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COMMAND, CONTROL, COMMUNICATIONS AND INTELLIGENCE (C3I)

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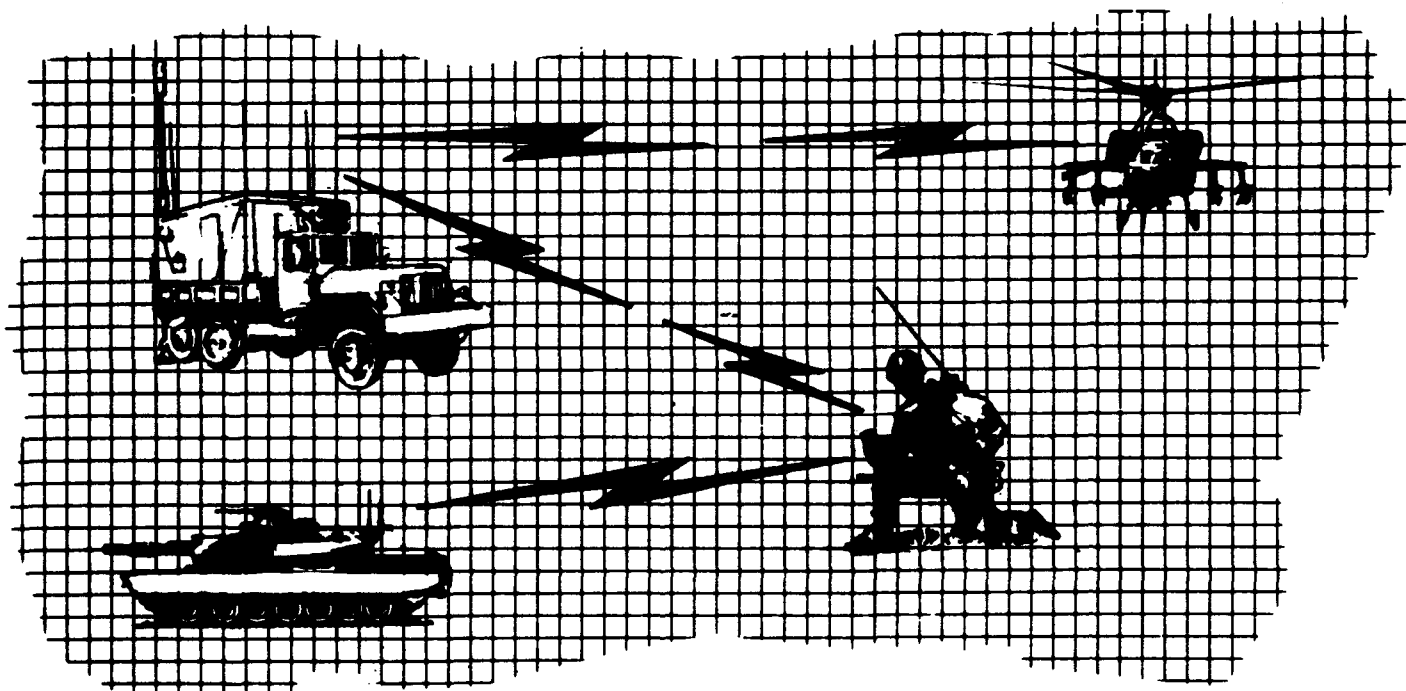


PROJECT BOOK

FISCAL YEAR 1992

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HEADQUARTERS, U.S. ARMY COMMUNICATIONS-ELECTRONICS
COMMAND

FORT MONMOUTH, NEW JERSEY 07703-5027



CECOM-BOTTOM LINE: THE SOLDIER

US ARMY
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6. AUTHOR(S) Marcy M. Rubman, Editor	
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12 MAY 92

**Message from the Commanding General
U.S. Army Communications-Electronics Command (CECOM)
Fort Monmouth, New Jersey**

Dear Reader:

I am pleased to present the Fiscal Year 1992 edition of the C3I Project Book. The C3I Project Book displays a cross section of systems and equipment which are currently in development, production, or in the field. This publication reflects a coordinated effort between CECOM, PEO Command and Control Systems, PEO Communications, and PEO Intelligence and Electronic Warfare.

The C3I military community, in partnership with industry, share the critical mission of sustaining and modernizing communications, electronics and intelligence systems in order to support the soldier with the best state-of-the-art C3I equipment and service available. Our changing global environment and current constraints on defense resources mandate that new methods and procedures be implemented throughout the life cycle of C3I equipment and systems. This publication serves to keep industry abreast of our latest developments and initiatives toward that goal and we encourage industry to assist us in accomplishing our mission within a declining budget.

CECOM Bottom Line: THE SOLDIER.

Sincerely,

[Signature]
Alfred J. Mallette
Major General, U.S. Army
Commanding



Major General Alfred J. Mallette



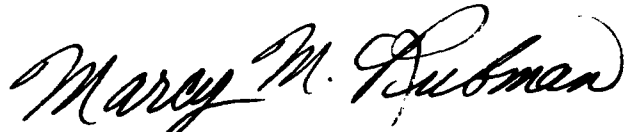
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MARCY M. RUBMAN (Editor)
Program Analysis
and Evaluation Directorate, CECOM

We welcome your suggestions and comments.

*Commander
U.S. Army Communications-Electronics Command
ATTN: AMSEL-PE-PD (Ms. Rubman)
Fort Monmouth, NJ 07703-5027*

Requests for copies may be addressed to:

*Commander
U.S. Army Communications-Electronics Command
ATTN: AMSEL-AC-BEB-TP
Fort Monmouth, NJ 07703-5000*

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PM ADCCS

FAAD C2I

FORWARD AREA AIR DEFENSE COMMAND AND CONTROL (FAAD C2)

FORWARD AREA AIR DEFENSE COMMAND, CONTROL AND INTELLIGENCE (FAAD C2I)

PROJECT MANAGER: COL David R. Taylor, DSN 788-3441
COM 205/895-3441

PRODUCT MANAGER: LTC Raymond Zegley, DSN 788-4309
COM 201/895-4309

PE & LINE #: 64741.D126

DESCRIPTION: FAAD C2 system consists of processors and displays, software and communications equipment to meet the Command and Control (C2) and targeting needs of FAADS battalions and separate batteries. This system will also fulfill the functional requirements of the air defense artillery component of the Army Tactical Command and Control System (ATCCS), and will interoperate with joint and allied High-to-Medium Altitude Air Defense (HIMAD) C2 systems. The FAAD C2I system consists of a C2 component (software) that integrates, processes and distributes aerial target information gathered from Ground-Based (GBS) and other Sensors, Identification Friend-or-Foe (IFF), Positive Hostile Identification (PHID) and Noncooperative Target Recognition (NCTR) devices. FAAD C2I will be used to integrate the division air defense fight to ensure freedom of maneuver by divisional forces and protection of critical C2, fire support, and sustaining elements of the air/land battle. FAAD C2I is an interactive processor-to-processor automated system replacing the man-to-man manual one-way system.

HISTORICAL BACKGROUND:

Mar 85 - Short Range Air Defense Command and Control (SHORAD C2) presented.
Jan 86 - SHORAD C2 became subsystem of FAAD system, redesignated to FAAD C2I.
Jul 86 - Milestone II, full scale development of system software.

EVENT SCHEDULE:

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EARLY USER EVAL *																												
IOT&E *																												
MS III *																												
FUE/IOC *																												
CONTRACT AWARD **																												
C3I TT **																												
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MS III **																												
FUE/IOC **																												

* Light Division; ** Heavy Division

REQUIREMENTS DOCUMENT: ROC approved, Oct 85; O&O approved, May 86.

TYPE CLASSIFICATION: Standard, Apr 97.

FAAD C2 PROVIDES NEAR REAL TIME TARGETING AND C2 INFORMATION, ACCURATE AND TIMELY IDENTIFICATION OF TARGETS, ALERTING OF FAAD AND FORCE ELEMENTS, CUEING OF FAAD WEAPONS, AND INTEROPERABILITY WITH ALLIED AND JOINT AD C2 SYSTEMS.

PM, ADCCS

PORTABLE ALL SOURCE ANALYSIS WORK STATION (PAWS)
WITH RAPID AIR DEFENSE EVALUATION SYSTEM (RAIDES)

PRODUCT MANAGER: LTC H. M. Carr, DSN 788-3517
COMN 205/895-3517

PE & LINE #:

DESCRIPTION: The Portable All Source Analysis System (ASAS) with RAIDES operational demonstration software provides the commander with the interim capability to automate tactical planning and Intelligence Preparation of the Battlefield (IPB) in the Air Defense Tactical Operations Center (ADTOC). The RAIDES software is a reverse engineered product of the Air Force - Force Level Automated Planning System (FLAPS) software. By reverse engineering the FLAPS software, it became possible for the friendly Air Defense commander to study his own air defense design with respect to weaknesses or gaps in coverage or lethality. PAWS/RAIDES thus allows the Air Defense commander to plan a cohesive and coordinated air defense system in minutes compared to a manual system that once took hours. The PAWS (which hosts the RAIDES software) is a DEC MICROVAXII computer which has been type classified and given the nomenclature AN/TYQ-37. The AN/TYQ-37 is a ruggedized system consisting of two high resolution 19" color monitors, a 32 bit CPU, a coprocessor, VMS Operating System, a graphics kernel system, 16 MB RAM/4MB ROM, IEEE 802.3 Interface, a 760 MB Disk Drive, and can accommodate several software systems: Ada Oracle, "C", and Fortran. PM ADCCS plans to add Combat Service Support and Maneuver Control System software to the RAIDES capability and port the combined software to common hardware. A series of field demonstrations will be conducted for proof-of-principle under the Advanced Technology Transition Demonstration (ATTD) acquisition.

HISTORICAL BACKGROUND:

Nov 88 - CG 32D Army Air Defense Command (AADCOM) and PM Joint Tactical Fusion (JTF) initiate program.
Jan 89 - JTF PAWS HW and RAIDES demo deployed.
Feb 89 - Proof of Principle successful: PAWS/RAIDES; FUE PAWS/RAIDES.
Mar 89 - Demonstration/prototyping activities began in 32D AADCOM; ADCCS Project Office began RAIDES SW deployment.
Oct 89 - V3.4 - Enhanced RAIDES SW deployed.
Jan 90 - V3.5 - PAWS Display Manager (PDM) fielded (pop-up menus).
Aug 90 - PAWS/RAIDES deployed to Operation Desert Shield/Storm.
Feb 91 - V4.0 - Major enhancements to RAIDES deployed.
Feb 92 - V4.3 - Major enhancements to RAIDES deployed.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
CNS CONVERSION																												
INCORPORATE CSS & MCS SW																												
ATTD I																												
ATTD II																												
ATTD III																												
ATTD IV/USER OPERATIONAL EVALUATION																												

REQUIREMENTS DOCUMENTS: Air Defense Artillery Command, Control, Communications and Intelligence (ADA C3I) O&O, Jul 90; Draft Air Defense Integrated Tactical Operations Center (ITOC) ROC, Oct 90. User functional description, Dec 91.

TYPE CLASSIFICATION: N/A for software.

PAWS/RAIDES PROVIDES AIR DEFENSE THE CAPABILITY TO PERFORM TACTICAL PLANNING AND ENCOMPASSES THE PLANS ASSOCIATED WITH SENSOR COVERAGE, WEAPONS COVERAGE/LETHALITY, THE EVALUATION OF AIR DEFENSE EFFECTIVENESS, DEVELOPMENT OF LIKELY THREAT INGRESS/EGRESS ROUTES, PERFORM THREAT ANALYSIS, PERFORM COMMUNICATIONS EFFECTIVENESS ANALYSIS, AND PERFORM TERRAIN ANALYSIS (PARTICULARLY MASKING EFFECTS). COMMON SOFTWARE WILL ADD GENERAL STAFF PLANNING CAPABILITY.

PM ASAS

PM, ASAS

ALL SOURCE ANALYSIS SYSTEM (ASAS)

PROJECT MANAGER: COL Richard Johnson, COMM 703/556-2950

PE & LINE #:

DESCRIPTION: ASAS is the central nervous system guiding field commanders to successfully execute the Air/Land Battle, and is the IEW subelement of the Army Tactical Command and Control System (ATCCS). ASAS automates command and control of IEW operations and intelligence fusion processing. It generates a near real-time picture of the enemy situation to guide employment of maneuver forces and systems and provides coordination to systems within the ATCCS arena. Many sophisticated sensor systems provide targeting information; however, the capability to process and respond to that information is limited, today, by manual and partially automated methods. ASAS uses state-of-the-art computers to speed the process and improve its accuracy. ASAS architecture is modular. The three major hardware modules within the ASAS are: intelligence data processing modules (AIM/DAIM); sensor interface modules that provide a relay between ground based sensors/sources in forward areas and the data processing modules and, additionally, provide the interface between the data processing modules and the area communications network (FSIC); and, portable workstations that provide the user interface with the system (PAMS).

HISTORICAL BACKGROUND:

Mar 83 - Congress approved Program Plan (prime contract award).
Dec 84-Jan 85 - R&D contracts awarded.
Feb 87 - Limited Production, Urgent contracts awarded.
Nov 87 - Joint Oversight Group Approved Plan "G" Program Baseline.
Nov 89-Dec 89 - FDT&E.
Mar 90 - LCC-Phase II contract award.
May 91 - V2 software delivered to Ft Hood.
Dec 91 - V2 software accredited.
Jan 92 - Block I Log Demo completed; Block II RFP released.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				1				1				1				1				1			
PPQT				I																								
IOT&E																												
BEGIN LCC-PHASE II TRAINING																												
EVOLUTIONARY ACQUISITION BLOCK II CONTRACT AWARD																												
MATERIEL FIELDING DECISION (ASARC)																												
FIRST UNIT EQUIPPED (FUE) BLOCK I																												
BLOCK II PRODUCTION AWARD																												I

REQUIREMENTS DOCUMENT: ROC was approved Jun 86; Functional Capabilities Document, 7 Dec 83; Baseline System Functional Specification, 10 Dec 84; Phased ROC validated by JROC 21 Nov 91.

TYPE CLASSIFICATION: Limited Production, Urgent, Feb 87 for the LCC; Standard, 1QFY93.

ASAS PROVIDES THE COMMANDER NEAR-REAL-TIME INTELLIGENCE TO EXECUTE THE BATTLE INDEPENDENT OF THEATER OR INTENSITY.

PM AWIS

PH. AMIS

ARMY WORLDWIDE INFORMATION SYSTEMS (AMIS)

PROJECT MANAGER: COL Melvin I. Hosaka, DSN 345-3260
COMM 703/355-3260

PE & LINE #: 393152.BE4100

DESCRIPTION: The Worldwide Military Command and Control System (WMCCS) provides the means for operational and administrative (when applicable) command and control of U.S. military forces. The primary mission of WMCCS is to support the National Command Authority (NCA), the Joint Chiefs of Staff (JCS), the Unified and Specified Commands and other Department of Defense (DoD) Agencies/Activities. Program objectives include: sustaining the current WMCCS ADP operational availability, providing compatibility with an open systems architecture environment, efficient and cost effective insertion of mature technology, the implementation of the Joint Operation Planning and Execution System (JOPEX) and supporting the Army in its modernization effort at Echelons Above Corps (EAC). As the primary overall national system for C2, WMCCS currently contains numerous subsystems, terminals, and interfaces. AMIS hardware and communications generally follows the plans for the WMCCS ADP Modernization (WAM) Program architecture. The AMIS software architecture defines a Layered Software Approach using Ada and will focus on the development of approximately 19 Software Product Lines (e.g., Logistics, Personnel, Medical, etc.).

HISTORICAL BACKGROUND:

83 - Project Manager established - tasked with the coordination of the Worldwide Information system within Army.
Sep 83 - Began documentation for modernization of WMCCS.
Jan 87 - Software development started.
Feb 86 - Milestone II - Definition/Design.
Sep 87 - MAISRC IPR.
Mar 90 - MAISRC IPR.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
HARDWARE PROCUREMENT WORKSTATIONS																												
SOFTWARE DEVELOPMENT:																												
MOB/OCEE																												
UNIT STATUS																												
PERSONNEL																												
RECONNAISSANCE																												
OPERATIONS																												
MEDICAL																												
TRANSPORTATION																												
WEATHER																												
C2, ASSETS MGMT																												
LOGISTICS																												
FORCE PLANNING																												
CIVIL ENGINEERING																												
TRAINING																												
INTELLIGENCE																												
PROVOST MARSHAL																												
HOST NATION SUPPORT																												
EXERCISE																												
SYSTEMS ENGINEERING SW																												

REQUIREMENTS DOCUMENT: JOPEX ROC approved, Jul 83; WMCCS ADP Concept of Operations and General Requirements approved Jul 83. AMIS Materiel Needs Statement approved Dec 91.

TYPE CLASSIFICATION:

AMIS PROGRAM SUPPORTS THE INFORMATION COLLECTION, PROCESSING, DISTRIBUTION, DISPLAY SYSTEMS AND SOFTWARE APPLICATIONS FOR THE WAM.

PM CSSCS

PM, CSSCS

COMBAT SERVICE SUPPORT CONTROL SYSTEM (CSSCS)

PROJECT MANAGER: COL J. R. Stevenson, DSN 345-7470
COMH 703/355-7470

PE & LINE #: 643805.D091

DESCRIPTION: CSSCS is one of five Battlefield Functional Area (BFA) Control Systems which constitute the integrated Army Tactical Command Control System (ATCCS). CSSCS provides CSS commanders with automated command and control support to accomplish the CSS mission. This system also provides the critical functional interfaces between ATCCS and the CSS Standard Army Management Information Systems (STAMIS) so that the state of readiness can be assessed and the ability to deploy can be evaluated in a near real time mode. CSSCS will share selected information with the remaining four BFAs of ATCCS (maneuver control, air defense, fire support and intelligence/electronic warfare). CSSCS will be deployed from echelons above corps, divisions, maneuver brigades/combat brigades to separate/armored cavalry regiments. CSSCS will be available in the 1994 time frame to coincide with the introduction of automation in all battlefield functional areas.

HISTORICAL BACKGROUND:

Jun 82 - MEMS approved.
Jun 84 - O&O approved.
Apr 87 - PM CSSCS established.
Nov 87 - Revised O&O plan approved.
Dec 88 - Version 1 SW evaluated.
May 90 - Version 2 SW evaluated.
Jun 90 - Version 3/4 SW solicitation issued.
Oct 90 - "Blocked" ROC approved.
Dec 90 - Milestone I/II ASARC.
Feb 91 - Contract Award Version 3/4 SW.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				1				1				1				1				1			
EARLY USER TEST & EVALUATION/ FORCE DEVELOPMENT TEST & EXPERIMENTATION																												
IOTE																												
FUE																												
ASARC III																												
IOC																												

REQUIREMENTS DOCUMENT: O&O approved, Jun 84; ROC approved, Oct 90.

TYPE CLASSIFICATION: Scheduled for Jun 93.

CSSCS WILL PROVIDE TIMELY LOGISTICS, MEDICAL, FINANCIAL AND PERSONNEL PLANNING AND DECISION MAKING CAPABILITY TO THE COMMANDER.

PM CHS

PH. CHS

COMMON HARDWARE/SOFTWARE (CHS)

PROJECT MANAGER: COL Walter L. Olson, DSN 995-4679
COMM 908/544-4679

PE & LINE #: 6.48.18A.X8W27P03

DESCRIPTION: CHS - PH. CHS's objective is to provide standard common hardware/software (HW/SW) for the Army Tactical Command & Control Systems (ATCCS) which consists of the five Battlefield Functional Areas (BFAs) of the Maneuver Control Systems (MCS); Field Artillery Tactical Data System (FATDS); Air Defense Command and Control System (ADCCS); Combat Service Support Control System (CSSCS) and All Source Analysis System (ASAS). Each BFA PH is being provided CHS as building blocks for ATCCS. The Army is procuring NDI computers to include a Simplified Handheld Terminal Unit (SHTU), Portable Computer Unit (PCU), Transportable Computer Unit (TCU) and compatible NDI peripheral devices. The SHTU will be hardened sufficiently to withstand military use in the harsh environment of the battlefield. The PCU, TCU and peripheral computer equipment will be provided in two versions: V1 version similar to commercial models with some extended temperature and vibration capability, and V2 version which is ruggedized. Standard NDI computer SW being acquired includes operating systems, database management systems, Ada language programming tools, word processing, spreadsheets, communications, training and maintenance diagnostic programs. These SW items provide a common baseline for the development of functional SW that can be ported between C3 systems. Government rights include an Army license to furnish the SW and documentation to third-party support contractors for Army tactical systems. Provisions to keep the computer SW and HW technologically current with the industrial market place is also being provided by the contractor.

COMMON ATCCS SUPPORT SOFTWARE (CASS), LIGHTWEIGHT COMPUTER UNIT (LCU) AND STANDARD INTEGRATED COMMAND POST SYSTEM (SICPS). Common SW includes commercially off-the-shelf SW (COTS) for common HW and Programming Support Environment, reusable CASS and Applications SW. The LCU is a procurement of existing NDI HW/SW components and support. The equipment is required to be compatible with standard Army Tactical Communications Systems and must interface with existing CHS units. Software will be interoperable with SW on the TCU-PCU. SICPS is a program directed by the Vice Chief of Staff Army to standardize command post equipment. SICPS provides the ATCCS nodal PMs with the HW platforms (tent command post (CP) shelter CP, track CP and 5-ton CP) to house their respective C2 systems. These platforms provide power, environmental control, mounting HW, lights and grounding kits. When populated with automation and communications equipment, SICPS will provide a completely survivable and mobile command post.

HISTORICAL BACKGROUND:

Dec 85 - Program Initiated.	Nov 90 - CHS I Final User Check Test completed.
Apr 88 - ASARC.	Aug 90 - LCU RFP Issue.
Jul 88 - DAB.	Dec 90 - LCU Pre-Award Demo complete.
Aug 88 - Awarded Common Hardware/Software Contract.	May 91 - Awarded LCU contract.
Aug 88 - Init Delivery of V1, SW, PSE, and V2 Prototypes.	Jun 91 - Initial delivery of LCU V1 and V2.
Nov 89 - Init Delivery of V2.	Sep 91 - CASS Release 1 delivery.
	1QFY92 - DT/OT completed.

EVENT SCHEDULE:

FISCAL YEAR					92				93				94				95				96				97				98							
					QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
CHS:	PRODUCTION DELIVERY CHS I				1(SHTU)								1(TCU)																							
	OSD C3I PRODUCTION REVIEW								1																											
	(CONCUR W/IPR FOR MCS USING CHS I)																																			
	CHS II CONTRACT AWARD								1																											
	PRODUCTION DELIVERY CHS II												(TCU)1				1(TCU)																			
	CHS III ASAS																																1			
	CASS DELIVERIES				(RELEASE 2)1				1(RELEASE 3)																											
SICPS:	XM 1068 CONTRACT AWARD				1																															
	XM 1068 DT/OT				1																															

REQUIREMENTS DOCUMENT: Original ROC, Dec 86. ATCCS updated ROC Sep 90 to include LCU.

TYPE CLASSIFICATION: CHS hardware, as class IX repair parts, will not be separately type classified.

CHS PROVIDES COMPATIBLE NDI COMPUTERS, SW AND PERIPHERAL PLUS A PROGRAMMING SUPPORT ENVIRONMENT, TECHNICAL ASSISTANCE AND LOGISTICS SUPPORT.

PM FATDS

PH. FATDS

ADVANCED FIELD ARTILLERY TACTICAL DATA SYSTEM (AFATDS)

PROJECT OFFICER: LTC Paul J. Dixon, DSM 995-3328
COMH 908/544-3328

PE & LINE #: 18423.7260322

DESCRIPTION: The Advanced Field Artillery Tactical Data System (AFATDS) will broaden and modernize the US Army Fire Support Command, Control and Coordination (FSC3) System. As a Battle Management System, AFATDS will provide automated fire support in the Army Command and Control System (ACCS) architecture in support of close, rear and deep operations, and non-nuclear and chemical fire support assets to complement the commander's scheme of maneuver. AFATDS is composed of a common suite of hardware and software employed in varying configurations at different operational facilities (or nodes) interconnected by tactical communications. Both hardware and software will be capable of being tailored to perform the fire support command, control and coordination requirements at any level of command.

