTEM (SATS), ALTUS AFB, OKLAHOMA (AETC)									
FY 02			HQ AETC	SS/FFP	MULTIPLE (2)	NOV 02	DEC 02		
H. GILABEND AIR FORCE AUXILIARY FIELD (AFAF) INFORMATION TECHNOLOGY UPGRADE (AETC)									
FY 02			HQ AETC	OTH/OTH	MULTIPLE (3) (4)	JAN 03	FEB 03		

REMARKS:
(1) OTH (Other) - Simplified Acquisition
(2) Two Contractors: Northrop Grumman Information Technology, 7575 Colshire Drive, McLean, VA 22102; Intermec Technologies, 6001 36th Avenue West, Everet, WA 98203.
(3) OTH (Other) - Various contract methods and types.
(4) Four Contractors: Niles Radio Communications, Flagstaff, AZ; Worldwide Technologies, St Louis, MO; Red River Services Corporation, Harlingen, TX; remaining contractor to be determined.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MOBILITY EQUIPMENT

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$40,282	$101,995	$92,951	$321,779	$79,395	$149,329	$61,727	$62,184

Description:

1. Basic Expeditionary Airfield Resources (BEAR), better known as Harvest Falcon (HF) and Harvest Eagle (HE) includes equipment to support the beddown of deployed forces (personnel, aircraft, support equipment, munitions) at austere sites where infrastructure is lacking, has been destroyed or to augment operations at existing sites. HF and HE systems are composed of four types of support packages configured for cold-weather or desert operations: Housekeeping packages that provide between 550-1100 personnel with a robust tent city (kitchens, laundry, hygiene facilities and billeting); Industrial Operations packages provide power generation, maintenance shops, airfield systems, water distribution, field exchange and mortuary infrastructure; and Initial and Follow-on Flightline packages that consist of revetment kits, airfield lighting, aircraft hangars, fire stations, and numerous additional systems to support flightline operations. Cost includes (in CONUS or prepositioned overseas), inventory reconstitution, spares and consumables, repairs, and procurement of new equipment for upgrades or full set replacement. BEAR assets, are a crucial enabler for the AF's Expeditionary Air Force strategy. These assets proved to be invaluable in Operations Southern Watch, Provide Relief, Provide Promise, Provide Comfort, Restore Hope, Sea Signal, Uphold Democracy, Joint Endeavor, Desert Focus, Desert Fox, Noble Anvil and Allied Force. Significant quantities of HF and HE assets were successfully employed during Operations Allied Force and Noble Anvil to support operational and humanitarian requirements in Kosovo, Albania, Italy, and Northern Turkey. Operation Enduring Freedom recently deployed over 50 percent of the available BEAR sets nearly depleting the authorized inventory, again demonstrating the critical role these assets play in support of expeditionary operations. BEAR program funding is critical to "reload" for any future operations. The funding thru FY07 supports 129 sets assuming no further consumption.

2. Due to increased demand for BEAR assets the Air Force changed from a commodity based to a full set procurement strategy. The full set procurement will begin in FY04.

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)		DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MOBILITY EQUIPMENT	

WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY2002			FY2003			FY2004			FY2005		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
HARVEST FALCON	A												
A. HOUSEKEEPING	A			11,501			39,923	4	12817475	51,270	15	12817475	192,262
B. INDUSTRIAL OPERATIONS	A			17,254			12,309	1	8832337	8,832	5	8832337	44,162
C. INITIAL FLIGHTLINE	A			5,619			23,018	1	10773177	10,773	5	10773177	53,866
D. FOLLOW-ON FLIGHTLINE	A			151			4,097	1	2185614	2,186	8	2185614	17,485
HARVEST EAGLE	A			1,967			21,859	3	6537244	19,612	2	6537244	13,074
TRAINING	A			790			789			278			930
HELI-BASKET TECHNOLOGY	A			3,000									
TOTALS:				40,282			101,995			92,951			321,779

REMARKS:

Due to an increase in demand for BEAR assets the Air Force changed from a commodity based to a full set procurement strategy. The full set procurement will begin in FY04. The funding in FY02 and FY03 procures items to fill holes to complete full sets. In FY02 funding will complete 13 Harvest Falcon Housekeeping, 4 Industrial Operations, 4 Initial Flightline, 1 Follow-on Flightline, and 1 Harvest Eagle set. In FY03 funding will complete 10 Harvest Falcon Housekeeping, 4 Industrial Operations, 4 Initial Flightline, 4 Follow-on Flightline, and 8 Harvest Eagle set.