HISTORICAL BACKGROUND:

Mar 81 - AFATDS MENS approved.
May 82 - Communications Control System (CCS) advanced development contract awarded to Singer Co., Librascope Division.
May 84 - AFATDS FSS/FST (software) contract awarded to Magnavox Corp.
Jul 85 - Cancel CCS Development contract.
Sep 85 - Modified AFATDS Program Plan submitted to House of Representatives.
Oct 85 - Magnavox contract capped at \$46.2M.
Sep 86 - Fire Support Automation Plan submitted to Congress.
Jan 89 - AFATDS ROC approved.
Apr 89 - Complete Concept Evaluation at Ft. Sill.
Jul 89 - ASARC II.
Sep 89 - DAB.
Apr 90 - Full Scale Development - Version 1 contract award.
Jun 90 - System Requirement Review.
Nov 90 - System Design Review.
Jan 91 - Revised AFATDS ROC approved.
Apr 91 - Software specification review.
Nov 91 - Preliminary design review.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
VERSION 1 FULL SCALE DEVELOPMENT																												
AFATDS/FORCE DEVELOPMENT TEST & EXPERIMENTATION/ INITIAL OPERATION TEST & EVALUATION																												
ASARC-MS III																												
FIELD ON ACCS HARDWARE																												

REQUIREMENTS DOCUMENT: AFATDS LOA, dated 13 Dec 84; AFATDS revised ROC, 28 Jan 91.

TYPE CLASSIFICATION: It is intended to TC AFATDS Standard.

AFATDS WILL BROADEN AND MODERNIZE THE US ARMY FIRE SUPPORT COMMAND, CONTROL AND COORDINATION (FSC3) SYSTEM.

AFATDS

FIRE SUPPORT ADA CONVERSION (FSAC)

PROJECT OFFICER: LTC J. Vickrey, DSN 995-3092
COM 908/544-3092

PE & LINE #: B78400

DESCRIPTION: FSAC program has been established to provide focal points to manage the following major programs:

Battery Computer System (BCS) - BCS is a command and control facility employed in all field artillery batteries/platoons for technical fire direction of the field artillery. The program objective is to replace the BCS, AM/GYK-29, with the Army Tactical Command and Control System (ATCCS) Common Hardware/Software (CHS) Lightweight Computer System (LCS) and Ada software. The LCU is a NDI computer that is modern, fast, and less expensive.

Multiple Launch Rocket System (MLRS) Fire Detection System (FDS) - FDS is a command and control facility used for tactical fire control of MLRS. FDS uses the same computer as the BCS, and operates as a standalone unit for platoon, and combines with the Fire Direction Adaptation Equipment (FDAE) to form the Fire Direction Data Manager (FDDM) for battery and battalion fire control. FDDM supports new weapon systems that have "smart" or programmable warheads. The program objective is to replace this computer and software with the ATCCS CHS LCU and Ada software.

Interim Fire Support Automated System (IFSAS) - IFSAS is designed to provide limited automation of fire support command and control at battalion nodes and above. The system will give commanders the ability to do automated fire support planning and execution prior to the arrival of the AFATDS. The system will utilize the ATCCS CHS LCU and will be fielded to both active and National Guard/Reserve units to provide early automation.

HISTORICAL BACKGROUND:

	<u>MLRS</u>	<u>BCS</u>	<u>IFSAS</u>
Program Start	Feb 89	Feb 90	Feb 91
System Requirement Review	Aug 89	May 90	
System Design Review	Nov 89	Sep 90	
Preliminary Design Review	Mar 90	Mar 91	
Critical Design Review	Aug 90	Jul 91	

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
MLRS: FORMAL QUALIFICATION TEST					I																							
TAPE DELIVERY					I																							
IOT&E					I																							
FIRST UNIT EQUIPMENT								I																				
FIELDING COMPLETED																	I											
BCS: FORMAL QUALIFICATION TEST					I																							
TAPE DELIVERY						I																						
IOT&E							I																					
PRODUCTION DESIGN								I																				
FIRST UNIT EQUIPMENT									I																			
FIELDING COMPLETED																					I							
IFSAS: FORMAL QUALIFICATION TEST					I																							
TAPE DELIVERY						I																						
IOT&E							I																					
PRODUCTION DESIGN								I																				
FIRST UNIT EQUIPMENT									I																			
FIELDING COMPLETED													I															

REQUIREMENTS DOCUMENT: ROC approved 12 Oct 90 (as part of Battery Computer Unit (BCU) ADA Conversion.

TYPE CLASSIFICATION:

FSAC WAS ESTABLISHED TO PROVIDE FOCAL POINTS FOR THE MANAGEMENT OF BCS AND MLRS FDS.

PM. FATDS

FORWARD ENTRY DEVICE (FED)

PROJECT OFFICER: LTC Wm. Sheaves, DSN 995-3366
COM 908/544-3366

PE & LINE #: 5213

DESCRIPTION: FED is a device that will be employed by Fire Support and Field Artillery Operational facilities for which the size and environment requirements command a small device with processing capabilities and low power requirements. The FED is comprised of a Simplified Handheld Terminal Unit (SHTU), (provided by PM Common Hardware/Software), and associated software package to compose, edit, transmit, receive, store and display messages used in the execution and planning of Fire Support operations. The FED will be used by the Field Artillery Forward Observers (FOs) in Light and Heavy Division. FED will be used by Fire Support Team (FIST) Headquarters, Bn/Bde Fire Support Officers (FSO), Battery Commanders, and Meteorological and Survey Sections in Light Infantry, Airborne, and Air Assault Division. In Heavy Artillery Units, the FED will be used by Forward Observers, Company and Aerial FSOs, Firing Battery Commanders, and Meteorological Survey Sections. The FEDs will replace Digital Communications Terminals which are in two Light Divisions and the Digital Message Devices in the Heavy divisions.

HISTORICAL BACKGROUND:

Feb 90 - Preliminary Formal Test.
Apr 90 - Final Formal Test.
Jun 90 - Initial Formal Qualification Test.
Oct 90 - Final Formal Qualification Test.
Nov 90 - Hardware Qualification Test.
Dec 90 - Follow on Test and Evaluation.
Mar 91 - Approval Milestone III; Initial production awarded.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
SOFTWARE SUPPORT									1																			
PRODUCTION DELIVERY OF SHTU	1																											
FUE					1																							
IOC					1																							
FIELDING	1																								1			

REQUIREMENTS DOCUMENT: Quantitative Materiel Requirement - TACFIRE, 1966; Army Tactical Command and Control Systems (R/W), 1986; Draft Annex E Fire Support ROC to ATCCS (S/W), 1990.

TYPE CLASSIFICATION: Standard, Mar 91.

FED WILL BE EMPLOYED TO COMPOSE, EDIT, TRANSMIT, RECEIVE, STORE AND DISPLAY MESSAGES USED IN THE EXECUTION AND PLANNING OF FIRE SUPPORT OPERATIONS AT MANEUVER PLATOON, COMPANY, BATTALION AND BRIGADE LEVELS.

PL: 0000

LIGHTWEIGHT TACTICAL FIRE DIRECTION SYSTEM (LTACFIRE)

PROJECT OFFICER: LTC Wm. Sheaves, DSN 995-3366
COM 908/544-3366

PE & LINE #: 5212

DESCRIPTION: LTACFIRE is designed to provide a lightweight transportable and user friendly automated fire support system, for use within the light infantry divisions (LID). A prototype system was fielded to the 9th Infantry Division at Ft Lewis, WA in 1985 under the experimental test bed concept. Fielding to the seven LIDs began in Sep 90 and was completed Jan 92. LTACFIRE provides the Division Artillery (DIVARTY) of the light division a fully automated means to plan, control and execute fires of both field artillery and mortars utilizing computer terminals, located at artillery battalion, DIVARTY, and Division Fire Support Element and Brigade FSE nodes. Communications between nodes and with a variety of interfacing devices is accomplished via communications means already available to the light infantry division. LTACFIRE functions are designed to automate the current manual techniques used in the light infantry's artillery battalions and DIVARTY. These include non-nuclear fire planning; tactical fire control; ammunition and fire unit data; meteorological data, artillery target intelligence and support/geometry information.

HISTORICAL BACKGROUND:

Oct 82 - Quick Reaction Program, QRP-2-32.
Oct 83 - LTACFIRE contract awarded to Litton Data Systems.
Apr 87 - OT at Fort Lewis, WA.
Jun 87 - OTEA FOT&E Report to HQDA.
Jul 87 - Post Deployment Software Support (PDSS) contract awarded to Litton Data Systems.
Aug 87 - HQDA conducted independent reviews of AFATDS and LTACFIRE and recommended to Undersecretary of the Army early fielding of AFATDS to LT Divs in FY90.
Oct 87 - Road and Safety test completed.
Nov 87 - EMI testing completed.
Dec 87 - Congress mandated obligation of FY86 OPA funds for procurement of LTACFIRE for the LT Divisions; Proof of Principle on LTDIVARTY concept conducted at Fort Lewis, WA.
Mar 88 - Letter contract awarded to Litton Data Systems.
Jan 89 - Letter contract definitized.
Apr 89 - IK&P contract awarded.
Jun 89 - PDSS Modification awarded (V9).
Jan 90 - Rail test.
Apr 90 - System support contract awarded.
May 90 - Additional hardware buy awarded.
Jun 90 - Conditional material release.
Sep 90 - FUE.
Nov 90 - Marine Corps contract modification - Desert Storm.
Jan 91 - Version 9.36 SN release approved.
Sep 91 - Small Unit Support Vehicle testing; Keyboard ECP awarded.
Jan 92 - Last unit equipped.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
PDSS																												
IOC																												
FIELDINGS																												
TRANSITION TO CECOM																												

REQUIREMENTS DOCUMENT: QRP-2-32, Dec 87, HQDA directed the procurement of seven light divisions worth of LTACFIRE using FY86 funds.

TYPE CLASSIFICATION: Type classification requirement waived.

LTACFIRE IS DESIGNED TO PROVIDE A LIGHTWEIGHT TRANSPORTABLE AND USER FRIENDLY AUTOMATED FIRE SUPPORT SYSTEM FOR USE WITHIN THE LIGHT INFANTRY DIVISION.

PM OPTADS

TACTICAL COMPUTER PROCESSOR (TCP) - NDI
ANALYST CONSOLE (AC)
MANEUVER CONTROL SYSTEM (MCS)

PROJECT OFFICER: Mr. Salvatore LaForgia, DSN 992-2970
 COMH 908/532-2970

PE & LINE #: 18423740.D484 **SSN:** BA-9300

DESCRIPTION: MCS is a collection of computer equipment which supports operations planning and control at one of the five nodal points (Maneuver Control) of the Army Command and Control System (ACCS). It is designed to assist the commander and his staff by providing information on his own forces, enemy forces and the battlefield characteristics. MCS provides this battlefield information by collecting, processing, and displaying data generated within the air/land combat environment. Using the features of this system the commander can improve the timeliness of his decisions and allocation of his resources.

MCS currently consists of Tactical Computer Processors and Analyst Consoles. The Tactical Computer Processor, AN/UYQ-43(V)1, is a micro-processor based portable system which provides automated assistance to the maneuver commanders. The Analyst Console, AN/UYQ-43(V)2 is a micro-processor based intelligent terminal, connected to the TCP via Local Network, which provides multiple workstations within a nodal configuration. MCS takes advantage of commercial state-of-the-art technology by more readily fielding the commercial hardware NDI.

MCS will transition to the digital computer system acquired by PM CHS for the Army Tactical Command and Control System (ATCCS) starting in 1994.

HISTORICAL BACKGROUND:

Jul 82 - O&O Plan (TCT & NDI); ROC approved (TCT & NDI).
 Jun 87 - Awarded NDI contract.
 Jul 87 - Awarded system engineering and integration contract (MCS). Full Production (TCT).
 Oct 87 - Awarded MCS software contract.
 Jan 88 - Updated ROC.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				1				1				1				1				1			
FIELD NDI																												
EARLY USER TEST AND EXPERIMENTATION																												
AWARD SM/SEI CONTRACT																												
IOT&E																												
ASARC III																												
FIRST MCS CHS PRODUCTION BUY																												
FIELD CHS																												

REQUIREMENTS DOCUMENT: ROC approved, Jul 82; ROC update, Jun 88.

TYPE CLASSIFICATION: TCT, AN/UYQ-43(V)1 and AC, AN/UYQ-43(V)2, Standard, ASARC-III, May 83; TCT, AN/UYQ-30A, Standard, VCSA guidance, Feb 86; TCP, AN/UYQ-43(V)1 and AC, AN/UYQ-43(V)2, Standard, IPR Jun 86.

MCS IS AN AUTOMATED COMMAND AND CONTROL SYSTEM.

PM ADDS

PH, ADDS

AN/TSD-129, POSITION LOCATION REPORTING SYSTEM (PLRS)

PROJECT OFFICER: MAJ P. A. Young, DSN 995-2852
COM 908/544-2852

PE & LINE #: 1X464727.DC98 T12C00011601

DESCRIPTION: PLRS provides automatic position reporting in a division's area of responsibility. The system employs a Master Station and an Alternate Master Station for 100% backup to insure system survivability and continuity of operations during displacements. The air transportable master station provides computer controlled network management and continuously updates the position of deployed User Units in manpack, vehicle, and airborne configurations. PLRS direct support maintenance will be aided through the use of special TMDE - the PLRS Test Set. PLRS equipped units can obtain their own position, range and bearing to other units or locations; location of other units, aircraft corridor guidance, an alarm when entering a pre-designated restricted area such as a minefield, and free format abbreviated data message from other users. The system is crypto-secure and is highly resistant to jamming. The network, under Master Station management, automatically utilizes surface airborne User Units as integral relays to achieve over-the-horizon transmission and to overcome close-in terrain obstructions to line-of-site communications.

HISTORICAL BACKGROUND: PLRS IS A USMC PROGRAM MANAGED BY PH, ADDS.

Jun 73-Jun 76 - Advanced Development Contract.
Aug 76-Aug 80 - Full Scale Development Contract.
Jul 82 - ASARC-III, Marine Corps approved PLRS for production.
Jul 83-Jul 86 - Multi-year Production Contract Award to HAC.
Jun 87 - PTS Production Contract Award.
Mar 88 - FOT&E.
Oct 88 - IOC, II MEF, Camp LeJeune, NC.
May 90 - PLRS Follow-on Buy Contract awarded to Hughes Aircraft Company (HAC).
Dec 90 - PLRS Production Hardware Delivery to USMC completed. EPUU common module delivery to Army is continuing.
Feb 91 - Fault Assist Module (FAM) Kit contract awarded to Hughes Aircraft Company (HAC).
Sep 91 - PLRS Communications Enhancement (PCE) contract awarded to HAC.

REQUIREMENTS DOCUMENT: Joint Service Operational Requirement (JSOR) approved, 1976; JSOR update, May 83.
USMC required operational capability for PLRS improvement program, 11 Jan 91.

TYPE CLASSIFICATION: Standard A as of 1 Sep 82 ASARC-III. To date 98% of NSNs have been received. All development line items numbers (ZLIN) have been converted to standard line item numbers.

PLRS PROVIDES TIMELY AND ACCURATE THREE DIMENSIONAL POSITIONING, LOCATION, AND REPORTING INFORMATION IN SUPPORT OF TACTICAL COMMANDERS.

POSITION LOCATION REPORTING SYSTEM (EPLRS)

PROJECT NUMBER: LTC C.F. Fornecker, DSN 985-3606
COM 908/544-3606

PE & LINE #: 63713.D370 BU1400

DESCRIPTION: EPLRS; 1) Net Control Station EPLRS (NCS-E) AN/TSQ-158; 2) EPLRS Radio Set AN/VSQ(V)X (Multiple Versions); 3) EPLRS Grid Reference Unit (EGRU) AN/GRC-XXX (Multiple Versions). EPLRS is a Pre-Planned Product Improvement (P3I) of the USMC Position Location Reporting System. It provides secure, jam-resistant, near real time data communications support for the five Battlefield Functional Areas of the Army Tactical Command and Control System (ATCCS). EPLRS is a Time Division Multiple Access system using a frequency hopping, spread spectrum waveform in the UHF band. It incorporates internal COMSEC devices of the Thoron family & has an Over The Air Rekeying capability. EPLRS will use both the Army Data Distribution System version of the X.25 CCITT and MIL-STD-1553B protocols to interface with ATCCS and selected weapons systems like the ABRAMS tank and the UH 60 MEDEVAC helicopter. Additionally, EPLRS provides position location and reporting information to both the user and to their their equipped higher HQ. This information will greatly enhance the command and control of tactical units by providing commanders with the location of friendly units, a dynamic representation of the Forward Line of Troops and abbreviated SITREPs for conditions and identification of adjacent equipped units. The major components of EPLRS are the Net Control Station-EPLRS (NCS-E), EPLRS Radio Set with its user input/output devices, and the EPLRS Grid Reference Unit (EGRU). A typical army division will have 3-4 NCS-Es, 500-550 EPLRS Radio Sets, and 12 EGRUs. EPLRS must be employed as a total system where NCS-Es control communities of EPLRS radio sets, EGRUs help with position location function and relaying of messages, and EPLRS Radio Sets originate, relay or receive messages.

HISTORICAL BACKGROUND: EPLRS concept was defined to be a 5 phased approach from system definition to engineering design model development and testing. Technology insertions would be incorporated as part of the P3I process. Key dates indicating completion of this concept are annotated below:

Sep 78-System Definition Contract Award to HAC.
Jun 80-EPLRS Testbed & Feasibility Award to HAC & Singer.
Mar 82-Phase 3/4 EPLRS Design & Integration award to HAC.
Apr 85-Phase 5 contract award to HAC.
Sep 86-POC approved.
Oct 86-ORO Plan revised.
Feb 88-P3I Phase A contract awarded to HAC.
May 88-Technical Test II. This effort tested the Phase 5 units for system compliance and was completed in Apr 89. Results indicated that additional engineering and testing efforts were required.

Jun 88-P3I Phase B contract awarded to HAC.
Jan 90-P3I Phase C (LRIP) contract awarded to HAC.
Feb 90-Intercommunity Needline Demonstration. First of two Government witnessed field trials to show successful resolution of problems identified in Techn Test II.
May 90-Production System Verification. Second of two Government witnessed field trials to show successful resolution of problems identified in Techn Test II.
Jul 90-LRIP Option 1 awarded to provide Test Hardware for TT/OT.
Jan 92-LRIP Option 2 awarded for corps level ATCCS testing.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				1				1				1				1				1			
TECHNICAL TEST III																												
OPERATIONAL TEST																												
FIRST UNIT EQUIPPED CONDITIONAL																												
MILESTONE III (OAB)																												
INITIAL OPERATIONAL CAPABILITY																												

REQUIREMENT DOCUMENTS: PLRS Joint Hybrid (EPLRS and JTIDS) Letter of Agreement approved, Jun 82; ORO approved, Oct 86; ROC approved, Oct 86.

TYPE CLASSIFICATION: A for production standard will result from the MS III Decision in 4QFY94.

EPLRS PROVIDES POSITION LOCATION AND SECURE, JAM-RESISTANT COMMUNICATIONS SUPPORT FOR THE FIVE BFAs OF ATCCS.

PH. ADDS

JOINT TACTICAL INFORMATION DISTRIBUTION SYSTEM (JTIDS)

PROJECT OFFICER: MAJ Edward Siomacco, DPM, DSN 995-4362
COMH 908/544-4362

PE & LINE #: 63713.D370 BU1400

DESCRIPTION: Army JTIDS Class 2M Terminal will provide jam resistant, secure data communications to high volume users specifically the Forward Area Air Defense Command & Control System (FAADC2) and HINAD. The joint nature of JTIDS system ensures interoperability between all services and provides a communications network to rapidly pass air battle information to the commander from multiple service sources. Allied interest in JTIDS will enhance interoperability with NATO Forces. Class 2M Terminal is an improvement of the Air Force Class 2 Terminal designed for aircraft & ground shelters. Class 2M is smaller, cost effective, designed for FAADC2, more reliable, and has unique Army capabilities such as 28VDC, vehicle operation improved portability, and improved soldier interface. In addition to the basic Class 2M Terminal, the Army JTIDS program consists of Dedicated JTIDS Relay Units (DJRU's), and Net Control Station - JTIDS (NCS-J). A typical division area may have 16 Class 2M Terminals. Of the 16 Class 2M Terminals three will serve as NCS-J/DJRU's and 5 will serve as DJRU's. Technically, the JTIDS is a Time Division Multiple Access system using a frequency hopping, spread spectrum waveform in the UHF band. It incorporates the Thornton family of COMSEC. The JTIDS interface with FAADC2 uses the ADDSI version of X.25 CCITT protocol.

HISTORICAL BACKGROUND:

Feb 85 - Award contract to Singer Kearfott for development of a downsized Class 2 terminal.
Oct 85 - DT/OT IIA started on Class 2 Terminals at Eglin.
Dec 85 - Award of Phase III contract to Singer Kearfott for development of Class 2 Ground Terminal.
Jun 86 - First ASIT fielded to 11th ADA Bde, Ft. Bliss, TX.
Nov 86 - Second ASIT fielded to 11th ADA Bde, Ft. Bliss, TX.
Jan 87 - DT completion.
Apr 87 - Third ASIT fielded to 3168th ADA, Ft. Bragg, NC.
Jan 88 - Fourth ASIT fielded to Ft Bliss, TX.
Feb 88 - First CL2M delivered.
Apr 88 - Awarded contract for 18 additional Class 2M Terminals.
Jun 89 - Awarded contract to Plessey Electronics System Corporation for EDM s/w for NCS-J/DJRU.
Jul 90 - Technical Test of the CL2M terminal successfully completed.
Aug 90 - Complete delivery of 24 Class 2M's.
Sep 90 - Complete delivery of 10 SICPs shelters/began integration efforts; CL2M check test/TAAF successfully completed.
Mar 91 - Technical test of the CL2M terminal completed.
Oct 91 - Started technical test of the NCS-J/DJRU.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
JTIDS BASELINE SCHEDULE	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
SYS TT/IOA (10/91 - 8/92)	110A 1																											
MILESTONE III																												
PRODUCTION																												

REQUIREMENTS DOCUMENT: JTIDS JOR approved, 23 Jan 81; JTIDS ROC approved, Sep 86.

TYPE CLASSIFICATION: Army Type Classification IPR for ASIT, held Mar 83. Limited Production (Urgent). Army Type Classification IPR for the CL 2M Terminal and the NCS-J/DJRU will be held in Sep 93.

JTIDS PROVIDES, AS A MAJOR COMPONENT OF THE ARMY DATA DISTRIBUTION SYSTEM HIGH CAPACITY SECURE, JAM-RESISTANT DIGITAL DATA COMMUNICATION.

PM MSE

PM, MSE

MOBILE SUBSCRIBER EQUIPMENT (MSE)

PROJECT OFFICER: COL David R. Gust, DSN 992-2524
COMM 908/532-2524

PE & LINE #: SSN: BB1610

DESCRIPTION: MSE will provide the tactical force with increased mobility and a discrete address capability to user. The functions of switching, radio trunking, communications security and system control will be integrated into one composite system, which will replace the existing command and area communications system in both the division and corps area of operation. The MSE system will provide users with a means of communicating throughout the battlefield, regardless of location, in either a static or mobile situation. The application of the system will significantly reduce the need to install great quantities of wire and cable when establishing command posts. It will have the capability of providing telephone-like, full-duplex operation for massed or dispersed command posts. The MSE system will consist of five major hardware functional elements: subscriber terminals, multiple subscriber access, wire subscriber access, area coverage and system control.

HISTORICAL BACKGROUND:

Oct 79 - Joint Operational Requirement approved.
Nov 83 - Under Secretary of the Army directed MSE be procured using a non-developmental acquisition approach.
May 83 - Acquisition Plan approved.
Sep 83 - Battlefield Communications Review determined MSE will be deployed throughout the Corps & Divisions of Army.
Sep 84 - Decision Review III.
Dec 85 - Contract award (Basic); Contract Award (1st option).
Feb 87 - Contract award (2nd option).
Oct 87 - TEMP approved.
Feb 88 - FUE completed.
Oct 88 - FOTE completed.
Dec 88 - Contract award (3rd option); Coorrective Action Plan (CAP) incorporated on GTE contract (P00059).
Mar 89 - Contract award (4th Option).
Nov 89 - TEMP approved.
Jan 90 - 50MHz Channel Spacing Contract Awarded. FOE FVT Test.
Feb 90 - Option for fielding to Echelons Above Core (EAC); Temp II approved.
Mar 90 - Contract awarded (5th option).
May 90 - Option 5 redistribution. CSN contract awarded; CNS contract awarded; CCP contract mod awarded.
Aug 90 - MSE support of Operation Desert Shield begins.
Sep 90 - Mobilize Regional Support Center in Saudi Arabia.
Oct 90 - First MSE equipped III Corps deployed to Southwest Asia Theatre of Operations; Dual LKG contract mod awarded.
Nov 90 - LCCP contract mod awarded; ADI contract mod awarded; VECF consolidated fielding contract mod awarded.
Dec 90 - VCSA, DA MSE Action Plan Review.
Jan 91 - Selected Acquisition Review.
Feb 91 - Packet switch interface mod awarded.
May 91 - TEMP III (Rev 1) approved by OSD.
Jul 91 - OY4 G.O. Review.
Dec 91 - MSE GOSC Review (Signal Architecture Review).

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
TRANSITION (Forecast)																												

REQUIREMENTS DOCUMENT: MSE Operational Capability document approved by HQDA, 24 May 84.

TYPE CLASSIFICATION: Standard, Nov 85.

MSE SYSTEM WILL INTEGRATE THE FUNCTIONS OF THE USER TERMINAL EQUIPMENT, SWITCHING, RADIO TRANSMISSION, COMMUNICATIONS SECURITY AND CONTROL INTO ONE COMPOSITE COMMUNICATIONS SYSTEM. WHEN FIELDIED, MSE WILL REPLACE THE EXISTING SWITCHING COMMUNICATIONS SYSTEMS IN THE CORPS AND DIVISION AREAS.

PM MSCS

PH. MSCS

AB-1309/TRC MAST

PROJECT OFFICER: Ms. Moreen Polo, DSN 992-3525
COMM 908/532-3525

PE & LINE #:

DESCRIPTION: AB-1309/TRC Mast is a highly mobile, collapsible tower which can erect up to three AS-1425 antennas at 120 feet. The mast telescopes down to a height of 23 feet and is lowered to the horizontal position for transit. It is mounted on a tandem axle trailer which also carries two MEP-003A 10 kw diesel generators. AB-1309/TRC and ancillary hardware are towed by a 5-ton truck that transports a DGM Shelter Assemblage. This mobile configuration unit is 8 feet wide, 8 feet high and 29 feet long. It can be transported by C-130 aircraft.

HISTORICAL BACKGROUND:

DT/OT Testing of Digital Transmission Assemblages in 1981 identified needs for: rapid antenna deployment and recovery; height of 34 meters; C-130 transportability; Modular Collective Protection Equipment (MCPE). AB-1309 was designed to satisfy the above "user" stated objectives. In 1986, the user community determined that the AB-1309 is not suitable as the primary antenna mast system for DGM assemblages, but is required as a stand alone antenna mast system.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				1				1				1				1				1			
TRANSITION																												

REQUIREMENTS DOCUMENT: MSG, HQDA, SAIS-PPS, 2019172 AUG 87, subject: AB-1309 requirement.

TYPE CLASSIFICATION: Limited Production, Urgent.

AB-1309/TRC MAST IS A HIGHLY MOBILE, COLLAPSIBLE TOWER WHICH CAN DEPLOY UP TO 3 AS-1425 SIZE ANTENNAS AND PROVIDES DGM SYSTEM POWER AND ANCILLARY ITEM TRANSPORT.

AN/GRC-222, RADIO TERMINAL

PROJECT OFFICER: Mr. Milan Schwartz, DSM 992-3525
COMN 908/532-3525

PE & LINE #:

DESCRIPTION: AN/GRC-222, operating in the 4.4 to 5.0 GHz frequency range, provides the Army with High Capacity Line-of-Sight (HI-CAP-LOS) and Short Range Wide Band Radio (SRWR) capabilities. These radios are deployed in the Radio Terminal Assemblage, AN/TRC-175 located in the switching node at the "Bottom-of-the-Hill" and Repeater Assemblage, AN/TRC-138A located in the radio park at the "Top-of-the-Hill". The HI-Cap-LOS radio mode accommodates one group in the ATACS or TRI-TAC hierarchies of up to 144 channels at a group rate of 1024, 1152, 1536, 2048, 2304, 4096, or 4608 kb/s. The SRWR mode of operation accommodates groups in the TRI-TAC hierarchy of up to 576 channels at master group rates of 9.36 or 18.72 Mb/s. The SRWR, is used to provide the link between a multichannel switching node and transmission facilities or "Top-of-the-Hill".

HISTORICAL BACKGROUND:

Mar 85 - Decision in coordination with Signal Center to replace AN/GRC-144(V)3 radio with NDI AN/GRC-222 radio.
Sep 86 - Contract awarded to Aydin Corporation for 733 radios, (\$33M).
Aug 87 - First Article Test (FAT).
Dec 88 - FAT completed.
Mar 90 - Successful Reforger.
Apr 90 - Final Logistics Support Concept (FLSC).
Aug 91 - FLSC non-institutional depot level training contract award.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
TRANSITION									1																			

REQUIREMENTS DOCUMENT: HQDA Letter Requirement for DGM Assemblages, 19 Mar 76.

TYPE CLASSIFICATION: IPR, Jul 81, STD A for end items AN/TRC-138A/175.

AN/GRC-222, OPERATING IN THE 4.4 TO 5.0 GHz FREQUENCY RANGE PROVIDES THE ARMY WITH HI-CAP-LOS AND SRWR CAPABILITIES AT ECHELONS ABOVE CORPS (EAC).

PH. MSCS

AN/TRC-138A/138B, RADIO SET

PROJECT OFFICER: Mr. Michael Hromoko, DSN 992-3525
COMM 908/532-3525

PE & LINE #: 1X428010.D111

DESCRIPTION: AN/TRC-138A/138B provides facilities terminating multichannel radio and cable groups, plus an AN/GRC-222 Short Range Wide Band Radio (SRMBR) for transmitting multiplexed groups from the radio park "top-of-the-hill" to the switching node "bottom-of-the-hill". It has the capability to terminate up to three systems and may be used for radio repeater, terminal, or SRMBR applications.

HISTORICAL BACKGROUND:

1980 - DT/OT-II.
1982 - Army initiated production effort with TOAD.
Feb 84 - TOAD First Article Tests (FAT), (mechanical, electrical) completed.
Jul 84 - ILS Support contract awarded.
Jun 86 - TOAD FAT (operational) completed.
Sep 86 - New assemblage ILS contract awarded to Laguna Industries.
Mar 87 - First units delivered to USAREUR.
Apr 87 - Units delivered to 67th Sig Bn for FOT&E.
Oct 87 - FOT&E completed. New Production contract awarded to Laguna Industries.
Aug 88 - Fieldings to USAREUR and CONUS Signal Units started.
Jul 89 - Awarded downsized Production contract to Laguna Industries.
Jul 90 - Downsized FAT completed.
Sep 90 - USAREUR fieldings completed.
Jul 91 - Materiel release (downsize) to EUSA.
Jan 92 - Downsize retrofit contract award.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
TRANSITION: FULLSIZE																												
DOWNSIZE																												

REQUIREMENTS DOCUMENT: HQDA Letter Requirement, 19 Mar 76.

TYPE CLASSIFICATION: Standard A, Jul 81, IPR.

AN/TRC-13A/138B RADIO SET PROVIDES FACILITIES FOR TERMINATING MULTICHANNEL RADIO/CABLE GROUPS FROM THE RADIO PARK "TOP-OF-THE-HILL" TO THE SWITCHING NODE "BOTTOM-OF-THE-HILL" FOR ECHELONS ABOVE CORPS SIGNAL UNITS.

AN/TRC-170(V)2 and (V)3 TRANSMITTER RADIO (TROPO)

PROJECT LEADER: Mr. George Mayer, DSN 982-3474
COMN 908/532-3474

PE & LINE #: 1X428010.D114

DESCRIPTION: Radio Terminal AN/TRC-170(V)2 and AN/TRC-170(V)3 are air and ground transportable TROPO microwave radio terminals. The terminals provide secure digital long haul radio trunking between major nodes of TRI-TAC/ATACS communication networks and interface with other TRI-TAC/ATACS systems, such as assemblages of Digital Group Multiplexing (DGM) equipment or various switching facilities. The terminals may be used in standalone applications as transmission links not associated with switching facilities. The terminals provide for the transmission and reception of digital voice and digital data over a nominal 150 mile path for the (V)2 radio (nominal 100 mile path for the (V)3 radio) by means of TROPO (they may also use in line-of-sight) propagation in the 4.4 GHz to 5.0 GHz frequency range. The terminals provide for throughout trunk group communications at switch selectable bit rates from 128 Kb/s to 4608 Kb/s, in addition to orderwire traffic.

CONSISTS OF:

- (V)2 - M923 5 ton truck carries S-280 shelter towing M1061E1 5 ton trailer w/two 30KW power units.
- M35A2 2-1/2 ton truck carries antennas on Low Profile Pallet towing M105AZ1-1/2 ton trailer with AN/GRC-193A radio.
- (V)3 - M35A2 2-1/2 ton truck carries S-250 shelter towing AN/MJQ-18 power plant with two 10KW power units.
- M1028 CUCV truck carries AN/GRC-193A radio towing 3/4 ton trailer with Quick Reaction Antenna (QRA).

USED WITH: TRI-TAC/ATACS systems.

REPLACES: AN/TRC-132, 132A, 112, 121 and 80.

HISTORICAL BACKGROUND: AIR FORCE IS THE LEAD SERVICE FOR THIS PROGRAM.

- Feb 75 - JOR SM 36-75.
- Jun 76 - A/F Research and Development (R&D) contract.
- Aug 80 - DT&E/10T&E.
- Apr 82 - A/F Production contract.
- Jan 83 - IPR TC LP.
- Apr 83 - First Army buy.
- May 85 - IPR TC, Standard.
- Jun 85 - Contract deliveries began.
- Dec 86 - Completed FOT&E.
- May 87 - Competitive contract awarded.
- Jul 87 - First materiel release.
- Sep 87 - First Unit Equipped (FUE).
- Mar 88 - Second materiel release.
- Nov 88 - Third materiel release.
- Dec 89 - Fourth materiel release.

REQUIREMENTS DOCUMENT: JOR SM86-75, 10 Feb 75.

TYPE CLASSIFICATION: Standard, 27 May 85 IPR.

TROPO PROVIDES SECURE TRANSMISSION AND RECEPTION OF TACTICAL MULTI-CHANNEL DIGITAL VOICE AND DATA BY MEANS OF TROPO MODE OF PROPAGATION IN THE 4.4 TO 5.0 GHz FREQUENCY BAND.

PH. MSCS

AN/TRC-173/A

PROJECT OFFICER: Mr. Michael Hronoko, DSN 992-3525
COMM 908/532-3525

PE & LINE #: 1X428010.D111

DESCRIPTION: AN/TRC-173/A is used as an extension terminal at major nodes to provide up to 36 channels of digital trunk communication. AN/TRC-173/A contains two complete communication systems housed in a shelter facility S-589()/TRC-173/A which is either a modified S-280C or a downsized S-280C shelter. AN/TRC-173/A is comprised of two radio sets, AN/GRC-103(V)4, portions of the Digital Group Multiplexer (DGM) family of equipment (MD-1206(P)/G, MD-1023(P)/G, MD-1065/G, TD-1234(P)/TTC, MD-1025/G and TD-1236/G), Orderwire Control C-10716/TRC and COMSEC equipment which includes the KY-57 VINSON, KG-94 Trunk Encryption Device and KY-68 DSVT. Each of the two communication systems in the AN/TRC-173/A is capable of full duplex operation (simultaneous send and receive). Under normal operating conditions, one system in the AN/TRC-173/A assemblage remains in standby condition in the event of malfunction. Radio set AN/GRC-103(V)4 is used for operation in line-of-sight applications and has a frequency range of 1350 to 1850 MHz with a transmission range of approximately thirty miles.

HISTORICAL BACKGROUND:

1980 - DT/OT-II.
1982 - Army initiated production efforts with TOAD.
Feb 84 - TOAD First Article Tests (FAT), (mechanical, electrical) completed.
Jul 84 - ILS Support contract awarded.
Aug 85 - New Production contract awarded to Laguna Industries Incorporated.
Jun 86 - TOAD FAT (operational) completed.
Sep 86 - New assemblage ILS contract awarded to Laguna Industries.
Feb 87 - Laguna Industries FAT completed.
Mar 87 - First units delivered to USAREUR.
Apr 87 - Units delivered to 67th Sig Bn for FOT&E.
Oct 87 - FOT&E completed; Award FY88 Production Option to Laguna Industries.
Aug 88 - Fieldings to USAREUR and COMUS Signal Units started.
Jul 89 - Awarded downsized Production contract to Laguna Industries.
Jul 90 - Downsized FAT completed.
Jul 91 - Materiel release (downsize) to EUSA.
Jan 92 - Downsize retrofit contract awarded.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				1				1				1				1				1			
TRANSITION: FULLSIZE																												
DOWNSIZE																												

REQUIREMENTS DOCUMENT: HQDA Letter Requirement, 19 Mar 76.

TYPE CLASSIFICATION: Standard A, Jul 81, IPR.

AN/TRC-173/A IS USED AS AN EXTENSION TERMINALS AT MAJOR NODES. CONTAINS TWO LIGHT-OF-SIGHT TRANSMISSIONS SYSTEMS FOR ECHELON ABOVE CORPS SIGNAL UNITS.

AN/TRC-174/A

PROJECT OFFICER: Mr. Michael Bronzko, DSN 982-3625
CGRN 908/532-3625

PE & LINE #: 1X428010.D111

DESCRIPTION: AN/TRC-174/A is used as an extension repeater at major nodes to provide up to 36 channels of digital trunk communications. AN/TRC-174/A contains three complete communications systems housed in Shelter Facility S-590()/TRC-174/A, which is either a modified S-280C or a downsized S-280C shelter. AN/TRC-174/A is comprised of three radio sets, the AN/GRC-103(V)4, portions of the Digital Group Multiplexer (DGM) family of equipment MD-1026(P)/G, MD-1023(P)/G and MD-1065/G, Orderwire Control C-10716/TRC and CONSEC equipment which includes the KY-57 VINSON and KY-68 DSVT. Each of the three communication systems in the AN/TRC-174/A is capable of full duplex operation (simultaneous send and receive). Under normal operating conditions, one system in the AN/TRC-174/A assemblage remains in standby condition in the event of malfunction. Radio set AN/GRC-103(V)4 is used for operation in line-of-sight applications and has a frequency range of 1,350 to 1,850 MHz with a transmission range of approximately thirty miles.

HISTORICAL BACKGROUND:

1980 - DT/OT-II.
1982 - Army initiated production efforts with TOAD.
Feb 84 - TOAD First Article Tests (FAT), (mechanical, electrical) complete.
Jul 84 - ILS Support contract signed.
Aug 85 - New Production contract awarded to Laguna Industries Incorporated.
Jun 86 - TOAD FAT (operational) completed.
Sep 86 - New Assemblies ILS contract awarded to Laguna Industries.
Feb 87 - Laguna Industries FAT completed.
Mar 87 - First units delivered to USAREUR.
Apr 87 - Units delivered to 67th Sig Bn for FOT&E.
Oct 87 - FOT&E Completed; FY88 Production Option awarded to Laguna Industries.
Aug 88 - Fieldings to USAREUR and COMUS Sigani Units started.
Aug 89 - Awarded downsized Production contract to Laguna Industries.
Jul 90 - Downsized FAT completed.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
TRANSITION: FULLSIZE DOWNSIZE																												

REQUIREMENTS DOCUMENT: HQDA Letter Requirement, 19 Mar 76.

TYPE CLASSIFICATION: Standard A, Jul 81 IPR.

AN/TRC-174/A IS USED AS AN EXTENSION REPEATER AT MAJOR NODES. CONTAINS THREE LINE-OF-SIGHT TRANSMISSION SYSTEMS FOR ECHOLON ABOVE CORPS (EAC) SIGNAL UNITS.

PH. NSCS

AN/TRC-175/A

PROJECT OFFICER: Mr. Michael Hromoko, DSN 992-3525
COMN 908/532-3525

PE & LINE #: X428010.D111

DESCRIPTION: AN/TRC-175/A is used at major switching nodes to transmit/receive trunk groups with the associated radio park. AN/TRC-175/A contains two complete communication systems housed in a shelter facility S-591()/TRC-175/A, which is either a modified S-280C or a downsized S-280C shelter. AN/TRC-175/A is comprised of two radio sets AN/GRC-222, portions of the DGM family of equipment (MD-1026(P)/G, MD-1024/G, TD-1237(P)/G), Order-wire Control C-10717/TRC and COMSEC equipment which includes the KY-57 VIRSON and KY-68 DSVT. Each of the two communication systems in the AN/TRC-175/A is capable of full duplex operation (simultaneous send and receive). Radio Set AN/GRC-222 is used as a radio link to the AN/TRC-138A/138B located at the radio park and has a frequency range of 4.4 to 5.0 GHz with a transmission range of approximately five miles for the 9.36 Mb/s data rates and 25 miles for the 18.72 Mb/s data rate.

HISTORICAL BACKGROUND:

- 80 - DT/OT-II.
- 82 - Army initiated production efforts with TOAD.
- Feb 84 - TOAD First Article Tests (FAT), (mechanical, electrical) completed.
- Jul 84 - ILS support contract awarded.
- Jun 86 - TOAD FAT (operational) completed.
- Sep 86 - New assemblage ILS contract awarded to Laguna Industries.
- Mar 87 - First units delivered to USAREUR.
- Apr 87 - Units delivered to 67th Sig Bn for FOT&E.
- Aug 87 - New Production contract awarded to Laguna Industries.
- Oct 87 - FOT&E completed; FY88 Production Option awarded to Laguna Industries.
- Aug 88 - Fieldings to USAREUR and COMUS Signal Units started.
- Jul 89 - Awarded downsized Production contract to Laguna Industries.
- Jul 90 - Downsized FAT completed.
- Oct 90 - First Unit Equipped 151st Sig Bn.
- Jul 91 - Materiel release (downsize) to EUSA.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				1				1				1				1				1			
TRANSITION: FULLSIZE																												
DOWNSIZE																												

REQUIREMENTS DOCUMENT: HQDA Letter Requirement, 19 Mar 76.

TYPE CLASSIFICATION: Standard A, Jul 81 IPR.

AN/TRC-175/A IS A BOTTOM-OF-THE-HILL RADIO TERMINAL UTILIZED AT RADIO PARK TO TRANSMIT/RECEIVE TRUNK GROUPS. CONTAINS TWO LINE-OF-SIGHT TRANSMISSION SYSTEMS FOR ECHELON ABOVE CORPS SIGNAL UNITS.

AN/TTC-39, AN/TTC-39A, AN/TTC-39D, CIRCUIT SWITCH

PROJECT OFFICER: Mr. Thomas Smith, DSN 992-1849
COM 908/532-1849

PE & LINE #: 1X428010.0107

DESCRIPTION: AN/TTC-39 Circuit Switch is a mobile, automatic, modular electronic circuit switch under processor control with integral CONSEC and multiplex equipment. It is compatible with the DCS and the tactical communications systems of the services. AN/TTC-39 interfaces with the NATO Integrated Communications System and Allied Organic Combat Communications Systems. AN/TTC-39 is configured in a single shelter 300 line version or a dual shelter 600 line configuration. It AN/TTC-39 handles secure and non-secure voice and data traffic and provides precedence, preemption, conference and a variety of other features. AN/TTC-39A adds nodal control to the circuit switch by incorporating the minimum essential control functions from the AN/TSQ-11. This is made possible by the replacement of the current processor with a state-of-the-art emulator. AN/TTC-39D is an all digital configuration providing service for 708 terminations. It provides flood search routing capability using the MSE routing subsystem, interface capability for the MSE RAW, and analog capability using the Digital Line Termination Unit (DLTU).

HISTORICAL BACKGROUND:

Jun 80 - ASARC-III A.
Jul 80 - DSARC-III A.
Sep 80 - Production contract awarded.
Sep 83 - First Unit Equipped.
Feb 84 - Program IOC achieved (JCSE).
Aug 84 - AN/TTC-39A development contract and retrofit contract awarded.
Jun 87 - AP approved for AF follow-on by of AN/TTC-39A's.
Sep 87 - AN/TTC-39D modification awarded (3 switches).
Sep 89 - AN/TTC-39D production option award (23 kits).
Sep 90 - AN/TTC-39D production option award (11 kits).
Feb 92 - AN/TTC-39D production option award (12 kits).

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				2				3				4				1				2			
PRODUCTION CONTRACT AN/TTC-39D	1																											
TRANSITION									1																			

REQUIREMENTS DOCUMENT:

TYPE CLASSIFICATION: ASARC-III, Jun 80, Standard.

AN/TTC-39 IS A MOBILE, AUTOMATIC, MODULAR ELECTRONIC CIRCUIT SWITCH UNDER PROCESSOR CONTROL WITH INTEGRAL CONSEC AND MULTIPLEX EQUIPMENT. AN/TTC-39A PRODUCTION IMPROVEMENT ADDS NODAL CONTROL CAPABILITY TO THE CIRCUIT SWITCH. AN/TTC-39D PRODUCT IMPROVEMENT ADDS MSE FLOOD SEARCH CAPABILITY TO THE CIRCUIT SWITCH.

PM. NSCS

AN/TTC-49, TACTICAL HYBRID SWITCH (THS)

PROJECT OFFICER: Mr. Ronald Testa, DSN 982-3658
COMN 908/532-3658

PE & LINE #:

DESCRIPTION: THS is a nondevelopmental item that draws upon the SB-3614A(V)/TT and the MSE Small Extension Mode Switch (SENS) programs. It provides a 60 line analog switch assembly housed in an extended S-250 shelter that can be transported on an M-1028 Commercial Utility Cargo Vehicle and powered by a PU-753 10 kw trailer mounted diesel generator set. The shelter assembly will include the mechanical and electrical facilities required to allow upgrade to SENS configuration by component insertion (DGM, COMSEC, digital cards, etc.). The switchboard used in the THS can be converted to the MSE switchboard configuration by changing the card population. THS uses the Terminal Control Device of the SB-3614A(V)/TT for creating and maintaining the switchboard's data base. THS also includes a dismount kit that will provide a capability for remote stand-alone operation of one of the switchboards.

HISTORICAL BACKGROUND:

Feb 86 - US of Army directs procurement of a switch capable of being upgraded to a SENS.
May 86 - J&A for sole source procurement submitted to AMC.
Jun 86 - Acquisition Plan approved.
Aug 86 - Type Classification IPR.
Nov 86 - Production contract award.
Jun 88 - Start of hardware delivery.
Mar 89 - Full Materiel Release.
Mar-Jun 89 - Handoffs to Ft. Drum, Ft. Polk, & Ft. Riley.
Jun 89 - Upgrade contract awarded.
Jan 90 - Turn-in at Ft. Polk with arrival of MSE.
Jul 91 - Second turn-in for Ft Drum.
Jan 92 - Acceptance for upgraded AN/TTC-49's to SENS.

REQUIREMENTS DOCUMENT: Qualitative Material Requirement for Automatic Electronic Switching Systems, Nov 72.

TYPE CLASSIFICATION: Standard.

AN/TTC-49, THIS PROVIDES A 60 LINE ANALOG SWITCH ASSEMBLY HOUSED IN AN EXTENDED S-250 SHELTER THAT CAN BE TRANSPORTED ON AN M-1028.

AN/TYC-39 MESSAGE SWITCH

PROJECT OFFICER: Mr. James Briganca, DSN 982-2678
COM 908/532-2678

PE & LINE #: 1X420010.D222

DESCRIPTION: AN/TYC-39 Message Switch is a mobile, automatic, modular, electronic store and forward switch under processor control with integral COMSEC and multiplex equipment. It is compatible with the Defense Communications System Automatic Digital Network. The message switch will operate independently or jointly with the AN/TYC-39A Circuit Switch. The message switch accepts, processes, stores, delivers and accounts for message traffic by utilizing the store and forward central processor, appropriate software programs and memory storage. The three prime capabilities of the message switch are the maintenance of security, message accountability and verifying character/bit integrity of all message traffic. Provisions are also made for 4 day journal storage, control of message orbiting, six levels of precedence and continuous monitoring. AN/TYC-39A provides the field user significant security, throughput, and reliability enhancements.