Congress added $3M to the FY02 appropriation for heli-basket technology.

	P-1 ITEM NO 93		PAGE NO: 70		Page 1 of 1

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MOBILITY EQUIPMENT

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
HARVEST FALCON									
A. HOUSEKEEPING									
FY02 (2)	13		AFMC/WR-ALC	OTH/OTH	MULTIPLE [1]	NOV 02	JUN 03		
FY03 (2)	10		AFMC/WR-ALC	OTH/OTH	MULTIPLE [1]	MAY 03	MAY 04		
FY 04	4	12817475	AFMC/WR-ALC	OTH/OTH	MULTIPLE UNKNOWN [1]	MAR 04	FEB 05	Y	
FY 05	15	12817475	AFMC/WR-ALC	OTH/OTH	MULTIPLE UNKNOWN [1]	MAR 05	FEB 06	Y	
B. INDUSTRIAL OPERATIONS									
FY02 (2)	4		AFMC/WR-ALC	OTH/OTH	MULTIPLE [1]	NOV 02	JUN 03		
FY 03 (2)	4		AFMC/WR-ALC	OTH/OTH	MULTIPLE [1]	MAY 03	MAY 04		
FY 04	1	8832337	AFMC/WR-ALC	OTH/OTH	MULTIPLE UNKNOWN [1]	MAR 04	FEB 05	Y	
FY 05	5	8832337	AFMC/WR-ALC	OTH/OTH	MULTIPLE UNKNOWN [1]	MAR 05	FEB 06	Y	
C. INITIAL FLIGHTLINE									
FY02 (2)	4		AFMC/WR-ALC	OTH/OTH	MULTIPLE [1]	NOV 02	JUN 03		
FY 03 (2)	4		AFMC/WR-ALC	OTH/OTH	MULTIPLE [1]	MAY 03	MAY 04		
FY 04	1	10773177	AFMC/WR-ALC	OTH/OTH	MULTIPLE UNKNOWN [1]	MAR 04	FEB 05	Y	
FY 05	5	10773177	AFMC/WR-ALC	OTH/OTH	MULTIPLE UNKNOWN [1]	MAR 05	FEB 06	Y	

	P-1 ITEM NO 93		PAGE NO: 71		Page 1 of 3

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MOBILITY EQUIPMENT

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
D. FOLLOW-ON FLIGHTLINE									
FY02 (2)	1		AFMC/WR-ALC	OTH/OTH	MULTIPLE [1]	NOV 02	JUN 03		
FY 03 (2)	4		AFMC/WR-ALC	OTH/OTH	MULTIPLE [1]	MAY 03	MAY 04		
FY 04	1	2185614	AFMC/WR-ALC	OTH/OTH	MULTIPLE UNKNOWN [1]	MAR 04	FEB 05	Y	
FY 05	8	2185614	AFMC/WR-ALC	OTH/OTH	MULTIPLE UNKNOWN [1]	MAR 05	FEB 06	Y	
E. HARVEST EAGLE									
FY02 (2)	1		AFMC/WR-ALC	OTH/OTH	MULTIPLE [1]	NOV 02	JUN 03		
FY 03 (2)	8		AFMC/WR-ALC	OTH/OTH	MULTIPLE [1]	MAY 03	MAY 04		
FY 04	3	6537244	AFMC/WR-ALC	OTH/OTH	MULTIPLE UNKNOWN [1]	MAR 04	FEB 05	Y	
FY 05	2	6537244	AFMC/WR-ALC	OTH/OTH	MULTIPLE UNKNOWN [1]	MAR 05	FEB 06	Y	
F. TRAINING									
FY02		790000	AFMC/WR-ALC	OTH/OTH	MULTIPLE [1]	NOV 02	JUN 03		
FY 03		600000	AFMC/WR-ALC	OTH/OTH	MULTIPLE UNKNOWN [1]	MAY 03	MAY 04		
FY 04		278000	AFMC/WR-ALC	OTH/OTH	MULTIPLE UNKNOWN [1]	MAR 04	FEB 05	Y	
FY05		930000	AFMC/WR-ALC	OTH/OTH	MULTIPLE UNKNOWN [1]	MAR 05	FEB 06	Y	