HISTORICAL BACKGROUND:

- 71 - JCS Memorandum 407-71 established requirements.
- Apr 74 - Full Scale Engineering Development contract awarded.
- Sep 80 - Production contract awarded.
- Dec 82 - First system delivery.
- Feb 85 - Delivery of last production AN/TYC-39.
- Mar 91 - Production contract awarded for Materiel Change (9 kits).
- Jan 92 - Production option awarded for Materiel Change (7 kits).

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				1				1				1				1				1			
PRODUCTION OF RETROFIT KITS																												
MATERIEL RELEASE																												

REQUIREMENTS DOCUMENT: JCS Memorandum 407-71 established requirements.

TYPE CLASSIFICATION: ASARC-III, Apr 80, Standard.

AN/TYC-39 IS A MOBILE, AUTOMATIC, MODULAR, ELECTRONIC STORE AND FORWARD MESSAGE SWITCH UNDER PROCESSOR CONTROL WITH INTEGRAL COMSEC AND MULTIPLEX EQUIPMENT.

PH. NSCS

AN/TYQ-30(V)1, AN/TYQ-30(V)2, AN/TYQ-31,
COMMUNICATION SYSTEM CONTROL ELEMENT (CSCE)

PRODUCT MANAGER: LTC G.L. Langbein, DSN 992-3110
COMN 908/532-3110

PE & LINE #: 1X428010.D107

DESCRIPTION: CSCE is the principal element of the system management and control hierarchy for the tactical switched network in Echelons Above Corps. The CSCE is a hierarchical system that includes the following three components: (1) AN/TYQ-30(V)1 used by Signal Battalions; (2) AN/TYQ-30(V)2 used by Signal Battalions; (3) AN/TYQ-31 Nodal Processor used by Signal Companies. It will exercise near real time control over the allocation and use of resources within its assigned portion of the deployed tactical communications network. CSCE is an evolutionary program. The software is segmented into discrete and demonstrable "phases". The hardware is an MDI procurement. Software incorporates "off-the-shelf" software (e.g., VMS, ORACLE, PASSPORT, GRAPHICS, AFES) as well as new software written in HOLS (ADA, FORTRAN). Hardware is Microvax based with GFE inventory equipments (e.g., DSVTs, DSDIs, DGH).

HISTORICAL BACKGROUND:

Jan/Jun 80 - General Officer In Process Review (IPR).
Feb 83 - Air Force transfers program to Army.
Apr 83 - Software development began.
Sep 84 - Build I hardware delivered.
Feb 87 - Production Contract restarted, all protests denied.
Apr 87 - Phase IV software completed/SASC contract terminated.
Sep 87 - Awarded Follow-On software development contract to GTE.
May 88 - FAT completed.
Aug 89 - System requirements test completed.
May 90 - Basis Of Issue Plan (BOIP) waiver from HQ DA; Hardware Technical Manuals Verification.
Jun 90 - Test Evaluation Master Plan approved.
Aug 90 - User Test (UT) conducted.
Sep 90 - Letter of Authorization from HQ DA to field to Germany.
Feb 92 - Germany fielding completed.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				2				3				4				1				2			
TRANSITION TO CECOM							I																					

REQUIREMENTS DOCUMENT: Joint Service Operational Requirement (JSOR) Jul 1974. (SN 393-74).

TYPE CLASSIFICATION: Special IPR Nov 90, Standard.

CSCE IS THE PRINCIPAL ELEMENT OF SYSTEM MANAGEMENT AND CONTROL HIERARCHY FOR ECHELONS ABOVE CORPS COMMUNICATIONS SYSTEMS.

COMMUNICATIONS TERMINAL

PROJECT OFFICER: Mr. Jeff Brown, RSN 992-8888
Comm 988/532-5888

PE & LINE #: 1X428010.A1906028

DESCRIPTION: AN/UGC-144 is a formal record traffic communications terminal capable of storing, editing, displaying, transmitting, receiving and printing record traffic in the R (General Service) and Y (Intelligence) communities at all echelons of a tactical communications system. The equipment is user owned and operated.

HISTORICAL BACKGROUND:

Jan 80 - IPR/ASARC approved/validation.
Sep 80 - Responsibility for program transferred from PM, ATACS to PM, MSCS; Full Scale Development contract awarded.
Jul 85 - AN/UGC-137A(V)2 CDT conducted.
Dec 85 - Market Investigation.
Jan 86 - NDI approach approved.
Feb 86 - AN/UGC-137A(V)2 procurement action terminated.
Jul 86 - HQDA approval of NDI ROC.
Sep 86 - HQDA approval of Acquisition Plan.
Oct 86 - Milestone III IPR completed.
Apr 87 - Production contract awarded.
Jul 89 - 1st Option exercised; FAT completed.
Aug 89 - VECP 3-1/2 Floppy Tech approved.
Jun 90 - 1st fielding.
Jul 90 - Materiel release.
Oct 90 - VECP Auxiliary Storage Cassette approved.

REQUIREMENTS DOCUMENT: ROC approved, Jul 86.

TYPE CLASSIFICATION: Standard.

AN/UGC-144 COMMUNICATIONS TERMINAL IS A MODERN COMMUNICATIONS TERMINAL EMPLOYING SOLID STATE ELECTRONICS AND MICROPROCESSOR CONTROL OF FUNCTIONS.

PH. NSCS

AN/USC-43(V)2, ADVANCED NARROWBAND DIGITAL
VOICE TERMINAL (ANDVT) TACTICAL TERMINAL

PROJECT OFFICER: Mr. Ronald Testa, DSN 992-3658
COMN 908/532-3658

PE & LINE #: 5211.605042

DESCRIPTION: ANDVT will provide a narrowband, secure voice capability for tactical and strategic echelons. It will be used in a variety of locations ranging from fixed plant to vehicles. The ANDVT Tactical Terminal (TACTERM) will provide fixed and mobile forces with the capability of secure voice or data transmission via High Frequency (HF), Very High Frequency (VHF), Ultra High Frequency (UHF) radio satellite systems, wireline, or Net Radio Interfaces (NRI). The ANDVT is a TRI-TAC item of equipment and meets the interoperability requirements of STANAGs 4197, 4198 and 4291. The ANDVT TACTERM in its standard configuration consists of two equipments: a Basic Terminal Unit, CV-3591, (P)/U, and a COMSEC Module, KYV-5/TSEC, here after referred to as the BTU and CM respectively. A third equipment, the Interface Unit, J-3953 (includes cables and field mount) is used only when the ANDVT TACTERM directly replaces a KY-65 or for wireline applications. In other configurations, the BTU/CM assembly will directly replace a KY-75.

HISTORICAL BACKGROUND:

Sep 76-Oct 78 - Concept definition.
Oct 78-Jun 80 - Feasibility development.
Jun 80-Jun 83 - Full Scale Development.
Jun 83-Mar 84 - DT/OT II.
Jan 85 - Production RFP released.
Oct 85 - Army Production IPR.
Dec 85 - Letter contract award.
Mar 86 - MIPR to Navy - 1986 funds.
Jun 86 - Amended MIPR to Navy for additional equipment.
Feb 87 - MIPR to Navy - 1987 funds.
Sep 87 - Award of additional equipment plus CDRL's.
Apr 88 - FAT completed.
Aug 88 - FATR approved by Navy.
Oct 88 - TECOM IAR completed.
Aug 89 - TWIG.
May 90 - Materiel Fielding Plan (MFP).
Aug 90 - Interim conditional/fielding release approved by AMC.
Dec 90 - Fielding complete for Operation Desert Storm.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
TRANSITION																												

REQUIREMENTS DOCUMENT: JOR SN-869-76 validated, Oct 76.

TYPE CLASSIFICATION: Correspondence IPR, 17 Oct 85; Standard.

ANDVT TACTICAL TERMINAL WILL PROVIDE FIXED AND MOBILE FORCES WITH THE CAPABILITY OF SECURE VOICE OR DATA TRANSMISSION VIA HIGH FREQUENCY, VERY HIGH FREQUENCY (VHF) ULTRA HIGH FREQUENCY (UHF) RADIO SATELLITE SYSTEMS, WIRELINE, OR NET RADIO INTERFACES.

AN/UXC-7, JEROMEIGHT DIGITAL FACSIMILE (LDF)

PROJECT OFFICER: Mr. William Blair, DSN 992-3656
COM 908/532-3658

PE & LINE #: L67964

DESCRIPTION: AN/UXC-7 is a non-developmental item program and provides facsimile graphic/narrative traffic capability over digital switched voice and data networks, combat net radios and supplements the Single Subscriber Terminal and/or communications centers at maneuver elements from battalion through echelons above Corps. The LDF is capable of operating over voice bandwidth channels having error rates up to 1 in 1000. It is also capable of operating over tactical cable/wire systems through direct wireline interface and tactical switching systems. In all of the above the LDF is able to operate both with and without approved CONSEC appliques. NATO interoperability conforming to STANAG 5000 is provided. The 55 lb LDF is capable of transmitting/receiving handwritten/typewritten copy, sketches and overlays up to 8 1/2 by 14" in black and white format. The required on-the-air time is less than 15 seconds at 16 Kbps for an average 8 1/2 by 11" typewritten page.

HISTORICAL BACKGROUND:

- Feb 84 - Market survey completed.
- May 84 - Responsibility for program transferred from PM, ATACS to PM, MSCS.
- Jul 84 - Acquisition Plan approved; solicitation to industry.
- Aug 84 - Solicitation response received.
- Sep 84 - Technical Evaluation completed; Production Contract award held pending Congressional reprogramming of funds.
- Oct 84 - Production Contract award on hold pending resolution of protests.
- Mar 85 - Protest resolved. Production Contract awarded to Magnavox Advanced Products and System Company.
- May 86 - First Article Test completed/secure lighting modification implemented.
- Oct 87 - Acquisition Plan and Justification and Authorization documents approved for Follow-On contract.
- Sep 88 - Follow-on-buy AF and Navy.
- Jul 89 - Army deliveries on contract completed.
- Aug 89-Jun 91 - Options exercised.
- Dec 89 - Fielding to 97th and 7th Sig Bde.
- Apr 90 - Fielding to National Guard Bureau.
- Jun 91 - Contract modification for out-of-warranty, depot level repair.
- Jul 91 - Full materiel release.

REQUIREMENTS DOCUMENT: Joint Operational Requirement MJCS-26-84, 17 Feb 84.

TYPE CLASSIFICATION: Standard, 12 Sep 84.

AN/UXC-7 IS A TERMINAL FOR TRANSMISSION/RECEPTION OF FACSIMILE GRAPHIC/NARRATE TRAFFIC OVER DIGITAL SWITCHED VOICE AND DATA NETWORKS AND COMBAT NET RADIOS; AND SUPPLEMENTS SST'S AND/OR COMMUNICATIONS CENTERS.

PM, MSCS

DIGITAL GROUP MULTIPLEXER (DGM)

PROJECT OFFICER: Messrs. Frank Coluccio/Jon Vogel
DSN 992-3474, COMM 908/532-3474

PE & LINE #: 1X428010.D107

DESCRIPTION: DGM equipment consists of a family of digital multiplexers, cable drivers, group modems and pulse restorers for use as elements of the TRI-TAC system. The DGM family of equipment will be deployed in such TRI-TAC acquisitions as the Communications Modal Control Element, TROPO Radio, Unit Level Circuit Switch and will also be deployed as field exposed items. In addition, DGM equipment will be deployed in unique Army transmission assemblages. These assemblages are the Radio Terminal Set AN/TRC-173, Radio Terminal Set AN/TRC-175, Radio Repeater Set AN/TRC-174 and Radio Repeater Set AN/TRC-138A. DGM equipment will be provided as GFE to the TRI-TAC and Army assemblage acquisitions for integration into and delivery with these assemblages.

HISTORICAL BACKGROUND:

Dec 74 - JOR for DGM approved by Joint Chiefs.
May 75 - FSED contract awarded to Raytheon.
Mar 82 - 3-year multi-year production contract awarded to Raytheon.
Sep 83 - PY2 option Award.
Sep 84 - PY3 option Award.
Jun 85 - FY85 DGM Acquisition Plan approved.
Aug 85 - FY85 DGM delivery order placed with Raytheon.
Jun 86 - FY86/87 DGM Acquisition Plan approved.
Jul 87 - Competitive solicitation issued for 4 High Volume DGM units.
Aug 87 - Initial Army fieldings of DGM.
Aug 88 - FY88 contract award to Raytheon.
Apr 89 - Competitive contract award to Honeywell and subsequently transferred to Group Technology Corporation (GTC) for 4 High Volume units.
Aug 90 - ICS depot with Raytheon terminated.
Sep 90 - Options 1 and 2 award to Honeywell and subsequently transferred to GTC; Competitive award to United Telecontrol Electronics (UTE) for TD-1218.
Sep 91 - First Article Test (FAT) approved GTC; Option 3 award to GTC.
Dec 91 - FAT started at UTE.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
DELIVERIES	1																											
TRANSITION	TBD																											

REQUIREMENTS DOCUMENT: OSD Memorandum, JSOR, Dec 74.

TYPE CLASSIFICATION: IPR, Aug 1981, Standard.

DGM IS A FAMILY OF VARIOUS MULTIPLEXERS, MODEMS AND CABLE SYSTEM COMPONENTS THAT ARE DEPLOYED IN TRI-TAC EQUIPMENTS SUCH AS THE CNCE, TROPO, ULCS, TTC-39A AND ARMY TRANSMISSION ASSEMBLAGES.

EXECUTIVE

DIGITAL GROUP MULTIPLEXER ANTENNA MAST PROGRAM (DAMP)

PROJECT OFFICER: Ms. Mureen Polo, DSN 992-3525
COMN 906/532-3525

PE & LINE #:

DESCRIPTION: DAMP consists of up to three Quick Erect 30 Meter Manual Antenna Masts stowed in a transit frame and mounted on an M1061A1 trailer or on the bed of a 5-ton cargo truck. The configuration depends on the variant of the DGM system it supports. These masts will deploy antennas in support of the AN/TRC-173, AN/TRC-174, AN/TRC-175 and AN/TRC-138A. These systems will include two each MEP 003A Generators for system power.

HISTORICAL BACKGROUND:

- Jul 86 - Signal Center General Officer Meeting decided the AB-1309/TRC Antenna Mast would no longer be fielded with DGM assemblages but instead as an auxiliary mast system. The DGM Assemblage Mast Program will provide an objective antenna mast system for DGM assemblages.
- Oct 87 - A general officer meeting at Fort Monmouth, resulted in a decision to suspend the DAMP program pending further review of requirements by SIG CEN.
- Dec 88 - DA direction to proceed with 30M Mast Procurement.
- Jul 89 - RFP released.
- Oct 89 - Source Selection started.
- Feb 90 - Contract (basic) awarded.
- Oct 90 - First Article Test (FAT) started.
- Jan 91 - 1st option exercised.
- May 91 - FAT completed.
- Jan 92 - 2nd option exercised.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
FIRST UNIT EQUIPPED		1																										
TRANSITION																	1											

REQUIREMENTS DOCUMENT: DGM JSOR, Dec 74.

TYPE CLASSIFICATION: DGM, 1981, Standard.

DAMP PROVIDES ANTENNA MASTS, GENERATORS AND ANCILLARY ITEM TRANSPORT IN SUPPORT OF THE DGM ASSEMBLAGES.

PM, MSCS

FIBER OPTICS TRANSMISSION SYSTEM (FOTS)

PROJECT OFFICER: Messrs. Tom Muldowney/Jorge Tersey
DSN 992-3525, COMN 908/532-3525

PE & LINE #: 1E464701.D48736

DESCRIPTION: FOTS is designed to be a replacement for the CX-11230 Coaxial Cable. The FOTS LH is comprised of the following equipments: Fiber Optic Modem (FOM); Field Test Set (FTS); Fiber Optic Cable Assembly (FOCA), and Cable Repair Kit (CRK). The FOM is mounted on the shelter entrance panel and converts the electrical signal to an optical signal for transmission down the FOCA. The FTS is utilized to troubleshoot the cable system. The CRK permits repair and retermination of the FOCA in a sheltered environment. The FOCA is a two fiber cable assembly and is provided in 300 meter and 1 kilometer lengths. The FOCA is the standard tactical two fiber cable assembly used by all services. The performance requirement for the FOTS is eight kilometers without repeaters.

HISTORICAL BACKGROUND:

Jun 77 - Exploratory Development contract, AM/GAC-1.
Feb 79 - Special In-Process Review for entry into Full Scale Engineering Development.
Jul 82 - Contract award ITT Nutley, NJ, \$16.3M, (FSED).
May 84 - Program management transferred from PM, ATACS to PM, MSCS.
Jan 86 - DT-II/OT-II commenced.
Jul 86 - DT-II/OT-II completed.
Sep 87 - Contract award, FiberCom Inc, Roanoke, VA (FOM and FTS), DAAB07-87-C-J021 (Base and 1st opt).
Sep 88 - ECP Award and second option contract DAAB07-87-C-J021.
Mar 89 - Contract award, AT&T, (FOCA, CRK) DAAB07-89-C-J001.
Jul 90 - First Article Test (FAT) approved AT&T.
Sep 90 - 1st option awarded, contract DAAB07-89-C-J001.
Apr 91 - 2nd option awarded, contract DAAB07-89-C-J001.
Aug 91 - FAT approved, FiberCom, Inc.
Sep 91 - 3rd option awarded, contract DAAB07-89-C-J001 and DAAB07-87-C-J021; TWIG.
Feb 92 - New Equipment Training and Instructor Key Personnel.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
FIRST UNIT EQUIPPED				I																								
INITIAL OPERATIONS CAPABILITY				I																								
TRANSITION							I																					

REQUIREMENTS DOCUMENT: Approved Nov 81.

TYPE CLASSIFICATION: Aug 87.

FOTS IS A REPLACEMENT FOR CX-11230 TWIN COAXIAL CABLE AND OFFERS INCREASED BANDWIDTH, DECREASED DIAMETER AND WEIGHT, INCREASED FLEXIBILITY, EMP/RFI IMMUNITY AND LOWER COST.

INTEGRATED SYSTEM CONTROL (ISYSCON)

PROJECT MANAGER: LTC G.L. Langbein, DSN 992-3110
COM 908/532-3110

PE & LINE #: D107

DESCRIPTION: The Integrated System Control (ISYSCON) facility is used by Signal Commanders at Division through Theater. It provides automated assistance in managing and integrating the various communications systems in the tactical area of operations. It uses Army Command and Control System hardware, software, shelter and extension tents. Software will be developed in three discreet blocks using an Ada environment. ISYSCON supports the following five major functional areas: Battlefield Spectrum Management, Communications Security (COMSEC) Management, Network Planning and Engineering, Signal Command and Control and Wide Area Network (WAN) Management.

HISTORICAL BACKGROUND:

Nov 89 - O&O Plan approved.
Oct 90 - ROC approved.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98							
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
MILESTONE I/II DECISION	I																															
CONTRACT					I*								I**																			
TESTING													I_ I***																			
MILESTONE III DECISION													I*																			

* Basic Block I; ** Block II Option; *** IOT&E Block.

REQUIREMENTS DOCUMENT: A Required Operational Capability (ROC) was approved Oct 90.

TYPE CLASSIFICATION:

ISYSCON PROVIDES A SYSTEM TO TWO SIGNAL UNITS ENABLING THEM TO COORDINATE THE PLANNING AND EMPLOYMENT OF COMMUNICATIONS RESOURCES IN SUPPORT OF THE COMMANDER'S WARFIGHTING PLAN.

PH. MSGS

UNIT LEVEL DIGITAL SWITCH PROGRAM (ULDS)

PROJECT OFFICER: Mr. George Fitzpatrick, DSN 992-3658
COMH 908/532-3658

PE & LINE #:

DESCRIPTION: ULDS is to be deployed at Echelons Above Corps (EAC) units. The ULDS consists of an MSE Small Extension Mode Switch (SENS), AN/TTC-48 and MSE Large Extension Mode Switch (LENS), AN/TTC-46. The SENS will provide the primary means of telephone subscriber access into the EAC area system utilizing a 41-line automatic switchboard. The MSE SENS is housed in an extended S-250E shelter. It also provides a direct link between local subscribers as well as a manual interface to commercial telephone systems. The LENS will provide access for up to 176 subscribers into the EAC area system. It can also provide the flood search and automatic affiliation/disaffiliation capabilities. The EAC LENS will be housed in two assemblies, an S-250 Switching Group and an S-250E Operations Group.

HISTORICAL BACKGROUND:

Jun 87 - HQDA confirmed US of A's intent to procure the MSE SENS using the MSE contract.
Jul 87 - SDS Program cancelled.
Oct 87 - Independent Report issued affirming US of A's decision to procure SEN using MSE control.
Feb 87 - Acquisition plan approved by HQDA for TRI-TAC Block III.
Mar 89 - 202 SGMS, 4 LENS awarded on contract options.
Feb 90 - USAREUR fielding/training award.
Dec 90 - SENS fielded to 7th Sig Bde.
Dec 91 - SENS fielded to 304th Sig Bn and 67th Sig Bn.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
DELIVERY (MSE LENS)				1																								
FIELDING (MSE LENS)				1																								

REQUIREMENTS DOCUMENT: DA Message, 091129ZJUN87, TRI-TAC Block III Architecture.

TYPE CLASSIFICATION: Standard (MSE contract DAAB07-86-C-K022).

ULDS PROVIDES PRIMARY MEANS OF TELEPHONE SUBSCRIBER ACCESS INTO THE EAC AREA SYSTEM UTILIZING A 41-LINE AUTOMATIC SWITCHBOARD.

PM RN

PH. RN

REGENCY NET SYSTEM (RN)

PROJECT OFFICER: COL J.E. Fields, DSN 995-4011
COM 908/544-4011

PE & LINE #: BB-8422

DESCRIPTION: RN System is a Tri-Service System. A Non-Developmental Item acquisition that will provide the U.S. Commander in Chief, Europe with an independent, agile, survivable, fully supportable HF radio communications system with secure data and voice communications capable of operations in a wartime environment. The AN/TRC-179(V)1 (Force) Terminal is the primary element of the RN architecture and consists of an assemblage of HF Radio/Transmitter equipment, and computer hardware, modems, power supplies, CONSEC, I/O devices and environmental control units housed in a S-711/TRC-179(V) shelter. The AN/TRC-179(V)3 version is for split-site use by the Air Force and Navy. Additional major items comprising RN include the AN/GRC-215 (Team) Terminal, the Regency Net/Flaming Arrow Net (RN/FAN) Interface, Broadband Antenna AS-3904/G and the PU-794/G Generator Set. The Regency Net System will replace Cometary Net in Europe.

HISTORICAL BACKGROUND:

May 79 - ASDC3I expressed urgency of upgrade requirement for CINCEUR communication, directed upgrading, and assigned Army as Lead Service.
Jun 80 - PH, DCS (Army), now PH RN, assigned material development/acquisition task by Commander, AMC.
Mar 82 - ASDC3I msg. directed services to plan, program, and budget for acquisition of equipment to satisfy validated Requirements Document.
Sep 82 - OSD memo assigned F/AD1 to RN Project.
Apr 83 - JCS msg validated services terminal requirements for Europe and modified them by msg 121519Z May 83 (S).
Dec 83 - Competitive solicitation; awarded to Magnavox.
May 87 - PH RN assignment to PEO Communications Systems.
Jun 89 - Show Cause Letter issued to contractor for failure to meet deliveries.
Sep 89 - Contract Modification P00153, providing a resolution to the Government's Show Cause Letter of Jun 89, and revising contractors delivery schedule was signed.
Jan 90 - Training Materiel Release for Ft Gordon was approved and signed by DCG, CECOM.
Feb 90 - Final hand-off of all RN equipment and support packages to Ft Gordon completed.
Sep 90 - IOT&E completed.
Nov 91 - CONUS Limited User Test completed; Commence pre-positioning of assets.
Dec 91 - Decision from DISC4 to proceed to fielding without FOE.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
OPERATIONAL EXPERIMENT (LUT)																												
FUE																												
FIELDING RELEASE																												
IPR (TC-STD)																												
PRODUCTION DELIVERIES																												
FIELDING																												

REQUIREMENTS DOCUMENT: USCINCEUR RN Baseline Requirements Document approved by JCS 18 Feb 82.