	P-1 ITEM NO 93		PAGE NO: 72		Page 2 of 3

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MOBILITY EQUIPMENT

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL

REMARKS:

[1] Various contract methods, types and sources will be utilized. Award/delivery dates reflect date of first award and first delivery. Examples of contractors include: Army/TACOM Reliance Coated Fabrics, Mansfield, TX; Army/TACOM Reliance Aero, East Camden, AR; Army/SBCCOM, Natik, MA; AAR Manufacturing Inc., Cadillac, MI; KECO Industries Inc., Florence, KY; Highland Engineering Inc., Howell, MI; JGB Enterprises Inc., Liverpool, NY; UNICOR, Big Springs, TX; Engineered Arresting System, Co., Aston, PA; Gil Marketing, Phoenix, AZ; Eagle Marketing, Houston, TX; Procurement/SPS, West Caldwell, NJ; Radian, Inc., Alexandria, VA; Simplex Inc., Springfield, IL; MC II General Electric, Inc., Tulsa, OK; Alaska Industrial Resources, Inc., Montrose, CO; California Industrial Facilities, Kirtland, WA; Universal Fabric, Quakertown, PA; Hunter Heaters, Solon, OH; and SPX Corporation, Owatona, MN.

(2) Due to an increase in demand for BEAR assets the Air Force changed from a commodity based to a full set procurement strategy. The full set procurement will begin in FY04. The funding in FY02 and FY03 procures items to fill holes to complete full sets. In FY02 funding will complete 13 Harvest Falcon Housekeeping, 4 Industrial Operations, 4 Initial Flightline, 1 Follow-on Flightline, and 1 Harvest Eagle set. In FY03 funding will complete 10 Harvest Falcon Housekeeping, 4 Industrial Operations, 4 Initial Flightline, 4 Follow-on Flightline, and 8 Harvest Eagle sets.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** AIR CONDITIONERS

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$9,890	$9,500	$10,238	$9,322	$5,591	$5,665	$3,806	$3,868

Description:

1. This program provides funding to procure air conditioning systems for Air Force ground-support missions. These assets provide environmental control--both cooling and heating. Old air conditioning systems contain hydrochlorofluorcarbon (HCFC-22), a Class II ozone depleting substance scheduled to be phased out by 2005. New procurement items contain a non-ozone depleting refrigerant (R-134a), required for the government to comply with the Montreal Protocol Treaty on substances that deplete the ozone layer and the Clean Air Act, which necessitate the elimination of HCFC-22 refrigerant.

2. The Field Deployable Environmental Control Unit (FDECU) is an electric-motor driven, vapor cycle, skid-mounted air conditioner with a cooling capacity of 55,000 to 67,000 British Thermal Units (BTU) per hour using ozone friendly R-134a refrigerant. It provides cooling and heating for US Special Operations Command combat communications units, F-15 and F-16 aircraft avionics maintenance shops, Air Force Flight Test Center test sites, Aerial Port/Combat Control organizations, Civil Engineering Red Horse Squadrons, and Security Police dog kennels. HQ Air Combat Command rates the FDECU as one of its top priority items for Basic Expeditionary Airfield Resources (BEAR) shelter support. Requirements for BEAR are funded under Mobility Equipment, P-1 Line #93. Additionally, a nuclear, biological, chemically hardened version of the FDECU supports War Reserve Material (WRM) requirements for field transportable hospitals. The FDECU will replace assets that have exceeded their service life, can no longer be economically repaired or maintained, and which also utilize HCFC-22 refrigerant. All new units comply with the Montreal Protocol Treaty and Clean Air Act. FY04 funding continues procurement of the FDECU. The FDECU provides crucial support during real world contingency situations and require recapitalization. This item is not only utilized and essential to the deployed units of the Air Force and BEAR, but to the Army, Navy, Marines, Special Ops, Military Intelligence and Medical Troops as well.

3. Items requested in FY04 are identified on the following P-5 and are representative of items to be procured. Items procured during execution may change based on the most critical equipment needed to support current Air Force mission requirements.