TYPE CLASSIFICATION:

RN SYSTEM IS AN INDEPENDENT, AGILE, SURVIVABLE, FULLY SUPPORTABLE HF RADIO COMMUNICATION SYSTEM.

PM SATCOM

PH. SATCOM

AN/FQ-13, SMART MULTI-CIRCUIT TERMINAL (SMCT)

TECHNICAL LEADER: Mr. Robert Perle, DSN 992-3169
COMH 908/532-3169

PROJECT LEADER: Ms. Lita Murphy, DSN 992-4354
COMH 908/532-4354

PE & LINE #: 888509

DESCRIPTION: The SMCT is an automated system which provides consolidation of the numerous control/coordination teletype requirements of the Terrestrial Critical Control Circuit (TCCC) through termination of each circuit on a display keyboard terminal and printer. It provides reliable time tagged communications with message routing capabilities in a clear or encrypted environment. SMCT consists of the following major items: Central Processing Unit (2), Mass Memory (Disk) (2), Keyboard (2), Video Display Unit (4), and Printer.

HISTORICAL BACKGROUND:

- Sep 82 - Stanford Telecommunications, Inc. (STI) proposal to DCA for lease of initial version of SMCTs called MCNs.
- Apr 83 - Control program reoriented after briefing to MG Rockwell at DCSOPS (DA). Army to procure SMCT based on specifications.
- Jul 84 - SATCOMA requested User Test held at Ft. Detrick. SMCT Team Members witness tests.
- Feb 85 - DCA exercised option on MCN II lease to buy out equipment.
- May 85 - Implementation strategy of SMCT. Members were DA, SATCOM, and AMC. Recommendation was for DA to direct SATCOMA to NIPR \$6.3M to DCA with AMC concurrence.
- Jun 85 - AMC Msg 261900ZJUN85 to SATCOM directing \$6.3M be NIPR'D to DCA for procurement of SMCT.
- Jul 85 - ED contract awarded by DCA.
- Feb 86 - ED contract awarded by DCA for additional models.
- Sep 87 - Production contract awarded by DCA for four (4) SMCT.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
CONTRACT AWARD																												
PRODUCTION DELIVERY																												

REQUIREMENTS DOCUMENT: DSCS Program Plan FY86-90.

TYPE CLASSIFICATION: Waived, DA directed procurement.

SMCT IS A MICROPROCESSOR BASED SYSTEM USED TO PROVIDE FULL DUPLEX SECURE RESERVED COMMUNICATIONS BETWEEN ALL DCS ELEMENTS.

SCCE - Defense Satellite Communications System (DSCS)

PROJECT LEADER: Mr. Fred Schaefer, DSN 988-0338
COMN 988/532-0338

PE & LINE #: 000509

DESCRIPTION: SCCE primary function is to provide operational command and control of the Defense Satellite Communications System III (DSCS III) satellites to satisfy real time user requirements. It is capable of jammer detection, location and nulling. Using the telemetry tracking and command channel, the SCCEs generate commands and command sequences which reconfigures DSCS III satellite channels and antenna beam allocations, and control COMSEC equipment. The SCCEs will be linked with the DSCS III satellites by existing satellite earth terminals via a "SCCE - Earth Terminal interface."

HISTORICAL BACKGROUND:

Sep 82 - First production contract awarded for SN 4 and 5.
Sep 83 - Production contract awarded for SN 6 and 7.
Dec 83 - Option exercised for SN 8 and 9.
Dec 84 - SN4 Fielded at CP Roberts.
Feb 85 - SN5 fielded at Landstuhl.
Jul 85 - SN6 fielded at Fort Detrick.
Jun 87 - SN8 fielded at Fort Meade.
May 91 - SN7 fielded at Fort Detrick.
Dec 91 - Site preparation at Fort Buckner for SN9.

REQUIREMENTS DOCUMENT: Defense Satellite Communications System Program Plan as approved by Assistant Secretary of Defense (C3I).

TYPE CLASSIFICATION: Limited production, Mar 82.

PH. SATCOM

**AN/FSC-96 & AN/GSC-51, DEFENSE SATELLITE COMMUNICATIONS
SYSTEM FREQUENCY DIVISION MULTIPLE ACCESS CONTROL SUBSYSTEM
(DFCS)**

TECHNICAL LEADER: Mr. Robert Perle, DSN 992-3169
COMN 908-532-3169

PRODUCT MANAGER: Mr. Ronald Johnson, DSN 992-4354
COMN 908/532-4354

PE & LINE #: E7086

DESCRIPTION: DFCS controls transmit power of Defense Satellite Communications System (DSCS) carriers and monitors earth terminal and satellite network status and performance. The Network Terminal, (AN/GSC-51) is installed in strategic satellite communications terminals. The satellite network data collected from these stations is transmitted via a Satellite Control Circuit to one of the two Network Control Terminals (AN/FSC-96 or NCTs). Power Control Commands are calculated and transmitted to the Network Terminals for adjustment of Carrier Transmit Power. The Satellite Links within the DSCS are normally operated with a link margin of at least 6 db to accommodate uncontrollable signal transmission fades. The DFCS automatically detects and compensates for these transmission fades allowing the link margins to be reduced. This reduction in link margin allows channel capacity of the spacecraft to be significantly increased.

HISTORICAL BACKGROUND:

Aug 85 - Production contract award.
Jul 87 - DFCS deliveries began.
May 88 - DFCS installations at strategic locations began.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
IOC																												
TRANSITION																												

REQUIREMENTS DOCUMENT: DSCS FY85-89 Program Plan, Mar 83.

TYPE CLASSIFICATION: Standard, Feb 84.

DFCS IS A GROUND BASED SUBSYSTEM USED WITH EARTH TERMINAL EQUIPMENT FOR CONTROLLING TRANSMIT POWER OF DEFENSE SATELLITE COMMUNICATIONS SYSTEM CARRIERS AND FOR MONITORING EARTH STATION AND SATELLITE NETWORK STATUS AND PERFORMANCE.

DOSS/DASA 1 & 2 - 100-79-C-0019 DOSS/DASA 3 & 4 - 100-84-C-0019 DOSS/DASA 5 & 6 - 100-86-C-0076 DOSS/DASA 7 & 8 - 100-86-C-0076 DOSS/DASA 9 & 10 - 100-86-C-0076 DOSS/DASA 11 & 12 - 100-86-C-0076

TECHNICAL LEADER: Mr. David Morrissey, DSN 992-3169
COMN 908/532-3169

PRODUCT MANAGER: Mr. Ronald Johnson, DSN 992-4354
COMN 908/532-4354

PE & LINE #: B8509

DESCRIPTION: The DOSS provides computational support for the SATCOM Network Controller (and up to seven remote operators) to calculate DSCS reconfiguration parameters in response to changing user requirements, changing network status, or changing environmental conditions. Contained within the DOSS is the Resource Allocation Software (RAS) consisting of the computer software which provides algorithms to support DOSS reconfiguration capabilities. The DASA is designed for operation connected directly to the DOSS, as well as in a stand-alone mode, should this be required. The DASA provides control and data processing for an automatic spectrum analysis capability. DASA software accepts signal monitoring data from the Hewlett-Packard 8566B Spectrum Analyzer, computes various signal parameters based upon the current operational traffic configuration in the DOSS data base, and compares the measured values with the expected values generated by the DOSS Computer.

HISTORICAL BACKGROUND:

Feb 79 - DCA contract 100-79-C-0019 DOSS/DASA 1 and 2.
May 84 - DCA contract 100-84-C-0019 DOSS/DASA 3 and 4.
Aug 84 - DCA contract 100-84-C-0065 to upgrade existing DOSS/DASA systems.
Jul 86 - DCA Letter Contract 100-86-C-0076 for partial requirements (\$4.5M).
Mar 87 - DCA contract 100-86-C-0076 definitized (\$9M). DOSS/DASA 5 and 6.
Dec 87 - Awarded contract (option) for O&M services, DAAB07-87-C-0016.
Sep 88 - Awarded contract with FACC for DOSS/DASA 7 through 12, DAAB07-88-C-0061.

REQUIREMENTS DOCUMENT: Mar 84, DSCS Program Plan FY86-90.

TYPE CLASSIFICATION: Standard, Oct 87.

DOSS PROVIDES COMPUTATIONAL SUPPORT FOR THE SATCOM NETWORK CONTROLLER TO CALCULATE DSCS RECONFIGURATION PARAMETERS. DASA PROVIDES CONTROL AND DATA PROCESSING FOR AN AUTOMATIC SPECTRUM ANALYSIS CAPABILITY INTEGRATED WITHIN THE DOSS.

PH. SATCOM

AN/GSC-39(V), MEDIUM SATELLITE COMMUNICATIONS TERMINAL

PRODUCT MANAGER: Mr. William Anderson, DSN 992-0995
COMN 908/532-0995

PE & LINE #: SSN: BB8507

DESCRIPTION: AN/GSC-39(V) is a medium SHF satellite communications terminal which operates in the Defense Satellite Communications System (DSCS) under DCA operational control using Army, Navy and Air Force personnel as operators. These terminals configured in government furnished buildings to form fixed installations or in mobile electronics vans with one communications van and one transmit van per terminal. In addition, each mobile terminal will have separate maintenance and supply vans. When integrated with the OE-222/G Antenna Group, the fixed terminals will be identified as AN/GSC-39(V)1 Satellite Communications Terminals. These terminals are capable of communicating with Frequency Division Multiple Access, Spread Spectrum Multiple Access (SSMA), and Time Division Multiple Access (TDMA) Modulation Techniques.

HISTORICAL BACKGROUND:

70 - DEPSECDEF Memo initiated development.
70 - Engineering Development contract awarded.
72 - Engineering Development contract completed.
74 - DSCS Program Plan FY74-78.
Mar 77 - Type Classification.
Mar 78 - Production contract awarded.
Nov 80 - First Unit Equipped.
Dec 80 - Initial Operational Capability.
Aug 87 - System #21 was installed at Mahiawa, HA, as a contingency terminal during the AN/FSC-78 and AN/FSC-79 HEMP modifications.
May 89 - System #21 was de-installed at Mahiawa, HA.
Jun 89 - System #21 was shipped to Fort Buckner, Japan.
Jan 91 - Preliminary Transition Plan (to CECOM) approved. Final transition TBD.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				1				1				1				1				1			
TRANSITION	TBD																											

REQUIREMENTS DOCUMENT: DSCS Program Plan FY81-85.

TYPE CLASSIFICATION: Mar 77, Standard.

AN/GSC-39(V) IS A HIGH QUALITY EASILY TRANSPORTED MEDIUM SHF SATELLITE COMMUNICATION TERMINAL WHICH OPERATES IN THE DSCS.

PROJECT MANAGER: Mr. William Anderson, DSN 982-0995
COMN 908/532-0995

PE & LINE #: BA8300

DESCRIPTION: JRSC is an add-on to the Defense Satellite Communications System (DSCS) resulting from the Secretary of Defense requirement to improve WMCCS capability of jam resistant secure communications via satellite. JRSC consists of SHF Satellite Terminals packaged to satisfy JRSC peculiar requirements.

HISTORICAL BACKGROUND:

Sep 80 - Production contract award.
Mar 84 - First Unit Equipped.
Jun 84 - Initial Operational Capability.
Dec 86 - Last two terminals delivered.

REQUIREMENTS DOCUMENT: DCSC FY80-84 Program Plan.

TYPE CLASSIFICATION: Aug 80, Standard.

JRSC PROVIDES JAM RESISTANT, SECURE COMMUNICATIONS ADD-ON FOR WMCCS.

PH. SATCOM

AN/GSC-52(V). STATE-OF-THE-ART MEDIUM TERMINAL (SAMT)

PRODUCT MANAGER: Mr. Wm. Anderson, DSN 992-0995
COMN 908/532-0995

TECHNICAL LEADER: Mr. Burton Stein, DSN 992-2333
COMN 908/532-2333

PE & LINE #: BB8607

DESCRIPTION: SAMT is a high-capacity, medium sized SHF Satellite Communications Terminal designed to operate in the DSCS satellite network. The terminals will be operated by the various services under the operational control of DCA. This is a new system characterized by computer aided fault isolation, hierarchial control (remote console and external control possible) and automatic equipment switchover to redundant equipment with HEMP protection in vans or fixed site buildings. SAMT includes a 38 foot OE-371/G antenna.

HISTORICAL BACKGROUND:

Nov 80 - DSCS FY83-87 Program Plan establishes requirements for SAMT's.
Jan 81 - Program Plan approved by an Assistant Sec Def (ASD) memorandum.
May 81 - Industry Symposium held to incorporate latest technology in system concept.
Sep 82 - Production contract awarded.
Jul 85 - First Article Test passed.
Dec 85 - First Unit Equipped.
Jul 86 - MOA signed by USAISEC and USASATCOMA for installation of systems number 10 - 39.
Sep 86 - FOE.
Dec 86 - IOC.
Nov 87 - Completed installation at Ft. Belvoir, #1, 2, and 3.
Nov 88 - Last terminal #39 delivered. Production phase completed.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
FIELDINGS																												

REQUIREMENTS DOCUMENT: Defense Satellite Communications System (DSCS) FY83-87 Program Plan.

TYPE CLASSIFICATION: Aug 82, Standard.

SAMT IS A HIGH-CAPACITY MEDIUM SIZED SHF SATCOM TERMINAL TO OPERATE IN THE DSCS NETWORK.

PM SATCOM

AN/PSC-3 & AN/VSC-7, SINGLE CHANNEL UHF SYSTEM

TECH LEADER: Mr. William Wong, DSN 992-2128
COMH 908/532-2128

PRODUCT MANAGER: LTC Michael Mazzucchi DSN 992-0994
COMH 908/532-0994

PE & LINE #: 05087.05088

DESCRIPTION: Single Channel UHF Manpack System consists of two terminal configurations: AN/PSC-3 Manpack and AN/VSC-7 Vehicular Configurations. These terminals will provide a satellite communications capability primarily for Special Forces and Army Ranger Units for use in forward areas or behind enemy lines. AN/PSC-3 is a rugged, lightweight (less than 35 lbs including batteries and whip and medium gain antennas) portable device capable of being paged while in motion, providing positive visual and audible indications to the operator. AN/VSC-7 will serve as the net control station for up to 15 AN/PSC-3's and other AN/VSC-7's. The procurement strategy for DOD requirements of AN/PSC-3/VSC-7 quantities involves three production efforts. The third (final) Production contract was awarded Aug 86. PM SATCOM initiated a Materiel Change in order to enhance the basic terminals satellite communications capability by adding Embedded COMSEC Demand Assignment Multiple Access (DAMA), as well as, Over-The-Air-Rekey (OTAR).

HISTORICAL BACKGROUND:

May 79 - DEVA IPR.
Sep 81 - First Production contract award.
Jun 82 - Incorporation of 2.4 Kb's ECP.
Aug 84 - FOE completed.
Jan 85 - Second production contract award.
May 85 - First Unit Equipped/Initial Operational Capability; Moratorium imposed by Secretary Latham.
Jun 86 - ASD (C3I) moratorium restricting further procurement of manpack radios rescinded.
Aug 86 - Third Production contract award.
Oct 86 - CSA Inc. files protest on 6db and 8db antenna sole source solicitation to Dorne Margolin Inc.
Dec 86 - Total Package/Unit Materiel Fielding (TP/UMF) complete to WESTCOM.
Jan 87 - TP/UMF completed to 24th Sig Bn, Ft Stewart, GA.
Feb 87 - GAO denied the CSA protest.
May 87 - A sole source solicitation for the medium and high gain antennas was awarded to Dorne Margolin Corp.
Jun 87 - Exercise contract option to procure additional quantities; Retrofit basic configuration for enhancements to the A model.
Jul 87 - Provided 2 AN/PSC-3s and 4 Medium Gain Antennas to CDEC at Ft Lewis, and directed by DA to support HST-4A and LST-5 B testing.
Aug 87 - Exercise additional 12 month option to requirements contract.
Oct 90 - First Article Test for new replacement amplifier.
Dec 90 - New power amplifier approved by PM SATCOM.
Apr 91 - Last unit AN/PSC-3 delivered.
Jan 92 - Completed Materiel Change procurement data package for R&D contract.

REQUIREMENTS DOCUMENT: TACSATCOM QMR approved Nov 71.

TYPE CLASSIFICATION: Standard, Aug 86.

AN/PSC-3 & AN/VSC-7 ARE SINGLE CHANNEL UHF SATELLITE RADIO SYSTEMS.

PH. SATCOM

AN/TSC-85A/B AND AN/TSC-93A/B TACTICAL SATELLITE COMMUNICATIONS TERMINAL

TECHNICAL LEADER: Mr. Eduardo Velez, DSN 992-0994
COMH 908/532-0994

PE & LINE #: 05137

DESCRIPTION: This Super High Frequency (SHF) system provides reliable multichannel capacity satellite communications with an anti-jam capability. Both terminals operate with an 8 foot diameter antenna through the DSCS satellite network. AN/TSC-93A/B provides a capacity of 24 channels that can operate in a point to point mode or as a non-nodal terminal in a nodal network. AN/TSC-85A/B provides a capacity of 48 channels that can also operate in a point to point mode or as a nodal terminal in a nodal network. The Baseband Improvement Modification (BIM) is a directed program change by Joint Chiefs of Staff (JCS) to the Army GHF SHF program. This change increases, improves satellite efficiency and interoperability modes between Army (AN/TSC-85B/AN/TSC-93B) and Air Force (AN/TSC-100/AN/TSC-94) terminals. The terminals use spacecraft resources more efficiently and improves network management and control.

HISTORICAL BACKGROUND:

Jun 76 - LRIP contract awarded to RCA Corporation (AN/TSC-85/93).
Apr 77 - LRIP terminals Type Classified.
Mar 78 - IPR defined configuration for Full Scale Production (AN/TSC-85A, AN/TSC-93A).
Feb 79 - IPR FSP approved.
Sep 79 - Production contract awarded to Harris Corporation.
Apr 85-Nov 85 - First production unit delivered; First Article Test; First Unit Equipped; IOC.
Sep 86 - BIM awarded (AN/TSC-85B, AN/TSC-93B).
Apr 89 - BIM First Article approved.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
PRODUCTION OF MODIFICATION																												
FIELDING OF MODIFICATION																												
TRANSITION																												

* Fieldings to 1st Cavalry tentatively scheduled for 3QFY93 contingent upon DA direction.

REQUIREMENTS DOCUMENT: TACSATCOM Qualitative Materiel Requirement approved 12 Nov 71.

TYPE CLASSIFICATION: Standard, Jul 85.

AN/TSC-85A/B & AN/TSC-93A/B ARE SHF SYSTEM WHICH PROVIDES MULTI CHANNEL CAPACITY SATELLITE COMMUNICATION WITH AN ANTI-JAM CAPABILITY.

PL. SYSTEM

AN/TSC-94A AND AN/TSC-100A, MULTICHANNEL SUPER HIGH
FREQUENCY SATELLITE COMMUNICATIONS TERMINAL

TECHNICAL LEADER: Mr. Peter Johnson, DSN 992-3011
COMN 908/532-3011

PRODUCT MANAGER: LTC Michael Mazzucchi, DSN 992-0994
COMN 908/532-0994

PE & LINE #: 739017Q2

DESCRIPTION: These multichannel Super High Frequency (SHF) Initial systems are full duplex trunking terminals utilized by the Air Force to provide subscriber voice channels or TRI-TAC groups. Both terminals provide a high order of component commonality, redundancy and Built-In-Test-Equipment (BITE). In a stressed environment, both have the capability to operate with an AJ Control Modem. AN/TSC-100A is capable of operating simultaneously with up to four AN/TSC-94A or nodal terminals in a mesh or hub spoke mode. Mounted in an S-280 shelter, it is self contained, includes both a 20 ft and 8 ft dish antenna, and interoperates with other SHF terminals.

HISTORICAL BACKGROUND:

Apr 82 - Production contract award.
Feb 86 - Complete First Article Testing; First production deliveries.
May 86 - Air Force FOTE completed; Deliveries stopped due to FOT&E.
Oct 86 - Deliveries resumed, problem corrected.
Dec 89 - Last terminal delivered.
Sep 91 - ECP 101 awarded, consisting of the fabrication of depot installation kits to support AJ fieldings.

REQUIREMENTS DOCUMENT:

TYPE CLASSIFICATION: N/A since the Air Force is the only user.

AN/TSC-94A AND AN/TSC-100A ARE MULTI CHANNEL SHF SATELLITE TERMINAL SYSTEMS USED BY THE AIR FORCE TO PROVIDE SUBSCRIBER VOICE CHANNELS OR TRI-TAC GROUPS.

PM, SATCOM

TD-1388(V), LOW RATE MULTIPLEXER (LRM)

PROJECT OFFICER: Mr. Rajesh Parikh, DSN 992-0994
COMN 908/532-0994

PRODUCT MANAGER: LTC Michael Mazzucchi, DSN 992-0994
COMN 908/532-0994

PE & LINE #: E7090

DESCRIPTION: The Ground Mobile Forces Satellite Communications (GMFSC) SHF multichannel initial system terminals require an anti-jam capability which will be provided by the Anti-Jam Control Modem (AJCM). AJCM requires an all-variable data input rate which will be provided by the LRM. LRM provides the multiplexing/-demultiplexing of digital subscribers for multichannel operation of the AJCM. LRM allows for a composite output rate which is adaptive, permitting graceful degradation of service under stressed conditions. Thus, LRM allows maximum utilization of satellite capacity in a hostile environment. LRM will also be deployed as a replacement for the TD-660 as part of the BIM program to update the AN/TSC-85A and AN/TSC-93A terminals and permit interoperability with the GMF community on a subscriber level under unstressed conditions.

HISTORICAL BACKGROUND:

Apr 82 - Production contract award.
May 83 - Type Classification.
Feb 86 - FAT completed.
Apr 86 - First production deliveries began.
May 86 - Deliveries halted due to spares shortage; IOC.
Nov 86 - Deliveries resumed.
Dec 88 - Deliveries halted due to proponent shortages.
Apr 89 - Deliveries resumed.
Sep 89 - Production contract award.
Mar 91 - Deliveries started.
Oct 91 - Deliveries completed.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				2				3				4				1				2			
PRODUCTION CONTRACT																												
TRANSITION	TBD																											

REQUIREMENTS DOCUMENT: ROC approved, Jul 83.

TYPE CLASSIFICATION: May 83, Standard.

TD-1388(V) PROVIDES MULTIPLEXING/DEMULTIPLEXING OF DIGITAL SUBSCRIBERS FOR MULTICHANNEL OPERATION FOR BOTH STRESSED AND UNSTRESSED CONDITIONS.

ENHANCED MANPACK ULTRA HIGH FREQUENCY TERMINAL (AMUT)

PROJECT MANAGER: LTC Michael Mazzocchi, DSN 992-0994
COMN 906/532-0994

PROJECT LEADER: (Phase I): Mr. Robert Wilson, DSN 992-0994
(Phase II): Mr. William Duda, DSN 992-0994
COMN 906/532-0994

PE & LINE #:

DESCRIPTION: AMUT will provide elements of the Special Operations Forces (SOF), and other designated units of the Army, Air Force, Navy, and Marine Corps with small, lightweight terminals for half-duplex, secure, data and digital voice communications through ultra high frequency (UHF) satellites. In addition to the satellite relay communications mode, the AMUT will be capable of communicating line-of-sight (LOS). AMUT will employ burst transmission to provide shared use of 5 and 25 kilohertz (kHz) channels on existing and planned satellite transponders. In addition, it will have the capability to access the satellite channels using Demand Assigned Multiple Access (DAMA) techniques. Specifically, AMUT will use the Fleet Satellite (FLTSAT), commercial Leased Satellite (LEASAT) and UHF Follow-On satellite systems. FLTSAT capabilities that the AMUT will use consist of the unprocessed 25 kHz Fleet Satellite Communications (AFSATCOM) segment. AMUT major components consist of R/T with embedded COMSEC and DAMA, battery box, satellite antenna, LOS antenna and Handset. In the DAMA mode, the terminal will operate in conjunction with the Network Control Stations (NCSs) of the Air Force UHF Satellite Terminal System (USTS) and the TD1271 B/U DAMA unit controlled by Navy's AN/USC-42(V)2 NCS. The Enhanced Manpack UHF Terminal (EMUT) Program will modify the existing inventory of radios to add Communications Security (COMSEC) and Demand Assigned Multiple Access (DAMA) to support SOF and all other users.