WEAPON SYSTEM COST ANALYSIS (EXHIBIT P- 5)		DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** AIR CONDITIONERS	

WEAPON SYSTEM COST ELEMENTS	IDENT CODE	FY2002			FY2003			FY2004			FY2005		
		QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST	QTY	UNIT COST	TOTAL COST
AIR CONDITIONER	A	890	11,112	9,890	940	10,106	9,500	935	10,937	10,226	792	11,770	9,322
ENGINEERING DATA										6			
TECHNICAL DATA										6			
TOTALS:				9,890			9,500			10,238			9,322

REMARKS:

	P-1 ITEM NO 94		PAGE NO: 75		Page 1 of 1

BUDGET PROCUREMENT HISTORY PLANNING (EXHIBIT P- 5A) | **DATE:** FEBRUARY 2003

APPROP CODE/BA:
OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT

P-1 NOMENCLATURE:
AIR CONDITIONERS

ITEM / FISCAL YEAR	QTY.	UNIT COST	LOCATION OF PCO	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWD. DATE	DATE FIRST DEL.	SPECS AVAIL NOW	DATE REV. AVAIL
AIR CONDITIONER									
FY02	664	11,112	AFMC/WR-ALC	OPT/FFP	KECO INDUSTRIES, FLORENCE, KY	DEC 01	APR 02		
FY02	226	11,112	AFMC/WR-ALC	OPT/FFP	KECO INDUSTRIES, FLORENCE, KY	AUG 02	NOV 02		
FY03	940	10,106	AFMC/WR-ALC	OPT/FFP	KECO INDUSTRIES, FLORENCE, KY	JAN 03	FEB 03		
FY04	935	10,937	AFMC/WR-ALC	C/FFP	UNKNOWN	DEC 03	NOV 04	Y	
FY05	792	11,770	AFMC/WR-ALC	OPT/FFP	UNKNOWN	DEC 04	MAY 05	Y	

REMARKS:
FY02 was a split procurement. FY02 and FY03 are options to a Competitive, Firm Fixed Price Contract awarded in Jun 1997. FY04 will be a new Competitive Firm Fixed Price contract with options.

	P-1 ITEM NO 94		**PAGE NO:** 76		Page 1 of 1

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** ITEMS LESS THAN $5,000,000 (BASE SUPPORT EQUIP)

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$15,986	$20,597	$14,940	$17,066	$20,024	$23,760	$24,466	$24,946

Description:

1. This program provides a wide variety of base support items with worldwide application. Examples include servicing platforms, aircraft arresting systems, compressors with various applications, refrigeration units, heaters, pallets to support Air Force missions, and military working dogs (used for base and anti-terrorist protection). This equipment provides prime support for all base missions. Lack of funding for these equipment items limits maintenance capabilities, testing functions, anti-terrorism/security missions, communications capabilities, flight operations and the ability of Air Force units to meet deployment requirements.

2. FY04 funding procures initial shortages as well as replacement equipment currently approaching obsolescence. All items have an annual procurement value of less than $5,000,000 and are Code A. Items requested for procurement in FY04 are identified on the following P-40a and are representative of items to be procured. Items procured during execution may change based on the most critical equipment needed to support current Air Force mission requirements.

3. The following projects were added by Congress in the FY03 appropriation. Reference Appropriation Conference Report 107-732, Oct 9, 2002 page 219:

Vaccine Facility Project ($1.0M)
Helibasket Technology ($3.2M)

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A-IL)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** ITEMS LESS THAN $5,000,000 (BASE SUPPORT EQUIP)

PROCUREMENT ITEMS	NSN	FY2004		FY2005	
		QTY.	COST	QTY.	COST
CARGO NET, TOP	1670009694103CT	5000	$615	5000	$620
CARGO NET, SIDE	1670009962780CT	5000	$530	10000	$1060
BAK-12 AIRCRAFT ARRESTING SYSTEM (AAS)	1710010985024	8	$2158	8	$2200
MOBILE AIRCRAFT ARRESTING SYSTEM (MAAS)	1710012232235			1	$556
LIGHTWEIGHT FAIRLEND BEAM (LWFB) CONFIGURATION SET	1710013703909	13	$1774	8	$1113
REFRIGERATION UNIT	4110000570325	61	$1103	60	$1106
AIR COMPRESSOR UNIT	4310005953865	30	$574	30	$585
BREATHABLE AIR COMPRESSOR	4310014743766	10	$544	7	$388
REVERSE OSMOSIS WATER PURIFICATION UNIT, TRAILER-MOUNTED	4610010268980	4	$836	4	$852
REVERSE OSMOSIS WATER PURIFICATION UNIT, SKID-MOUNTED	4610011934348	8	$791	10	$1007
FUEL SERVICING UNIT	4930001122432	8	$907	8	$924
SERVICING PLATFORM	4940010890129	6	$707	6	$720
EMERGENCY AIRFLIELD LIGHTING SYSTEM (EALS)	6230013355078	1	$1124	4	$2033
MILITARY WORKING DOGS (MULTIPLE NSNS)		356	$986	356	$985
FSC = FEDERAL STOCK CLASS					
FSC 1710 - AIRCRAFT ARRESTING SYS			$329		
FSC 3910 - CONVEYORS			$319		$384

	P-1 ITEM NO		PAGE NO:		
	95		78		Page 1 of 2

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A-IL) | **DATE:** FEBRUARY 2003

APPROP CODE/BA:
OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT

P-1 NOMENCLATURE:
ITEMS LESS THAN $5,000,000 (BASE SUPPORT EQUIP)

PROCUREMENT ITEMS	NSN	FY2004 QTY.	FY2004 COST	FY2005 QTY.	FY2005 COST
FSC 3940 - BLOCKS, TACKLE, RIGGING AND SLINGS					$18
FSC 4230 - DECONTAIMINATING EQUIPMENT			$333		$340
FSC 4320 - POWER & HAND PUMPS			$270		$305
FSC 4510 - PLUMBING FIXTURES AND ACCESSORIES			$181		$338
FSC 4910 - MOTOR VEHICLE MAINTENANCE & REPAIR SHOP SPECIALIZED EQP			$134		$263
FSC 4933 - WEAPONS MAINTENANCE & REPAIR SHOP SPECIALIZED EQP			$44		$40
FSC 4940 - MISC MAINTENANCE REPAIR EQUIP			$212		$501
FSC 5430 - STORAGE TANKS			$312		$474
FSC 5855 - NIGHT VISION EQUIPMENT			$58		$59
FSC 6635 - PHYSICAL PROPERTIES TESTING EQUIPMENT			$39		$90
FSC 6665 - HAZARD DETECTING EQUIP			$29		$28
FSC 6670 - SCALES AND BALANCES			$20		$48
FSC 6675 - DRAFTING, SURVEYING, AND MAPPING INSTRUMENTS			$11		$29
TOTALS:			$14,940		$17,066

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** TECHNICAL SURVEILLANCE COUNTERMEASURES EQUIPMENT

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$4,185	$4,018	$3,998	$4,055	$4,072	$4,014	$4,088	$4,154

Description:

1. The Technical Surveillance Countermeasures Equipment Program is a continuous program for the acquisition of Technical Surveillance Countermeasures (TSCM), Technical Investigative Equipment (TIE), and Investigative Support Equipment in support of the Air Force Office of Special Investigations (AFOSI). AFOSI-trained technical agent teams located on Air Force installations worldwide conduct specialized technical surveys to detect clandestine intelligence gathering devices in sensitive Department of Defense (DOD) facilities. These devices may be targeted against facilities for purposes of counterintelligence or competitive intelligence collections. These specialists also conduct numerous technical support operations annually in support of criminal, fraud, and counterintelligence investigations.

2. Some equipment items used to support these missions utilize antiquated technology and urgently need to be replaced. TSCM equipment must continually be updated to keep abreast of the technological advances incorporated in the design of current intelligence gathering devices. In addition, the use of technologically advanced equipment saves man-years of labor in extremely complex criminal and fraud investigations. Based on rapid technology advancements and the critical need for AFOSI to maintain pace, AFOSI's dependence on this advanced equipment will increase. Some equipment has also reached a phase in its life cycle when maintenance and repair costs have become excessive, and in some cases parts for those repairs are no longer available. The Air Force TSCM program is in danger of becoming ineffective with the use of old equipment. Sensitive Air Force facilities will become highly vulnerable to technical penetration without new/upgraded equipment.

3. This program also includes Investigative Support Equipment that supports the AFOSI specialized investigative services (USAF Polygraph Program, USAF Computer Crime Investigations, and AFOSI specialized evidence collection and analysis activities). Specially trained agents support all types of investigations with state of the art surveillance equipment uniquely designed to monitor illicit activity and provide protection to undercover agents and informants. These specialists have continually proved critical to resolving major investigations. AFOSI polygraph examiners conduct over 4,200 polygraph examinations annually in support of criminal/fraud/counterintelligence investigations and counterespionage operations. Failure to maintain AFOSI's polygraph equipment will result in the loss of credibility of USAF polygraph exams

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** TECHNICAL SURVEILLANCE COUNTERMEASURES EQUIPMENT

Description (continued):

and result in non-certification of polygraph examiners. Advances in computer technology and the amount of sensitive data maintained in USAF computer systems necessitates the procurement of state of the art equipment to aid in computer intrusion investigations and the analysis of computer media evidence.