HISTORICAL BACKGROUND:

- Nov 81 - Project initiated.
- Dec 82 - CPFF contract awarded to Motorola.
- Mar 83 - Draft LOA for the Satellite Reconnaissance Radio (SRR) was signed between PM, SATCOM and Tactical Satellite Communications, Fort Gordon, GA at a Joint Working Group Review. SRR as described in the draft LR was approximately 1/2 the size and 1/3 the weight of the AN/PSC-3 and appeared to require R&D to meet the requirements. AMC/SATCOMA worked with the SOF community to analyze the stated requirement versus the capabilities in the commercial market. This effort eventually resulted in renaming the SRR project to the AMUT with subsequent submission of a new O&O Plan.
- May 85 - Draft O&O Plan for SSR.
- Jun 85 - Draft LR for SSR.
- Aug 88 - AMUT O&O Plan approved by TRADOC.
- Apr 89 - Funding transferred to Enhanced Manpack UHF Terminal (EMUT) Program.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				1				1				1				1				1			
PHASE II (R&D)																												
CONTRACT AWARD PHASE I																												
TESTING																												
FIRST UNIT EQUIPPED PHASE I/II																												
TYPE CLASSIFICATION IPR																												
INITIAL OPERATIONAL CAPABILITY																												
TRANSITION																												
TBD																												
TBD																												

REQUIREMENTS DOCUMENT:

TYPE CLASSIFICATION:

AMUT WILL PROVIDE ELEMENTS OF SOF, AND OTHER DESIGNATED UNITS OF THE ARMY, AF, NAVY, AND MARINE CORPS WITH SMALL, LIGHTWEIGHT TERMINALS FOR HALF-DUPLEX, SECURE, DATA AND DIGITAL VOICE COMMUNICATIONS THROUGH UHF SATELLITES.

PH. SATCOM

ANTI-JAM CONTROL MODEM (AJCM)

TECH LEADER: Mr. Italo Villacis, DSN 992-3011
COMH 908/532-3011

PRODUCT MANAGER: LTC S. Leja, DSN 992-0994
COMH 908/532-0994

PE & LINE #: 1X533142.D456

DESCRIPTION: AJCM provides Electronic Counter Counter Measures (ECCM) protection for TACSATCOM Multichannel Initial System (MCIS) terminals being procured for use by the Ground Mobile Forces (GMF) of the three services. ECCM is achieved by utilizing spread spectrum techniques. The modems consist of a family of three devices which include a nodal unit, a non-nodal unit and a network control unit. The modems will become integral components of the host terminals (AN/TSC-85B, AN/TSC-93B, and AN/MSQ-114). AJCM will also be used with AF SHF MCIS terminals AN/TSC-94A and AN/TSC-100A, and in the DSCS/GMF Control Link (DGCL) and Gateway Racks of the Defense Satellite Communications System.

HISTORICAL BACKGROUND:

Sep 78 - Full Scale Development contract awarded to Harris Corporation.
Jun 82 - DT-II (POT-C) initiated.
Sep 82 - Additional contract award to Harris Corporation for Added Capabilities Efforts, (ACE).
Feb 84 - DT-II completed.
Apr 84 - OT-II completed.
Aug 84 - IPR approved for Full Scale Production.
Aug 85 - Production contract award, 221 units.
Mar 86 - Preliminary design review.
Dec 86 - Critical design review.
Nov 88 - FAT completed.
Mar 89 - Begin delivery (ship in place).
Jul 90 - FOT&E completed.
Nov 90 - Deliveries completed in place.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PRODUCTION CONTRACT									1																			
INITIAL OPERATIONAL CAPABILITY									1																			
TRANSITION	TBD																											

REQUIREMENTS DOCUMENT: QMR for TACSATCOM approved, 12 Nov 71, amended Apr 80.

TYPE CLASSIFICATION: Type Classified with the host terminals (AN/TSC-85A, AN/TSC-93A and AN/MSQ-114).

AJCM UTILIZES SPREAD SPECTRUM TECHNIQUES TO ACHIEVE ECCM PROTECTION FOR TACSATCOM TERMINALS.

DD FORM 1

**DEFENSE SATELLITE COMMUNICATIONS SYSTEM ELECTRONIC COUNTER
MEASURE CONTROL SUBSYSTEM (DECS)**

TECHNICAL LEADER: Mr. Steve Vaughn, DSN 992-1213
COMH 908/532-1213

PRODUCT MANAGER: Mr. Ronald Johnson, DSN 992-4354
COMH 908/532-4354

PE & LINE #: BB8509

DESCRIPTION: The Defense Satellite Communications System (DSCS) Electronic Counter Counter Measure (ECCM) Control Subsystem (DECS) will provide automated control of the AN/USC-28 ECCM network to allow the most effective and efficient communications. This will ease the workload of the already overburdened network controllers and network terminal operators by performing line power monitoring and automated polling responses at the NTs. In addition, DECS will allow the ECCM network to operate in a stressed environment by alerting the network controller to the presence of a jammer or violator, analyzing the stress, and executing the proper network reconfiguration needed to null the effects of the stress.

HISTORICAL BACKGROUND:

Mar 80 - Real Time Automated Control System (RTACS) initiated, included ECCM control.
Apr 82 - RTACS program cancelled, too expensive to continue.
May 83 - Approval of revised network control system by MG Rockwell.
Apr 86 - Modified NDI acquisition approved (Milestone III).
Jun 87 - DCA directed spec change.
Sep 87 - DECS Production award.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				1				1				1				1				1			
FIRST UNIT EQUIPPED				I																								
PRODUCTION CONTRACT				I																								
INITIAL OPERATIONAL CAPABILITY				I																								
TRANSITION				TBD																								

REQUIREMENTS DOCUMENT: DCA DSCS Program Plan.

TYPE CLASSIFICATION: Standard, Apr 86.

DECS PROVIDES AUTOMATED CONTROL OF THE ECCM NETWORK IN THE DSCS.

PM SINGARS

PE SUMMARY

AN/GRC-193 RADIO SET, IHFR

PROJECT OFFICER: Ms. Ling Lee Shao, DSN 995-3055
COMM 908/544-3055

PE & LINE #: SSN: BB1600

DESCRIPTION: The medium to high power vehicular (100-400 watt selectable) AN/GRC-193 radio set will provide a secure voice data command and control communications capability for tactical units in the compatible AM, SSB, CW and DATA modes. The AN/GRC-193A will be secured with the KY-65 or future COMSEC equipments. The radio set features automatic antenna tuning, operates in the 2-30 MHz frequency band, provides 280,000 channels in 100 Hz increments, is user operated for voice operation, OSC for teletype, contains built-in-test features, reflect power protection and can be operated by remote wireline up to 2 km. The radio also interfaces with the AN/VIC-1 Vehicle Intercom System and is compatible with the AN/UGC-74 at 300 words per minute with a built-in modem. All IHFR radios will provide secure voice communications with KY-65 or future COMSEC equipment. The AN/GRC-193 radio set will also provide secure data communications with the KG-84.

HISTORICAL BACKGROUND:

Jul 81 - USA Program Objective Memorandum established.
Dec 81 - Non-Developmental Item decision approved.
May 85 - Follow-On-Evaluation.
Sep 85 - FY85 Production contract award.
Nov 85 - Official transfer of program responsibility to PM, SINGARS.
Dec 86 - First Unit Equipped.
Sep 87 - STAJ compatible production contract award.
Aug 90 - FAT completed.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
TRANSITION TO CECOM	1																											

REQUIREMENTS DOCUMENT: ROC approved by DA, 30 Nov 81.

TYPE CLASSIFICATION: Approved, Jun 83, Standard A; BOIP approved, 22 Oct 86.

AN/GRC-193 IS A MEDIUM TO HIGH POWER VEHICULAR RADIO SET TO PROVIDE SECURE VOICE (KY-65) DATA COMMAND AND CONTROL COMMUNICATIONS IN THE COMPATIBLE AM, SSB, CW AND DATA MODES WITH AUTOMATIC ANTENNA TUNING AND 280,000 CHANNELS IN 100 HZ INCREMENTS.

PM, SINGARS

AN/GRC-213, RADIO SET, IHFR

PROJECT OFFICER: Ms. Ling Lee Shao, DSN 995-3055
COMM 908/544-3055

PE & LINE #: SSN: BB1802

DESCRIPTION: The Low Power (20 watt) Manpack/Vehicular Radio Set consists of an AN/PRC-104A manpack radio with all the necessary ancillary items to provide a vehicular mounting capability as well as rapid removal for manpack only operations. The AN/GRC-213 will provide secure voice and data communications when used with the KY-65 voice, KY-84 data or future COMSEC equipments, in the SSB, compatible AM, CW and DATA modes. The AN/GRC-213 is user operated and about as complex to use as the current family of VHF/FM radios. The radio features include automatic antenna tuning, 2-30 MHz frequency range with 280,000 channels in 100 Hz increments, built in test features and receive squelch. The radio interfaces with the vehicular intercom system AN/VIC-1 and provides FM retransmission capability. All IHFR radios will provide secure voice communications with KY-65 or future COMSEC equipment. The AN/GRC-193 radio set will also provide secure data communications with the KG-84.

HISTORICAL BACKGROUND:

Jul 81 - USA Program Objective Memorandum established.
Dec 81 - Non-Developmental Item decision approved.
May 85 - Follow-On-Evaluation.
Nov 85 - Official transfer of program responsibility to PM, SINGARS.
Dec 86 - First Unit Equipped.
Sep 87 - STAJ compatible production contract award.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
TRANSITION TO CECOM	I																											

REQUIREMENTS DOCUMENT: ROC approved by DA, 30 Nov 81.

TYPE CLASSIFICATION: BOIP approved, 22 Oct 86, Standard A.

AN/GRC-213 IS A LOW POWER MANPACK/VEHICULAR MOUNTED RADIO SET TO PROVIDE SECURE VOICE (KY-65) AND DATA COMMAND AND CONTROL COMMUNICATIONS (KY-84). IT HAS AUTOMATIC ANTENNA TUNING, 280,000 CHANNELS IN 100 Hz INCREMENTS AND RETRANSMISSION CAPABILITY.

PL SUMMARY

AN/PRC-104 RADIO SET, IHFR

PROJECT OFFICER: Ms. Ling Lee Shao, DSM 992-3055
COMN 908/544-3055

PE & LINE #: SSN: BG1801

DESCRIPTION: The low power (20 watt) High Frequency Radio Set AN/PRC-104 provides single sideband command and control communications for tactical units in the compatible AM, SSB, CW and Data modes. AN/PRC-104 is user operated and is about as complex to use as the current family of VHF FM radios. The radio utilizes either a non-rechargeable BA-5590 Lithium battery or a rechargeable BB-590 NICAD battery. The radio features automatic antenna tuning, operates in the 2-30 MHz frequency range, maximum bandwidth 3 KHz, 280,000 channels in 100 Hz increments, and built-in test features. All IHFR radios will provide secure voice communications with KY-65 or future COMSEC equipment. AN/GRC-193 radio set will also provide secure data communications with the KG-84.

HISTORICAL BACKGROUND:

Jul 81 - USA Program Objective Memorandum established.
Dec 81 - Non-Developmental Item decision approved.
Mar 82 - BOIP/QQPRI approved.
Jun 85 - Follow-On-Evaluation.
Nov 85 - Official transfer of program responsibility to PN, SINCGARS; Materiel Release and First Unit Equipped.
Mar 87 - First Unit Equipped.
Jul 87 - MARB on STAJ.
Sep 87 - STAJ compatible Production Contract Award.
Aug 90 - First Article Test completed.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
TRANSITION TO CECOM																												

REQUIREMENTS DOCUMENT: ROC approved by DA 30 Nov 81.

TYPE CLASSIFICATION: Standard A, approved Jun 83.

AN/PRC-104 IS A LOW POWER, HIGH FREQUENCY RADIO SET TO PROVIDE SINGLE SIDEBAND COMMAND AND CONTROL COMMUNICATIONS FOR TACTICAL UNITS IN THE COMPATIBLE AM, SSB, CW AND DATA MODES.

PH. SINGARS

BATTLEFIELD ELECTRONIC COMMUNICATION ELECTRONIC OPERATION INSTRUCTION SYSTEM (BECS)

PROJECT OFFICER: Mr. Kam Lee, DSN 992-5971
COMM 908/532-5971
Ms. Ling Lee Shao, DSN 995-3055
COMM 908/544-3055

PE & LINE #: 1T464751.D282.Z16800

DESCRIPTION: BECS is a frequency management system designed to meet the critical requirement for a decentralized and automated process to generate both single channel and frequency hopping Communication Electronic Operation Instruction (CEOI) information. BECS is intended to be more responsive to rapidly changing and highly mobile battlefield conditions as an integral subsystem of SINGARS and other VHF (AM/FM), UHF and HF radio systems. BECS is an automated management system that will generate, display, print, store, and electronically transfer CEOI information. BECS will generate and load frequency hopping information for radios and the Transmission Security (TRANSEC) key for ECCM protection. BECS is an NOI program. The system is composed of a Basic Generation Unit (BGU) (initially an HP-111 Desk Top Computer, an HP Disk Drive, and HP Printer), the MX-10579 and the MX-18290. HP equipment will be replaced by the PMCHS Laptop Computer Unit (LCU). Consideration of this integration is ongoing. As an interim system prior to acquisition of the NSA Data Transfer Device (DTD), the BECS will utilize a MX-10579 and MX-18290 ECCM Fill Devices, an ECCM Fill Device Interface Cable and an HP THINK Jet Printer which will generate paper CEOIs at the separate battalion level. BECS system will eliminate the use of paper CEOIs and provide greater flexibility to using units. BECS will be used by all combat, combat support, and combat service support units as a standard replacement for the paper CEOI. Electronic Notebook/BGU interface program was terminated in Feb 91. BECS program is moving into Phase III, DTD and LCU buy. BECS program has been incorporated into the ACHEs program.

HISTORICAL BACKGROUND:

Sep 83 - Initial tasking from VCSA.	Sep 86 - EN LRIP award to ITT by NSA.
Oct 84 - O&O Plan approved by CG TRADOC.	Jan 87 - Completed Development Test (DT) including CERT at EPG and NSA (Phase I).
Sep 85 - Electronic Notebook (EN) FSED awarded to ITT by NSA for Software Development and Hardware Upgrade, (Programmable Variable Storage Device (PVSD) upgrade).	Sep 87 - DTD engineering development contract award.
Aug 86 - Completed Operational Assessment (OA) - OT type test at Fort Gordon, GA (Phase I).	Aug 88 - Phase I (BGU) awarded.
	Sep 89 - DA approved J&A.
	Oct 89 - Acquisition Plan approved.
	Jul 90 - DTD LRIP award.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				1				1				1				1				1			
LCU USER CHECK TEST (UCT)																												
DTD OPERATIONAL DEMO																												
LCU/DTD TC LRP																												
LCU/DTD OPTION AWARD																												
OBJECTIVE BECS OT																												
LCU OPTION DELIVERY																												
LCU/DTD TC STANDARD																												
DTD OPTION DELIVERY																												

REQUIREMENTS DOCUMENT: ROC approved 24 Apr 86.

TYPE CLASSIFICATION: Phase I BGU approved Jul 87, Standard.

BECS IS A FREQUENCY MANAGEMENT SYSTEM DESIGNED TO MEET THE CRITICAL REQUIREMENT FOR A DECENTRALIZED AND AUTOMATED PROCESS TO GENERATE BOTH SINGLE CHANNEL AND FREQUENCY HOPPING CEOI INFORMATION.

SINGARS

PROJECT OFFICER:

GROUND: Mr. Dominic Satili, DSN 992-2521
COMN 908/532-2521

AIRBORNE: Mr. Jim Goon, DSN 995-3054
COMN 908/544-3054

PE & LINE #: 1T463746.D555; 1T464751.D282
SSN: B00500; J30500; BA9102

DESCRIPTION: SINGARS is a new family of VHF-FM combat net radios which provides the primary means of command and control for Infantry, Armor and Artillery Units. SINGARS system is designed on a modular basis to achieve maximum commonality among the various ground and airborne system configurations. A common Receiver Transmitter (RT) is used in the manpack and all vehicular configurations. SINGARS family of radios has the capability to transmit and receive voice, tactical data and record traffic messages and is consistent with NATO interoperability requirements. The system will operate on any of the 2320 channels between 30-88 Megahertz and is designed to survive in a nuclear environment. Communications Security (COMSEC) for the basic radio is provided by use of the VINSON device. An Integrated COMSEC (ICOM) version of the SINGARS is currently in production. SINGARS system will be operable in a hostile environment through use of Electronic Counter Countermeasure (ECCM). SINGARS will replace the currently standard manpack and vehicular radios, the AN/PRC-77 and the AN/VRC-12 family, respectively. An airborne version of the SINGARS radio is now in production and will replace the currently standard aircraft radios, the AN/ARC-114 and AN/ARC-131.

HISTORICAL BACKGROUND:

Feb 76 - DSARC I.	Nov 88 - Airborne First Article Test complete.
Aug 81 - ILS efforts added to contract to by-pass ED phase.	Apr 89 - Milestone IIIB (ITT); Airborne Option 2 award.
Dec 81 - VCSC decision made to terminate FFH development and to further accelerate the SFH development.	Jun 89 - Ground (ITT) Option 3 award.
Dec 83 - Production contract award (650 units) Ground Radios.	Dec 90 - Milestone IIIB ITT full rate (ICOM)/General Dynamics low rate; Ground ITT Option 4 award; IOC (1st Division Equipped).
Oct 84 - ASARC/DSARC (Milestone IIIA).	Jan 91 - Airborne Option 3 award.
Nov 87 - Rebaselining contract mod signed by Government & ITT.	Mar 91 - Ground General Dynamics Option 1 award.
Jan 88 - Awarded first Production Option; First Article.	Jan 92 - ICOM IOT&E General Dynamics; Airborne Option 3 delivery began.
Apr 88 - Airborne Opt 1 award.	
Jul 88 - Initial Ground contract awarded to General Dynamics.	

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
GROUND RADIO:																												
GENERAL DYNAMICS PRODUCTION DEL BEGINS																												
MILESTONE IIIB- GENERAL DYNAMICS																												
GENERAL DYNAMICS OPTION II AWARD																												
AIRBORNE RADIO:																												
GENERAL DYNAMICS OPTION 1 DEL BEGINS																												
GENERAL DYNAMICS OPTION 2 DEL BEGINS																												

REQUIREMENTS DOCUMENT: ROC approved 19 Dec 74, updated 10 Jan 75; Joint Operational Requirement approved 26 Mar 76.

TYPE CLASSIFICATION: Non-ICOM, Standard A, 21 Sep 83; Airborne full rate production, 14 Dec 90; ITT ICOM Ground full rate production, 14 Dec 90.

SINGARS PROVIDES VHF-FM (30-88MHz) COMBAT NET RADIO COMMUNICATION WITH ECCM CAPABILITY (FREQUENCY HOPPING) AND DIGITAL DATA CAPABILITY (DATA RATE ADAPTER).

**PM MILSTAR
(ARMY)**

PM MILSTAR (ARMY)

AN/FRC-181(V)1,2,3, AN/TRC-194(V)1,2, MILSTAR GROUND COMMAND POST TERMINALS (GNDP)

PROJECT MANAGER: COL L. W. Paul, DSN 992-5232
COM 908/532-5232

PE & LINE #: 1X533142.D455

DESCRIPTION: Milstar is a multi-service satellite communications systems which will operate with Extremely High Frequency/Ultra High Frequency (EHF/UHF) uplinks and Super High Frequency (SHF)/UHF downlinks. It will provide worldwide, two-way, anti-jam, survivable, secure voice, teletype, and data communications, enabling the National Command Authority (NCA) to command and control strategic and tactical forces through all levels of conflict and crisis. Milstar system must be operational and serviceable in a severe, nuclear, biological, chemical and electronic warfare environment.

GNDP (AN/FRC-181(V)1,2,3) is a fixed terminal housed in an operational center and replaces the AN/GSC-40, with others to be installed at CINC and Special User locations. GNDP (AN/TRC-194(V)1,2) is a transportable terminal housed in a S-280 shelter, transported by two 5-ton vehicles and uses twin 30Kw generators with trailers. PM MILSTAR to integrate into Army force structure.

HISTORICAL BACKGROUND:

Feb 89 - Army assigns PM SCOTT as Level I SICA Manager for six JCS Validated Terminals.
Jun 89 - DAB (AF).
Dec 89 - LRIP Award (AF) Raytheon/Rockwell.
Jul 90 - Atwood directed adjustment to POM to fund integration/support for six AF procured GNDP.
Aug 90 - PM SCOTT hosted initial Army Milstar GNDP Working Group meeting.
Jan 91 - Milstar Restructuring Plan approved.
May 91 - AF exercised LRIP option with Raytheon/Rockwell.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
CONFIGURE TRANSPORTABLE TERMINAL																												
DAB REVIEW																												
ACQUIRE GFE																												
COMPLETE SITE SURVEYS																												
ACQUIRE EHF/UHF SPARES																												
START/COMPLETE DELIVERY TO ARMY																												
FUE																												

REQUIREMENTS DOCUMENT: Draft JORD, Mar 92.

TYPE CLASSIFICATION:

MILSTAR EHF-UHF GROUND COMMAND POST TERMINAL PROVIDES FIXED/SEMI-FIXED CAPABILITIES FOR NET CONTROL AND VOICE, TELETYPE AND DATA COMMUNICATIONS IN AN EXTREMELY HOSTILE ENVIRONMENT.

PH, MILSTAR (ARMY)

AN/TSC-124, SINGLE CHANNEL OBJECTIVE TACTICAL
TERMINAL (SCOTT)

PROJECT MANAGER: COL L. W. Paul, DSN 992-5232
COMM 908/532-5232

PE & LINE #: 1X533142.D455

DESCRIPTION: MILSTAR is the highest priority DOD C3I program and a critical part of the president's strategic modernization initiative. SCOTT is a EHF satellite terminal which will provide mobile, survivable, anti-jam and low probability of intercept communications installed in S-250 shelter mounted on a truck with a trailer and generator. SCOTT is the ground segment of the MILSTAR system assigned to the Army. It will provide data or secure voice communications at 75-2400 bps for up to four users. The user can be up to 2500 feet away.

HISTORICAL BACKGROUND:

Jan 79 - Letter of Agreement for a Tactical Single Channel Vehicular Terminal.
May 80 - IPR approves entering Advanced Development (AD) phase with Lincoln Laboratory on an EHF terminal.
Nov 83 - Pre-ASARC determined ASARC would not be necessary, System Acquisition Decision Memorandum (SADM) will suffice for LRIP decision, signed Mar 84.
Dec 84 - Direction received from US of A to restructure the program to enter a FSD Phase.
Mar 85 - US of A approves acquisition strategy.
Dec 85 - FSD contract awarded to Magnavox (\$105.9M FFP).
Jul 87 - Final Design Review.
Jun 88 - Began Contractor Technical Testing.
Jul 88 - Successful Multi-Service Interoperability Test, Phase I, II, III.
Mar 89 - Successful completion of Maintenance Demonstration (M-Demo).
May 90 - Successful Joint Milstar Demonstration held at Pentagon.
Oct 90 - FY91 Congressional Language directed SECDEF to restructure Milstar EHF programs.
Nov 90 - Formal Phase I Reliability Development Growth Testing began.
Jan 91 - Milstar Restructuring Plan approved.
Sep 91 - Completed Technical Test and RDGT.
Dec 91 - Government accepted 11 terminals.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
FSD CONTRACT									1																			
FIELDING OF FSED TERMINALS					1				1																			
FIRST ARTICLE TESTING					1																							

REQUIREMENTS DOCUMENT: ROC approved Aug 85.

TYPE CLASSIFICATION:

SCOTT IS AN EHF SATELLITE EARTH TERMINAL THAT PROVIDES MOBILE, ROBUST, SURVIVABLE ANTI-JAM AND LOW PROBABILITY OF INTERCEPT COMMUNICATIONS INSTALLED IN AN S-250 SHELTER MOUNTED ON A DUAL-WHEELED CUCV.