4. The following categories of investigative equipment are being procured in FY04. Project funding by fiscal year is provided on the following P-40a. This equipment is required to counter the level of sophistication of foreign governments/intelligence services, terrorists, and criminals, e.g. the September 11th and USS Cole terrorist attacks, US State Department bug, etc.

a. TSCM Survey Systems. These systems consist of TSCM equipment/components necessary to detect, exploit, and neutralize clandestine technical surveillance systems employed against sensitive Air Force and DOD facilities. Equipment must be upgraded to counter the threat presented by new and advanced technical surveillance devices. The capabilities of the equipment being procured are constantly reviewed to ensure that the most comprehensive surveys are conducted to disclose the presence of clandestine monitoring devices. These systems have the capability to search for covert transmissions from facilities both from the interior and exterior while not alerting a potential adversary of the TSCM team's presence. These systems include equipment to examine telephone systems to determine their security. Additionally, equipment is needed to conduct non-destructive examinations of walls, furniture, etc., for concealed devices.

b. Specialized Law Enforcement Equipment. This specialized equipment is uniquely designed for and utilized during lawfully authorized monitoring of activities and conversations. This visual monitoring often occurs during the hours of darkness and sophisticated light enhancement equipment must be used. Audio monitoring during meetings between suspected criminals and undercover agents must be accomplished without the possibility of the agent being identified; therefore, updated equipment that is smaller and less susceptible to detection and interception must be procured to ensure the agents' safety. Video and audio monitoring is often done remotely and specialized equipment to clandestinely transmit the images and audio is used. Advances in telephone systems require continuing improvements and upgrades to AFOSI's telephone monitoring equipment. Additionally, the capability to track the movements of suspected individuals and contraband, without revealing law enforcement's presence and utilizing the latest advances in navigation and position systems, must be procured as existing technology in this area is rapidly becoming obsolete. Without maintaining pace with advancements in these and other areas, AFOSI's ability to detect and solve crimes with lawfully collected evidence will be greatly diminished. Lastly, the capability to analyze and enhance audio and

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** TECHNICAL SURVEILLANCE COUNTERMEASURES EQUIPMENT

Description (continued):

video recordings from both law enforcement surveillance and suspected individuals' audio/video equipment requires continuous upgrading to keep pace with advancing technology.

c. Computer Crime and Intrusion Investigation Systems. The evolution of a new wave of computer crimes has made AFOSI responsible for the collection, investigative analysis, national level law enforcement coordination, and dissemination of hacker activity and intrusion incidents for the Air Force. AFOSI's computer crime equipment must stay on the leading edge of technology to collect criminal information as well as pursue and apprehend criminals through the global medium. AFOSI must continually update its existing high tech computer surveillance equipment to support ongoing and future investigative operations to identify hackers and hacker groups, as well as potential hostile government activities targeting Air Force communication and control systems. This equipment specifically supports the growing investigative case load resulting from increasing use of computers used in crime and the explosion of incidences of attempted intrusions into USAF and other DoD computer systems. This equipment consists of computer network monitoring systems and computer forensic equipment.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** TECHNICAL SURVEILLANCE COUNTERMEASURES EQUIPMENT

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		OTY.	COST	OTY.	COST	QTY.	COST	QTY.	COST
A. TSCM SURVEY SYSTEMS	A		$1902		$1985		$2034		$2015
B. SPECIALIZED LAW ENFORCEMENT SURVEILLANCE EQUIPMENT	A		$1396		$1063		$1018		$1021
C. COMPUTER CRIME/INTRUSION INVESTIGATION SYSTEM	A		$887		$970		$946		$1019
Totals:			$4,185		$4,018		$3,998		$4,055

Remarks:

	P-1 ITEM NO 97		PAGE NO: 83		Page 1 of 1

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** DARP RC135

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$14,072	$12,995	$16,775					

Description:

FY05-FY09 - Detailed information DARP-RC 135 program remains classified and will be provided on a need-to-know basis. For further information, please contact USAF/XOIRC, 614-7317.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** DARP MRIGS

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$88,517	$114,658	$99,915					

Description:

FY05-FY09 - Detailed information DARP- MRIGS program remains classified and will be provided on a need-to-know basis. For further information, please contact USAF/XOIRY, 697-0810.

	P-1 ITEM NO 99		PAGE NO: 85		Page 1 of 1

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** MODIFICATIONS

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$122	$199	$201	$196	$200	$204	$207	$211

Description:

1. Permanent modifications are configuration changes to in-service systems and equipment which correct material or other deficiencies or add or delete capability. Safety modifications correct deficiences which would produce hazards to personnel, systems or equipment. This budget line encompasses both new and on-going modification efforts for base maintenance and support equipment.

2. The dollars budgeted in FY04 are for "Miscellaneous Low Cost Modifications" to satisfy historically unforeseen modification requirements.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/OTHER BASE MAINTENANCE & SUPPORT EQUIPMENT	**P-1 NOMENCLATURE:** FIRST DESTINATION TRANSPORTATION

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$7,197	$9,672	$4,980	$5,797	$5,758	$5,966	$6,117	$6,270

Description:

First Destination Transportation (FDT) is the movement of property from the free-on-board (FOB) point of acquisition to the point at which the material is first received for use, storage, or distribution in the military supply system. When advantageous to the government, the contractual price includes the investment item transportation (FOB destination) and finances them as part of their unit cost. This P-1 line program provides for continental United States (CONUS) and outside CONUS movement of material newly procured by Air Force major commands (MAJCOMs). FY04 funding will provide for shipment of items procured FOB origin from all Air Force procurement appropriations (Aircraft, Missile, Ammunition and Other Procurement). The requirement is based on material buy programs in the procurement appropriations and is computed using a factor relationship of FDT costs to the value of the associated procurement programs.

BUDGET ITEM JUSTIFICATION (EXHIBIT P-40)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/SPARES & REPAIR PARTS	**P-1 NOMENCLATURE:** SPARES AND REPAIR PARTS

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
QUANTITY								
COST (in Thousands)	$35,290	$41,045	$36,582	$41,609	$28,714	$26,513	$19,022	$25,436

Description:

Initial Spares consist of reparable components, assemblies, subassemblies, and consumable items required as initial stockage (including readiness spares package requirements) in support of newly fielded vehicles, communications-electronics and telecommunications equipment, and other base maintenance and support equipment items. Requirements are determined by applying established factors against the acquisition cost of the end items. The factors are based on historical data of similar equipment, employment/deployment concepts, production schedules and other related information. Initial spares are procured using obligation authority in the Air Force Supply Management Activity Group (AFSMAG) of the Air Force Working Capital Fund (AFWCF), with the exception of intelligence and communications security spares which are not managed by the Standard Base Supply System (SBSS). For spares bought through the AFWCF, procurement funds reimburse the AFSMAG as outlays occur and are, therefore, budgeted based on outlay projections. Funds for AFWCF Exempt spares, which are not managed through the SBSS, are budgeted in the year of the requirement. Appropriated funds for AFWCF Exempt spares obligate when spares are ordered.

Replenishment Spares consist of components, assemblies, and subassemblies required to resupply initial stockage for reasons other than support of newly fielded end items. This includes additional stockage due to changes in usage, deployment of systems, and readiness initiatives. Replenishment spares include AFWCF spares and AFWCF Exempt spares.

FY04 funding will procure initial and replenishment spares noted on attached P-40a.

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/SPARES & REPAIR PARTS	**P-1 NOMENCLATURE:** SPARES AND REPAIR PARTS

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		QTY.	COST	QTY.	COST	QTY.	COST	QTY.	COST
INITIAL SPARES			${29,602}		${40,871}		${36,460}		${41,486}
ITEMS LESS $5M, FIRE FIGHTING EQUIPMENT (P-1 LINE NO. 25)	A				$128		$305		
AIR CARGO MATERIEL HANDLING (P-1 LINES 26)	A		$2,584		$9,395		$7,239		$8,021
COMSEC EQUIPMENT (P-1 LINE NO. 35)	A		$752		$775		$1,045		$1,036
INTEL COMMUNICATIONS EQUIPMENT (P-1 LINE NO. 38)	A		$425		$421		$700		$1,648
NATIONAL AIRSPACE SYSTEM (P-1 LINE NO. 40)	A		$3,475		$3,874		$3,108		$3,315
THEATER AIR CONTROL SYSTEM IMPROVEMENTS (P-1 LINE NO. 41)	A		$1,854		$1,165		$887		$451