MILSTAR (ARMY)

SINGLE CHANNEL ANTI-JAM MANPORTABLE TERMINAL (SCAMP)

PROJECT OFFICER: COL L. W. Paul, DSN 992-5232
COM 908/532-5232

PE & LINE #: 1X533142.D455

DESCRIPTION: The SCAMP terminal will meet a critical need for worldwide assured voice and data satellite communications in a severe electronic warfare. The system will operate in an intense jamming environment, having low probability of detection and interception with interface to the Army Common Users System (ACUS). The SCAMP terminal will provide manportable, secure, anti-jam satellite communications capability to Army and Air Force units which cannot be served by larger less mobile terminals.

HISTORICAL BACKGROUND:

Oct 90 - Congressional direction to restructure Milstar.
Jan 91 - Deputy Secretary of Defense submitted restructured Milstar plan to Chairman, Armed Service Committee;
Milstar restructure plan approved.
Jun 91 - Briefing to industry.
Sep 91 - Draft Procurement Data Package via Electronic Bulletin Board.
Nov 91 - Library established.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
MILESTONE II DECISION REVIEW				I																								
MILSTAR PROGRAM DAB				I																								
DEVELOPMENT CONTRACT AWARD				I																								
MILESTONE III																I												

REQUIREMENTS DOCUMENT: Army Milstar Advanced Satellite Terminals (MAST) Operational Requirements Document, Mar 92.

TYPE CLASSIFICATION:

PH. MILSTAR (ARMY)

SECURE MOBILE ANTI-JAM RELIABLE TACTICAL TERMINAL
(SMART-T)

PROJECT OFFICER: COL L. W. Paul, DSN 992-5232
COMM 908/532-5232

PE & LINE #: 1X533142.D455

DESCRIPTION: The SMART-T terminal will provide tactical users with secure, survivable, anti-jam, low probability of intercept and detection satellite communications. SMART-T will process data and voice communications at medium or low data rate. It will provide a range extension capability to the Army's Mobile Subscriber Equipment to support Airland Operations, specifically to provide a satellite interface to permit uninterrupted communications as our advancing forces move beyond the line-of-sight capability of MSE.

HISTORICAL BACKGROUND:

Oct 90 - Congressional direction to restructure Milstar.
Jan 91 - Deputy Secretary of Defense submitted restructured Milstar plan to Chairman, Armed Service Committee;
Milstar restructure plan approved.
Sep 91 - Briefing to industry.
Oct 91 - Draft Procurement Data Package via Electronic Bulletin Board.
Nov 91 - Library established.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				1				1				1				1				1			
MILESTONE II DECISION REVIEW				I																								
MILSTAR PROGRAM DAB				I																								
DEVELOPMENT CONTRACT AWARD																												
LRIP CONTRACT AWARD														I			I											
MILESTONE III DECISION REVIEW; FULL SCALE PRODUCTION AWARD																												

REQUIREMENTS DOCUMENT: Army Milstar Advanced Satellite Terminals (MAST) Operational Requirements Document, Mar 92.

TYPE CLASSIFICATION:

PM GPS

PM, GPS

GLOBAL POSITIONING SYSTEM (GPS)

PROJECT OFFICER: COL Bruce Sweeney, DSN 992-6301
COMM 908/532-6301

PE & LINE #: 1X564778.D168 SSN: K47800

DESCRIPTION: NAVSTAR GPS is a space based radio positioning and navigation system that will provide extremely accurate, three dimensional position, velocity, and time of day information to users anywhere on or near the earth. The system consists of a space, control, and user segments. Space and control segments consist of the GPS satellites and their associated control stations. User segment consists of those equipments that translate the satellite signals into time and position data. GPS User Equipment (UE) family now includes eight different models meeting needs which range from those of the foot soldier to high performance military aircraft. The basic UE capability is the determination and display of position data. More capable models do additional navigational calculations, cope with greater host vehicle dynamics, and provide for interfaces with other navigation systems and/or communications systems. USAF is executive service with Army (and other services) providing the Joint Program Office with an embedded staff to coordinate Army to manage Army requirements and funding, with the Project Manager GPS at Fort Monmouth, NJ.

HISTORICAL BACKGROUND:

Apr 73 - Navy and Air Force satellite navigation efforts integrated.
Dec 73 - DSARC-I.
Oct 74 - Advance Development contract awarded.
Jun 75 - Alternate Manpack contract awarded to Texas Instruments.
May 79 - ASARC-II/DSARC-II.
Jul 79 - Full scale competitive contracts awarded to Rockwell/Collins and Magnavox.
Dec 82 - First Manpack set delivered for test.
Dec 84 - Development Test II; Operational Assessment.
Apr 85 - Contract (Service R&D) awarded.
Jul 86 - Awarded contract for Low Rate Initial Production of Manpack, 2-Channel and 5-Channel receivers to Rockwell/Collins.
Oct 87 - Second source contract award for 2-Channel and 5-Channel receivers to SCI and Plessey Corporations.
Jan 88 - Award of contract for NDI procurement of Manpack receivers to Texas Instruments Corporation.
Mar 89 - Completed of operational assessment of Rockwell/Collins GPS receivers.
Aug 90 - Procurement of NDI Manpack receivers in support of Operation Desert Shield.
Nov 90 - Award of contract for NDI procurement of the Miniaturized Airborne GPS Receiver (MAGR).
Mar 91 - Option 1 award of 2-Channel and 5-Channel receivers to SCI.
Dec 91 - Restructure program to give priority to Ground Users.
Feb 92 - Released Precision Lightweight GPS Receiver (PLGR) draft Letter Request for technical proposal & bid samples.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
OPTION 2 (5-CHANNEL); DAB IIIB SATELLITE MBRS SUPPORT, 3D CAPABILITY MILESTONE III FOR MAGR PLGR AWARD PLGR IOT&E FIRST UNIT EQUIPED MILESTONE III FOR PLGR																												

REQUIREMENTS DOCUMENT: NAVSTAR GPS Army UE ROC approved by HQ DA 22 Mar 79; ASARC IIIA approved, baseline. Revised ROC to include PLGR & MAGR, approved 24 May 91.

TYPE CLASSIFICATION: MILSPEC LPU/LPT, Feb 87; Standard, Dec 91; SLGR LPU, Aug 90.
Anticipate SLGR Generic, 1993 and PLGR Standard, 1994.

GPS PROVIDES EXTREMELY ACCURATE THREE DIMENSIONAL POSITION AND VELOCITY INFORMATION TO SUITABLY EQUIPPED USERS ANYWHERE ON OR NEAR THE EARTH.

PM EW/RSTA

AN/TM-31

AN/TM-31. METEOROLOGICAL DATA SYSTEM (MDS)

PROJECT OFFICER: Ms. Martha Smith, DSN 996-5655
COM 906/544-5655

PE & LINE #: SSN: K27800

DESCRIPTION: AN/TM-31 is a mobile, automated meteorological data acquisition and processing system. This is a stand alone system that collects meteorological data for artillery fire support. Two MDS are used to support each Division Artillery Headquarters Battery and one MDS supports each separate brigade. MDS automatically tracks a balloon-borne meteorological radiosonde as it ascends the atmosphere; receives the telemetered signals of temperature, relative humidity, pressure, and navigation data; measures elevation and azimuth angles to the radiosondes; automatically converts and processes the data; and computes meteorological data for immediate transmission to the user via wire or radio. Two modes of operation are provided: Radio Direction Finding (RDF) mode at 1680 MHz and NAVAID mode at 400 MHz. As an ongoing product improvement, AN/TM-31 is being modified to utilize a low cost radiosonde. A companion system, the Meteorological Measuring Set (AN/TM-38) is being procured in a separate program for the light forces and reserve components.

HISTORICAL BACKGROUND:

Mar 79 - AD/ED contract.
Jun 79 - ROC approved.
Jan 83 - OT II.
Mar 83 - OT II.
Sep 83 - IPR, MDS approved for production.
Aug 84 - Production contract award (55 units).
Dec 87 - FAT completed.
Feb 88 - Independent Evaluation Report.
Mar 88 - Fielding to Ft. Sill, OK (NET).
Apr 88 - Training release.
May 88 - Full release.
Oct 91-Pres - VECF kits installation.
Jan 92 - Completed fieldings to U.S. Army and USMC.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
TRANSITION	I																											

REQUIREMENTS DOCUMENT: ROC approved Jun 79; CARDS 0449.

TYPE CLASSIFICATION: Standard, Sep 83.

AN/TM-31 IS A MOBILE, VERSATILE, AUTOMATED METEOROLOGICAL DATA ACQUISITION AND PROCESSING SYSTEM.

PH. EW/RSTA

AN/THQ-38, METEOROLOGICAL MEASURING SET (MMS)

PROJECT LEADER: Ms. Martha Smith DSN 996-5655
COMN 908/544-5655

PE & LINE #: SSN: K27800

DESCRIPTION: MMS is an upper air meteorological data collection, processing and dissemination system. The system consists of a radiosonde carried aloft by a balloon and a ground terminal. One MMS is deployed with each light division. MMS will provide the meteorological data to field artillery, target acquisition and air weather service units. The system will provide pressure, relative humidity, temperature, wind speed and direction measurements to an altitude of 30 kilometers above the earth's surface. The ground terminal automatically acquires and tracks the radiosonde using NAVAID and Radio Direction Finding (RDF) techniques. In the NAVAID mode, the system will be capable of using LORAN, or any combination of VLF/OMEGA transmissions, to determine the radiosonde's position. The ground system will receive telemetered temperature, pressure, humidity, and NAVAID data from the radiosonde and azimuth and elevation angular data from the RDF antenna assembly. It reports in standard formats for computer processing at the using units. MMS is a complement to the Meteorological Data System (AN/THQ-31) fielded to heavy divisions.

HISTORICAL BACKGROUND:

Aug 88 - ROC approved.
Sep 88 - IPR-TC generic.
Feb 90 - Award-7 systems.
Mar 92 - Field to U.S. Army Field Artillery School.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PRODUCTION (7)																												
SYSTEM DELIVERY																												
FIELDINGS (4)																												
FOLLOW-ON PROD AWARD (50)																												
FIELDING																												

REQUIREMENTS DOCUMENT: ROC approved, Aug 88.

TYPE CLASSIFICATION: Generic: 1QFY90, Standard scheduled for 4QFY92.

MMS IS AN UPPER AIR METEOROLOGICAL DATA COLLECTION, PROCESSING AND DISSEMINATION SYSTEM.

REMBASS

IMPROVED REMOTELY MONITORED BATTLEFIELD SENSOR SYSTEM (I-REMBASS)

PROJECT OFFICER: Ms. Martha Smith, DSN 996-5655
COMM 908/544-5655

PE & LINE #: 23751.D475; SSN: BP1002

DESCRIPTION: I-REMBASS is an all weather, day/night, passive, ground-based unattended sensor system. It is a downsized derivative of the fielded REMBASS system. I-REMBASS will use three types of sensors (passive IR, magnetic, and seismic-acoustic). It will also contain the AN/PSQ-7 Monitor Programmer and a small, lightweight radio repeater, RT-1175A/GSQ. I-REMBASS will be fielded to the Special Operations Forces (SOF) for ground surveillance in deep penetration/denied area operations, in Low Intensity Conflict (LIC), and for surveillance of hostile activity behind enemy lines. It detects moving targets and classifies them as personnel, wheeled vehicles or tracked vehicles. The system transmits real-time reports on activity within the sensor's detection radius.

HISTORICAL BACKGROUND:

- Dec 87 - Army wide agreement to develop downsized REMBASS for SOF.
- Jun 87 - Twelve sets of mini sensors acquired and field tested in parallel with REMBASS DT-III. System is "transparent" in that all sensors performed to same baseline requirements.
- Jan 88 - Operational evaluation of I-REMBASS mini sensors and selected REMBASS assets by 5th SF6, Ft. Bragg, NC.
- Feb 89 - Initial ILSP available.
- Feb 90 - Mini Repeater, Monitor Programmer Development awarded.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
DEVELOPMENT TESTING			I																									
MILESTONE III				I																								
TYPE CLASSIFICATION				I																								
PRODUCTION AWARD (SOF)				I																								
FIRST ARTICLE TESTING								I																				
FULL RELEASE APPROVED										I																		
FUE AND IOC												I																

REQUIREMENTS DOCUMENT: ROC approved Nov 86.

TYPE CLASSIFICATION: Scheduled for 3QFY92.

I-REMBASS IS AN ALL WEATHER, DAY/NIGHT, PASSIVE, GROUND-BASED UNATTENDED SENSOR SYSTEM.

PM, EW/RSTA

AN/USD-9A, IMPROVED GUARDRAIL V (IGR V)

PRODUCT MANAGER: LTC Andrew Fallon, DSN 996-5211
COMN 908/544-5211

PE & LINE #: SSN: AZ2100

DESCRIPTION: IGR V is an airborne Communications Intelligence (COMINT) collection/location system. AN/USD-9A consists of airborne collection platforms (RC-120/H), AN/TSQ-105 (V)4 Information Processing Facility (IPF), AN/TSC-116 Improved Commanders Tactical Terminal (ICTT), AN/ARW-83 (V)5 Airborne Relay Facility (ARF), AN/ANR-163 (V)4 Auxiliary Ground Equipment (AGE) and an Interoperable Data Link (IDL). Current major upgrade is to provide satellite remote capability for both IGRV and insertion into GUARDRAIL/Common Sensor.

HISTORICAL BACKGROUND:

Sep 81 - Contract award.
Dec 84 - Materiel Release; System 1 fielded to V Corps.
Dec 85 - System 2 fielded to VII Corps.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
TRANSPORTABLE RELAY FACILITY																												
REMOTE RELAY UPGRADE																												
SATELLITE TERMINALS																												
GROUND PROCESS INTERFACE																												
UPGRADE FIELD (FORSCOM)																												
UPGRADE FIELD (INSCOM)																												

REQUIREMENTS DOCUMENT: Materiel change to GUARDRAIL; ROC approved, 1979.

TYPE CLASSIFICATION:

IGR V IS AN AIRBORNE COMINT COLLECTION/LOCATION SYSTEM.

PL. NUMBER

AN/USD-88, GUARDRAIL/COMMON SENSOR (GR/CS)

PRODUCT MANAGER: LTC Andrew Fallon, DSN 996-5211
COMN 908/544-5211

PE & LINE #: 3.58.856; SSN: A02005 & AZ2000

DESCRIPTION: GR/CS is a Corps Level Airborne Signal Intelligence (SIGINT) collection/location system. GR/CS integrates the Improved GUARDRAIL V (IGR V), Communications High Accuracy Airborne Location System (CHAALS), and the Advanced QUICKLOOK (AQL) into the same SIGINT platforms. One GR/CS system is authorized per Aerial Exploitation Battalion (AEB) in the MI Brigade at each Corps. Each system consists nominally of twelve aircraft which normally fly operational missions in sets of three. However, budget limitations presently permit procurement of only nine aircraft per system. GRCS provides near real-time SIGINT and targeting information to Tactical Commanders throughout the corps area with emphasis on Deep Battle and Follow-on Forces Attack support. The airborne elements are integrated into the RC-12K aircraft. Ground processing is conducted in the Information Processing Facility (IPF). Interoperable Data Links (IDL) provide microwave connectivity between the airborne elements and the IPF. Reporting is accomplished via Commanders Tactical Terminals (CTT). Key features include integrated COMINT and ELINT reporting, enhanced signal classification and recognition, fast Direction Finding (DF) and precision emitter location. Preplanned product improvements include frequency extension, computer assisted on-line sensor management, upgraded data links and the capability to exploit a wider range of signals.

HISTORICAL BACKGROUND:

Jan 79 - TRADOC Statement of Need.
Oct 80 - JSOR.
Jun 84 - Contract award for GR/CS Systems 3 and 4.
Mar 86 - Critical Design Review.
Feb 88 - Awarded Maintenance Trainer Contract (competitive); released AQL RFP (competitive).
Sep 88 - AQL Production contract award (competitive)
Dec 88 - GRCS (minus) fielded to Korea.
Jun 89 - RC-12K Production award (System 1).
Sep 89 - CHAALS Production award.
Dec 89 - RC-12K option added.
Aug 90 - GR/CS Systems 1 and 2 Airborne Relay Facility (ARF) Production contract awarded.
Sep 90 - GR/CS Systems 1 and 2 IPF Production contract awarded.
Aug 91 - GR/CS System 4 fielded to USAREUR.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
SYSTEM INTEGRATION CONTRACT (INCLUDES IPF & PAYLOADS)																												
RC-12K PRODUCTION CONTRACT																												
FIELDINGS																												

NOTE: Lines indicate need for follow-on contracts.

REQUIREMENTS DOCUMENT: ROC approved 1 Oct 84, updated Nov 85.

TYPE CLASSIFICATION:

GR/CS IS A CORPS LEVEL AIRBORNE SIGINT COLLECTION/LOCATION SYSTEM.

PH, EN/RSTA

AN/VLQ-(), STINGRAY COMBAT PROTECTION SYSTEM

PROJECT OFFICER: LTC Joseph Kitchell, DSN 996-5489
COMM 908/544-5489

PE & LINE #: 64270.D540

DESCRIPTION: STINGRAY Combat Protection System (CPS), AN/VLQ-(), is an electro-optical countermeasures system for the area protection of ground combat vehicles. STINGRAY will be developed as an adjunct to the Bradley Fighting Vehicle Systems (BFVS) and has potential application to a variety of other current and future platforms (e.g., other tracked vehicles, wheeled vehicles, light armored vehicles). Additional details concerning the STINGRAY program are classified. The present acquisition strategy is to develop as fieldable prototypes, six systems as adjuncts to the Bradley Fighting Vehicle. These systems will be placed in operational usage to support operational testing and training/doctrine evaluation. STINGRAY's principal operational use is as a countermeasures system and it is functionally categorized as an electronic warfare system. STINGRAY is the most mature program of its type in the DOD community and has strong support in Congress, OSD and HQDA.

HISTORICAL BACKGROUND:

Sep 82 - Awarded competitive advanced development contract to Martin Marietta Corp.
Jan 85-Apr 87 - Completed 27 months DT testing.
Mar 88 - AMSAA IER supports going into FSD.
Sep 88 - AMSAA completed One-on-one Analysis.
Aug 89 - TRADOC completed Phase I COEA.
Jul 91 - ASARC Milestone II approved.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
DAB																												
DEMONSTRATION/VALIDATION (SIX FIELDABLE PROTOTYPES)																												
FIELDING																												

NOTE: Assumptions to meet DA guidance and achieve accelerated LRIP schedule.

REQUIREMENTS DOCUMENT: ROC approved Apr 90.

TYPE CLASSIFICATION:

STINGRAY CPS IS AN ELECTRO-OPTIC PROTECTION OF GROUND COMBAT VEHICLES.

PM, EW/RSTA

COMMANDERS TACTICAL TERMINAL (CTT)

PRODUCT MANAGER: LTC Andrew Fallon, DSN 996-5211
COMH 908/544-5211

PE & LINE #: SSN: V29600

DESCRIPTION: CTT is a secure intelligence reporting device. The system includes airborne relay equipment installed in the GUARDRAIL/Common Sensor (GR/CS) and TR-1 platforms, ground terminals, and a security data system. CTT is deployed at the Corps, Division, Brigade and EAC level. It is a component of the GR/CS system and will replace the obsolete reporting devices used on the earlier variants of GUARDRAIL. CTT sends perishable intelligence reports from GRCS and the Air Force's TR-1 to remote ground locations. It allows field users to receive and request information from GRCS and the TR-1. CTT has anti-jam and automatic retransmission capabilities and is a key link in the air/land battle future. To prevent proliferation of multiple nonstandard dissemination devices in the force structure, CTT is being upgraded to incorporate the capability to operate in the Tactical Information Broadcast System (TIBS) and Tactical Data Information Exchange System (TADISX) Intelligence Demonstration Networks. A receive only version of the upgrade will be fielded to support those users with operational, weight, and/or power limitations. In addition, a 3 channel program upgrade is projected to commence 3QFY92 with multi-service commonality and interoperability.

HISTORICAL BACKGROUND:

Jun 83 - JSOR approved.
Jul 84 - Engineering Development contract awarded (USAF lead).
Feb 88 - Completion of Multiservice Test and Evaluation.
May 88 - LRIP decision approval.
Aug 89 - LRIP contract award.
Sep 89 - Contract management transfer from USAF to Army.
Nov 90 - "System High" (NSA accreditation requirements) completed.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
HARDWARE BUILD																												
DELIVER																												
LOGISTICS: ILS DATABASE DE																												
V&V																												
UPDATE																												
TEST EFFORT: FAT																												
TT																												
UT																												
TYPE CLASSIFICATION STANDARD																												
MILESTONE III																												
PRODUCTION AWARD																												
FIELDING (LRIP AND PRODUCTION)																												
FULL SCALE PRODUCTION																												

REQUIREMENTS DOCUMENT: JSOR approved Jun 83 (update to include CTT/H and CTT/H-R in approval cycle).

TYPE CLASSIFICATION: Scheduled for 3QFY93.

CTT IS A SECURE INTELLIGENCE REPORTING DEVICE.

PM JSTARS

PH. JSTARS

AN/TSO-132. JOINT STARS RADAR GROUND STATION MODULE (GSM)

PROJECT MANAGER: COL JAMES MITCHELL, DSN 996-5165
COMN 908/544-5165

PE & LINE #: 64770.D202; SSN: BA1080

DESCRIPTION: Joint Star (JS) Radar GSM is a Mobile Multisensor Imagery Intelligence (IMINT) Tactical Data Processing and Evaluation Center. GSM is a subcomponent of a joint Army/Air Force program whose other major component is the E-8 airborne platform. JS system is designed to detect, locate and track moving and stationary equipment ground targets located beyond the FLOT. GSM disseminates intelligence and target data to Army C3I nodes via wire or radio enabling integrated battle management, surveillance, targeting and interdiction plans to be developed/executed using near real-time data. Currently, there are three GSM configurations, all mounted on Army standard five-ton trucks. Variations among the three configurations are the result of user requirements and state-of-the-art technology at the time of fielding. The configurations are: 1) an Interim JS GSM (IGSM) (currently in FSD); 2) a Limited Procurement Urgent (LPU) GSM designed for service with the Army's AN/UPD-7, Side Looking Radar Surveillance System; and 3) a NATO GSM (NUNN initiative) procured for interoperability demonstrations with the U.K. and France. In FY88, GSM program was restructured to capture all user requirements, to synchronize GSM and E-8 fieldings, and field GSMs in time to support other programs. In order to achieve these objectives, the existing IGSM will be enhanced in a phased effort (Block I, II, and IIA). Block I improvements entail open systems architecture using standard industry computer modules, increased operational capabilities and enhanced modularity of line replaceable units for commonality/standardization for subsequent export to other Intelligence and Electronic Warfare systems. Extensive Manpower and Personnel Integration (MANPRINT) design objectives (for example the use of new and user friendly Man-Machine Interface (MMI)) are being incorporated. Block II improvements involve integrating the Block I mission equipment and functions into an Electronic Fighting Vehicle System Bradley Fighting Vehicle (BFV) chassis, to meet Nuclear, Biological, Chemical. Block IIA improvements integrate Block I mission equipment and functions into a MPMV for light forces operational capability.

HISTORICAL BACKGROUND:

May 82 - USRE directed joint program combining AF PAVE MOVER and Army's SOTAS programs.	Aug 89 - First combined E-8 Aircraft/Radar/GSM operation.
Sep 87 - LPU contract awarded for nine GSMs.	Sep 89 - FSD contract award for four Block I GSMs.
Sep 88 - GSM O&O approved.	Jul-Oct 90 - Nine LPU GSMs fielded.
Jan 89 - Revised GSM ROC released.	Oct 90 - Operational Field Demonstration 1 (OFD-1).
Mar 89 - Revised Joint STARS JSORD released.	Nov 90 - GSMs fielded to Operation Desert Shield.
	Dec 90 - One LPU GSM fielded to US Army Intel Ctr School.
	Apr 91 - FSD systems returned from Operation Desert Storm.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
FIELDING/FUE																												
BLOCK I: ENG MANUFACTURING DEV (END)																												
MS III																												
PRODUCTION																												
FIELDINGS																												
BLOCK II: END																												
PRODUCTION																												
FIELDINGS																												
BLOCK IIA: END																												
PRODUCTION																												
FIELDINGS																												

REQUIREMENTS DOCUMENT: ARDS MOU; ROC, Apr 86; JSOR, Jun 86; Revised ROC, Jan 89.