	P-1 ITEM NO 106		PAGE NO: 2		Page 1 of 5

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/SPARES & REPAIR PARTS	**P-1 NOMENCLATURE:** SPARES AND REPAIR PARTS

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		QTY.	COST	QTY.	COST	QTY.	COST	QTY.	COST
WEATHER OBSERVATION/FORECAST (P-1 LINE NO. 42)	A		$1,859		$1,150		$1,479		$1,497
STRATEGIC COMMAND AND CONTROL (P-1 LINE NO. 43)	A		$584		$577		$577		$586
CHEYENNE MOUNTAIN COMPLEX (P-1 LINE NO. 44)	A		$1,673		$657		$651		$655
TAC SIGINT SUPPORT (P-1 LINE NO. 45)	A		$62		$57		$107		$110
MOBILITY COMMAND AND CONTROL (P-1 LINE NO. 50)	A		$21		$21		$20		$20
AIR FORCE PHYSICAL SECURITY (P-1 LINE NO. 51)	A		$596		$745		$171		$175
COMBAT TRAINING RANGES (P-1 LINE NO. 52)	A		$1,400		$775		$774		$787

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/SPARES & REPAIR PARTS	**P-1 NOMENCLATURE:** SPARES AND REPAIR PARTS

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		QTY.	COST	QTY.	COST	QTY.	COST	QTY.	COST
THEATER BATTLE MANAGEMENT C2 SYSTEMS (P-1 LINE NO. 56)	A		$1,896		$1,845		$1,584		$1,856
NAVSTAR GPS (SPACE) (P-1 LINE NO. 62)	A		$467		$170		$94		$93
AF SATELLITE CONTROL NETWORK (P-1 LINE NO. 64)	A		$1,518		$2,026		$4,444		$3,184
SPACELIFT RANGE SYSTEM (SPACE) (P-1 LINE NO. 65)	A		$682		$1,996		$701		$1,409
MILSATCOM (SPACE) (P-1 LINE NO. 66)	A		$4,777		$4,254		$4,138		$9,845
SPACE MODS (SPACE) (P-1 LINE NO. 67)	A		$27		$6,021		$1,993		$220

	P-1 ITEM NO 106		PAGE NO: 4		Page 3 of 5

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/SPARES & REPAIR PARTS	**P-1 NOMENCLATURE:** SPARES AND REPAIR PARTS

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		QTY.	COST	QTY.	COST	QTY.	COST	QTY.	COST
TACTICAL CE EQUIPMENT (P-1 LINE NO. 69)	A		$3,423		$95		$4,820		$4,385
TV EQUIPMENT (AFRTV) (P-1 LINE NO. 72)	A		$246		$246		$246		$248
COMM ELECTRONICS MODS (P-1 LINE NO. 77)	A		$625		$796		$795		$809
ITEMS LESS THAN $5M ELECTRICAL EQUIPMENT (P-1 LINE NO. 86)	A		$656		$3,165		$26		$418
AIR BASE OPERABILITY (P-1 LINE NO. 90)	A				$517		$556		$718
REPLENISHMENT SPARES			${5,688}		${174}		${122}		${123}
COMSEC EQUIPMENT (P-1 LINE NO. 35)	A		$5,598		$82				

	P-1 ITEM NO 106		PAGE NO: 5		Page 4 of 5

BUDGET ITEM JUSTIFICATION FOR AGGREGATED ITEMS (EXHIBIT P- 40A)	DATE: FEBRUARY 2003
APPROP CODE/BA: OPAF/SPARES & REPAIR PARTS	**P-1 NOMENCLATURE:** SPARES AND REPAIR PARTS

PROCUREMENT ITEMS	ID CODE	FY2002		FY2003		FY2004		FY2005	
		QTY.	COST	QTY.	COST	QTY.	COST	QTY.	COST
TAC SIGINT SUPPORT (P-1 LINE NO. 45)	A		$47		$51				
AIR FORCE PHYSICAL SECURITY SYSTEM (P-1 LINE NO. 51)	A						$81		$82
WEAPONS STORAGE & SECURITY SYSTEM (P-1 LINE NO. NONE)	A		$43		$41		$41		$41
Totals:			$35,290		$41,045		$36,582		$41,609

Remarks:

	P-1 ITEM NO 106		PAGE NO: 6		Page 5 of 5