TYPE CLASSIFICATION: LPU, Dec 86; IGSM LTP 4QFY92; GSM-Block I 2QFY93; GSM-Block II, 1QFY96; GSM-Block IIA, 1QFY95.

JS RADAR GSM IS A MOBILE MULTISENSOR IMINT TACTICAL DATA PROCESSING AND EVALUATION CENTER.

PM NVEO

PH. NVED

AN/AVS-6. AVIATION NIGHT VISION IMAGING SYSTEM (ANVIS)

PROJECT LEADER: Mr. Andy Hermann, DSN 656-3280
COMM 703/806-3280

PE & LINE #: SSN: K35601

DESCRIPTION: AN/AVS-6 is a lightweight, high performance passive third generation image intensifier system designed specifically for use by helicopter pilots during night flights including Nap-of-the-Earth (NOE) missions. ANVIS is designed to recognize terrain obstacles at an altitude of 200 feet and below, at a maximum speed of 150 knots and at light levels down to overcast starlight. The system mounts on an SPH-4 helmet using a mount assembly that replaces the normal visor. When not in use the binocular assembly can be flipped up and/or easily removed from the helmet if necessary. ANVIS consists of a binocular system with each monocular unit comprised of an objective lens assembly, an 18mm (MX10160) third generation image intensifier tube assembly and an eyepiece assembly. Fielding is two per attack helicopter (AH-1 only), three per utility helicopter, four per cargo helicopter (CH-47) and two per scout helicopter.

HISTORICAL BACKGROUND:

1982 - Two first Production contract awards (totaling 2210 units).
1985-89 - Five-year Multiyear contract awarded to ITT, Varo for 6037 units. All units delivered issued to aviators.
1986 - First Unit Equipped.
May 88 - Govt won protests that were presented by Varian and Litton on Dec 87 ITT contract award.
May 89 - Awarded emergency MX10160 Spare Tube Buy to Varian (1680 tubes).
Aug 89 - Awarded additional MX10160 Spare Tube contract to ITT (3500 tubes).
30FY89 - Increased funding for \$7M in FY90 and FY91 authorized to accelerate production.
1989 - San Francisco earthquake (Varian) caused slight production delays.
Dec 89 - Completed corrections for humidity problem.
Feb 90 - 100% phase-in of improved fiber optics to correct distortion problem.
Mar 90 - OMNIBUS II contracts awarded to ITT (6022 units) and EOS (formerly Varian, 4019 units).

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PRODUCTION (OMNIBUS II)					I																							
OMNIBUS III: RFP					I																							
AWARD					I																							
DELIVERIES									I				I															

REQUIREMENTS DOCUMENT: MIL-A-49425, MIL-A-49426, MIL-A-49427, MIL-A-49428 and MIL-A-49429.

TYPE CLASSIFICATION: Standard, Sep 82.

ANVIS IS A LIGHTWEIGHT, HIGH PERFORMANCE PASSIVE THIRD GENERATION IMAGE INTENSIFIER SYSTEM DESIGNED SPECIFICALLY FOR HELICOPTER PILOTS DURING NIGHT FLIGHTS INCLUDING NOE MISSIONS.

PL 1800

AN/PAQ-48. INFRARED AIMING LIGHT

PROJECT LEADER: Mr. Tim McCaffery, DSN 666-3280
COMN 703/806-3280

PE & LINE #: SSN: K35000

DESCRIPTION: AN/PAQ-48 is an infrared aiming light which is attached to the M16 (A1, A2) Rifle, M60 Machine Gun, M67 Recoilless Rifle and the M72 Rocket Launcher. AN/PAQ-48 sends out an invisible pulsing light beam along the line-of-sight. The light beam can be seen only with night vision equipment, such as the AN/PVS-7 Night Vision Goggles. Visible only with night vision goggles, the projected spot of light appears at the exact point where the weapon is aimed. The fired round impacts in the center of the spot of light on the target when properly bore-sighted. Fielding is two per infantry squad.

HISTORICAL BACKGROUND:

1979 - First Production contract award for 1156 units (\$625 each).
1982 - First Unit Equipped; units sent to SOF.
Feb 89 - SOUTHCOM requested units for mission requirements; Production contract awarded to Insight Technology.
Mar 92 - Production award (multiyear buyout).

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
FOLLOW-ON PRODUCTION					1												1											

REQUIREMENTS DOCUMENT:

TYPE CLASSIFICATION: Standard, FY80.

AN/PAQ-4A IS AN INFRARED AIMING LIGHT WHICH IS ATTACHED TO THE M16 (A1, A2) RIFLE, M60 MACHINE GUN, M67 RECOILLESS RIFLE AND THE M72 ROCKET LAUNCHER.

PM, NVEO

AN/PAS-13, THERMAL WEAPON SIGHT (TWS)

PROJECT OFFICER: Mr. Paul Laster, DSN 656-3277
COMM 703/806-3277

PE & LINE #: 64710.DL70; SSN: K22900

DESCRIPTION: TWS is a class of low cost, light weight, infrared imaging devices of medium to high resolution to be used for fire control of individual and crew served weapons during both daylight and darkness. TWS will operate in adverse weather and battlefield scenarios containing light foliage, smoke, dust and camouflage. TWS will provide early warning, enhance the security of defensive positions, and facilitate offensive operations. System will be deployed world-wide. TWS replaces AN/PVS-4 and AN/TVS-5 weapon sights. Fielding is three per infantry squad, infantry and other select units.

HISTORICAL BACKGROUND:

- 1980 - Advanced Focal Plan Technology for TWS successfully demonstrated with Bench Top Imagery.
- 1981 - Advanced Development contracts were awarded to Hughes Aircraft Co. (HA) and Rockwell International (RI).
- 1983 - Night Imaging Thermal Equipment (NITE) LOA for TWS.
- 1986 - Cost to complete awarded to HA; RI terminated.
- 1987 - Four AD units delivered; DT/OT I initiated and completed.
- 1989 - AP approved; O&O Plan approved; Encompasses TWS and Short Range Thermal Sight (SRTS) capabilities; SRTS/TWS Thermal technologies successfully demonstrated in Panama under full jungle canopy per SOUTHCOM request.
- 1990 - Engineering and Manufacturing Development (END) contract awarded.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
END									I																			
DT/OT II					I				I																			
IPR III/TC STD													I															
PRODUCTION CONTRACT AWARD													I															

REQUIREMENTS DOCUMENT: ROC approved, 1990.

TYPE CLASSIFICATION: Anticipated 4QFY94.

TWS IS A CLASS OF LOW COST, LIGHTWEIGHT, INFRARED IMAGING DEVICES OF MEDIUM TO HIGH RESOLUTION TO BE USED FOR FIRE CONTROL OF INDIVIDUAL AND CREW SERVED WEAPONS DURING BOTH DYLIGHT AND DARKNESS.

AN/PVS-4

AN/PVS-4, INDIVIDUAL SERVED WEAPON SIGHT

PROJECT LEADER: Mr. Tim McCaffery, DSN 656-3280
COM 703/806-32809

PE & LINE #: SSN: K41500

DESCRIPTION: AN/PVS-4 provides passive sighting and viewing of targets using second generation image intensifier techniques. When mounted on individual weapons, the scope will provide the capability for delivery of accurately aimed fire during hours of darkness. The system is easily installed and removed from the weapon using suitably designed brackets which require no modification to the weapon. A protective objective daylight cover provides the capability for daylight boresighting of the weapon. AN/PVS-4 is primarily designed for use with the M14 and M16 Rifles, M60 Machine Gun, M249 Squad Automatic Weapon, M72A1 Rocket Launcher and M203 Grenade Launcher. The system is supplied with a suitable shipping case which protects the system. The sight can be used in the hand-held mode for night surveillance. Fielding is two per infantry squad.

HISTORICAL BACKGROUND:

1976 - First Production contract award.
1978 - First Unit Equipped (47,074 units procured).
1985-1989 - Total of 16,927 devices produced and deployed to Army units.
1990-1992 - OMNIBUS II award of 24,776 devices for deployment to Army units.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
OMNIBUS II PRODUCTION																												
OMNIBUS III PRODUCTION					1																				1			

REQUIREMENTS DOCUMENT:

TYPE CLASSIFICATION: Standard, FY77.

AN/PVS-4 PROVIDES PASSIVE SIGHTING AND VIEWING USING SECOND GENERATION IMAGE INTENSIFIER TECHNIQUES AND THE ABILITY TO ACCURATELY AIM FIRE DURING HOURS OF DARKNESS.

PM, NVEO

AN/PVS-7, NIGHT VISION GOGGLES

PROJECT OFFICER: Mr. Mike Etzinger, DSN 656-4276
COMM 703/806-4276

PE & LINE #: SSN: K36400

DESCRIPTION: AN/PVS-7 is a lightweight, high performance passive third generation image intensifier system. The goggle assembly is a headmounted self contained night vision system containing one monocular unit consisting of an objective lens assembly, an image intensifier tube and an a binocular eyepiece assembly. The frame is mounted to a face mask assembly which is held by head straps to the user's head. The assembly incorporates an infrared (IR) light source which provides illumination, to permit close-in-viewing. Fielding is 5 per Infantry squad, battalion and 298 to combat support/combat service support units. AN/PVS-7 is a single tube Image Intensifier tube system which replaces the earlier AN/PVS-5 binocular second generation image intensifier goggle. All AN/PVS-7 systems are presently being delivered with third generation tubes (MS-10130).

HISTORICAL BACKGROUND:

Sep 85 - NDI Procurement contract for AN/PVS-7.
Feb 88 - Initial fielding to 7th ID Ft. Hood.
Dec 89 - Delivered 43846 units (Army).
Feb 89 - Life Cycle Cost Study indicated no preference for AN/PVS-7A or AN/PVS-7B.
Oct 89 - ITT/Varo and Litton delivered Level III TDPs to Government at no cost.
Mar 90 - Three-year Production contract awarded.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
OMNIBUS II PRODUCTION																												
OMNIBUS III: RFP AWARD DELIVERIES																												

REQUIREMENTS DOCUMENT: TRADOC ACN 36829, 21 Jan 82.

TYPE CLASSIFICATION: Standard, Feb 88.

AN/PVS-7 IS A HEADMOUNTED SELF CONTAINED NIGHT VISION GOGGLE FOR CLOSE-UP VIEWING BY THE INDIVIDUAL SOLDIER TO PERFORM TASKS AT NIGHT.

AN/TVS-5. CREW SERVED WEAPON SIGHT

PROJECT OFFICER: Mr. Tim McCaffery, DSN 666-3200
COM 703/806-3200

PE & LINE #:

DESCRIPTION: AN/TVS-5 provides sighting and viewing of targets using second generation image intensifier techniques. When mounted on crew served weapons, the scope will provide the capability for delivery of accurately aimed fire during hours of darkness. AN/TVS-5 is primarily designed for use with the M2 and M60 Machine Gun and the 106mm Recoilless Rifle. The system is supplied with a suitable shipping case which protects the system. The sight can be used in the handheld mode for night surveillance by individual soldiers, commanders and reconnaissance elements. Fielding to Army units is complete. The Army is no longer procuring the second generation AN/TVS-5 weapon sight. Supplement/replacement system is the AN/PAS-13, Thermal Weapon Sight (TWS). However, we will continue to produce this device in support of other U.S. requirements, predominantly the U.S. Marine Corps.

HISTORICAL BACKGROUND:

1976 - First Production contract award.
1978 - First Unit Equipped.
1985-1989 - OMNIBUS Multiyear contract in effect for USMC requirements (856 units).
1987-1990 - MINIBUS Multiyear contract in effect for other DOD requirements.
Feb 1991 - Contract award for Operation Desert Storm requirements (2138 units).
1QFY91-92 - Desert Storm procurement.

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
OMNIBUS III PRODUCTION																												

REQUIREMENTS DOCUMENT:

TYPE CLASSIFICATION: Standard, FY77.

AN/TVS-5 PROVIDES SIGHTING AND VIEWING USING SECOND GENERATION IMAGE INTENSIFIER TECHNIQUES AND PROVIDES THE CAPABILITY OF ACCURATELY AIMED FIRE DURING HOURS OF DARKNESS.

PH. INFO

AN/VVS-2, DRIVERS VIEWER

PROJECT OFFICER: Mr. Tim McCaffery, DSN 656-3280
COM 703/806-3280

PE & LINE #:

DESCRIPTION: Drivers Viewer, AN/VVS-2, enables a closed hatched vehicle to be driven under night conditions without active illumination. The area viewed is presented as a green image display. It is lightweight enough to be installed from within the vehicle and can be manually rotated from between 30° to 45° depending on the vehicle in which it is to be mounted. Drivers Viewer is presently being installed in the Bradley M1 and M60 Tanks. Future plans also include purchase of VVS-2 for M113 and M109 vehicles. Fielding is one per tracked vehicle. This system will be replaced or supplemented in the M1A2 and M2/M3 vehicles by the Drivers Thermal Viewer.

HISTORICAL BACKGROUND:

1976 - NVEOC first Production contract award.

1978 - First Unit Equipped.

1985-1989 - Five-year OMNIBUS I contract awarded ITT/Varo for 11,418 units; all units delivered to date have been installed in tracked/combat vehicles.

1990-1992 - Three year multiyear contract awarded to IND/VARO for 3720 units.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
OMNIBUS II PRODUCTION									1																			
OMNIBUS III PRODUCTION					1																				1			

REQUIREMENTS DOCUMENT:

TYPE CLASSIFICATION: Standard, FY77.

AN/VVS-2 ENABLES A CLOSED HATCH VEHICLE TO BE DRIVEN UNDER DARK NIGHT AND STARLIGHT CONDITIONS WITHOUT ACTIVE ILLUMINATION.

PH. 1102

MINI EYESAFE LASER INFRARED OBSERVATION SET (MELIOS)

PROJECT OFFICER: Mr. Richard Renairi, DSM 656-3277
COMN 703/806-3277

PE & LINE #: 464710.DL70; SSN: B53800

DESCRIPTION: MELIOS will provide the individual soldier with accurate range determination to provide target acquisition data for direct and indirect weapons systems. MELIOS will replace the AN/GVS-5 Laser Infrared Observation Set. AN/GVS-5 is not eyesafe. MELIOS is designed for ranges out to 10km with plus or minus 5m accuracy. It operates in the eyesafe wavelength region allowing maximum use by units in training and tactical exercises. It will increase first round hit probabilities during battlefield engagements, expedite target acquisition and provide accurate ranges for Ground-to-Air Defense. It will enhance the effective conduct of reconnaissance, surveillance and terrain navigation. It will be carried in a small, water resistant padded pouch that is attachable to the soldier's web gear. Fielding is one per infantry squad, other distribution to combat, SOF and combat support units to be determined.

HISTORICAL BACKGROUND:

- Jul 81 - LOA approved.
- Mar 82 - Decision to pursue Eyesafe System in response to user's strong desire for eye safety.
- Sep 83 - Two CPFF contracts awarded.
- Jul 85 - OT-I successfully completed.
- Dec 85 - OT-I successfully completed.
- Feb 87 - ROC approved.
- Sep 88 - DPPD contract award.
- Jun 89 - Contractor indicated technical difficulty with compass insertion.
- Jul 89 - Government Tiger Team established to assess compass issue.
- Aug 89 - Tiger Team determined compass insertion was high risk (cost, schedule and performance) and recommended removal of requirement pending further on-going evaluations as possible P3I effort.
- Sep 89 - Stop work order issued for compass work.
- Jan 91 - Compass vendors demonstrate ability to resolve technical difficulties.
- Apr 91 - OT-II successfully completed; efforts to insert compass/vertical angle measurement restarted.
- Dec 91 - Milestone III approval.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
PRODUCTION AWARD																												
FAT																												
FUE																												

REQUIREMENTS DOCUMENT: ROC, Feb 87.

TYPE CLASSIFICATION: Standard, 1QFY92.

MELIOS IS DESIGNED TO MEET ALL RANGING REQUIREMENTS OF THE INFANTRY AND SELECTED REQUIREMENTS OF OTHER BRANCHES AND SERVICES OUT TO RANGES OF 10KM WITH PLUS OR MINUS 5M ACCURACY.

PM RADAR

PH. RADAR

FIREFINDER SYSTEMS/PROGRAMS

PRODUCT MANAGER: LTC Paul Wolfgramm, DSN 996-5018
COMH 908/544-5018

PE & LINF #: BZ7325 - AN/TPQ-36
BZ7325 - AN/TPQ-37
64823.DL83 - BA5100, BA5120 (ATACS)
BZ7325 (FIREFINDER HMMV and Electronics Upgrade Program)

DESCRIPTION: The current FIREFINDER System is comprised of the AN/TPQ-36 Radar Set (Mortar Locating Radar) and the AN/TPQ-37 Radar Set (Artillery Locating Radar). These Radars are organic to separate infantry and armored brigades, to the Target Acquisition Battery of Division Artilleries (Div Arty), and/or Corps Target Acquisition Detachments. The FIREFINDER Radars are operational and were used to support Operation Desert Shield/Storm.

HISTORICAL BACKGROUND: Fielding and redeployments of the AN/TPQ-36 and AN/TPQ-37 Radars continue. Operational use and sustainment of fielded FIREFINDER continue.

A Block approach was used for identifying Product Improvements to the FIREFINDER systems. Four Product Improvements to implement minor improvements and corrections to existing deficiencies are in process and were at one time grouped as Block I. These Product Improvements are currently known as Materiel Change (MC) projects. They include: TACFIRE Upgrade MC; Water Entry Resolution MC; FIREFINDER Training Device Upgrade MC; and Backplane Wiring MC. A brief description and status of each MC follows:

TACFIRE Upgrade MC: TACFIRE Upgrade MC provides for the procurement in FY92 of 202 updated Circuit Card Assemblies (CCAs) which will make the FIREFINDER radars (AN/TPQ-36s and AN/TPQ-37s) compatible with the TACFIRE Version 10 Software and thereby enhance communications between FIREFINDER and other segments of the fire support/control community. The cost of this MC is \$4.3M in FY92. CCAs will be distributed to the field and installed by crew members.

Water Entry Resolution (WER) MC: WER MC provides for design and production of modification kits to resolve AN/TPQ-37 water entry deficiencies which create a safety problem for crew personnel and cause equipment degradation because of condensation and humidity. The design of the WER modification kit has been completed and tested. Fabrication of mod kits is scheduled for FY92 (\$3.3M are programmed for fabrication). SAAD will apply the mod kits in FY93.

FIREFINDER Training Device Upgrade MC: FIREFINDER Training Device Upgrade MC provides for upgrading the existing FIREFINDER training devices located at Ft. Sill, OK. This MC will upgrade training software so that it is consistent with the latest radar configurations. Also, obsolete Training Device hardware which is causing maintainability problems will be replaced. Computer software/hardware has been procured and delivered (installed) is anticipated in 4QFY91 and early FY92. Total cost of this MC is \$5.0M, with most of the funds obligated in FY89 and FY90.

Backplane Wiring MC: Backplane Wiring MC provides for changing the backplane wiring thereby modifying the control logic of the signal processor. This will correct fault indication problems which are being exhibited by the AN/TPQ-36 and AN/TPQ-37 radars. This MC was funded (\$464K) in FY90. Application of wiring changes will be accomplished by SAAD starting in 3QFY91 and completed in FY92.

Originally grouped as Block II, were two Product Improvement projects. One project, identified as Block IIA S 1le Vehicle (5-ton) AN/TPQ-36, has been cancelled. The second Block II project has been restructured into two Materiel Change Programs. The two Materiel Change Program Packages to improve the AN/TPQ-36 radars have been developed. The Materiel Change, for the AN/TPQ-36 HMMV Configuration Program, has already been approved by the PEO, IEM. The second Materiel Change, for the AN/TPQ-36 Electronics Upgrade Program, has been forwarded by the PM, RADAR for approval by the Army Acquisition Executive.

A new requirement for an Advanced Target Acquisition Counterfire System (ATACS) to replace the existing AN/TPQ-37s is being developed.

The two existing radar systems (AN/TPQ-36 and AN/TPQ-37), the AN/TPQ-36 HMMV Configuration Program and AN/TPQ-36 Electronics Upgrade Program, as well as the ATACS Program are discussed on the following pages.

PH. RADAR

AN/TPQ-36. FIREFINDER MORTAR LOCATING RADAR

PRODUCT MANAGER: LTC Paul Wolfgramm DSN 996-5018
COMN 908/544-5018

PE & LINE #: SSN: BZ7325

DESCRIPTION: FIREFINDER AN/TPQ-36 locates both enemy mortar and artillery weapons systems. It consists of an Operations Control Group (OCG) mounted on an M-35 2-1/2 ton Truck, an Antenna Transceiver Group mounted on an M-103 series Trailer, and the AN/MJQ-25 power unit (two MEP112s, 10Kw, 400Hz, diesel generators) mounted on an M-103 1-1/2 ton Trailer. Three AN/TPQ-36 radars are assigned to a division Target Acquisition Battery and are normally complemented by two AN/TPQ-37 Artillery Locating Radars. FIREFINDER AN/TPQ-36 is a highly mobile phased-array radar which automatically and accurately locates mortars, artillery and short range rocket launchers. Materiel changes to increase mobility, decrease emplacement/displacement time, and increase mobility have been approved or are under review.

HISTORICAL BACKGROUND:

Nov 71 - Materiel Need Statement for Mortar Locating Radars approved by HQ DA.
Oct 73 - Contract to Hughes Aircraft Company for five Engineering Development models.
Jun 77 - DT/OT-II.
Dec 77 - Full Scale Production (FSP) approved at ASARC-III; Materiel Need Statement approved/revalidated by HQ DA.
Aug 78 - Contract award (10 systems - Army).
Oct 78 - Early deployment (2 EDNs to Germany).
Jan 80 - First Article Test.
Dec 80 - First delivery; conditional acceptance.
Dec 81 - Follow-on Test and Evaluation accomplished at Ft. Hood.
Feb 83 - Initial Operational Capability (IOC), Europe.
Jul 83 - IOC, Korea; return of 2 ESHs from Germany.
Feb 84 - IOC, FORSCOM.
Feb 86 - IOC, USMC.
Jul 86 - Production complete (for U.S. forces).

REQUIREMENTS DOCUMENT: Materiel Needs Statement with changes, Jun 74.

TYPE CLASSIFICATION: Standard, Oct 79.

FIREFINDER BLOCK II PHASE II SHELTERLESS-CONFIGURED AN/TPQ-36 IS A MORTAR AND ARTILLERY LOCATING RADAR.

FIREFINDER RADAR HMMV CONFIGURATION

PROJECT MANAGER: LTC Paul Wolfgarm, DSN 926-5018
COM 908/544-5018

PE & LINE #: SSN: BZ7325

DESCRIPTION: FIREFINDER Radar HMMV Configuration will locate enemy mortar and artillery weapons systems. Major components are: the Operations Control Group (OCG), Antenna-Receiver GP (ATG), and two MEP112A2 10kw Diesel Generators. OCG is mounted on an M1037 HMMV which tows an M116A2 Cargo Trailer. A second M1037 HMMV carries an MEP112A Generator and tows the ATG mounted on an M116A2 Trailer. An M998 HMMV Reconnaissance Vehicle tows a second MEP112A Generator mounted on a third M116A2 Trailer. The radar will have a Modular Azimuth Positioning (MAPS) capability. Three FIREFINDER Radar HMMV Configurations will be organic to all active Army divisions. FIREFINDER Radar HMMV Configuration is a highly mobile phased array radar which automatically and accurately detects mortar, artillery, and shortrange rocket projectiles and determines the location of enemy weapon(s) which fired the projectile. FIREFINDER Radar HMMV Configuration will be operated and maintained by a six-man crew, and will meet transportability and airlift requirements and provide rapid mobility required for active Army Rapid Deployment Operations.

HISTORICAL BACKGROUND:

Mar 84 - VCSA approved Block concept.
Mar 84-Dec 85 - Program definition.
May 85 - TRADOC THEC approved PIPs.
Dec 85 - OMO Plan approved; PIPs for Block II (single vehicle) and Block III submitted.
Jul 86 - AMC MARB approved Block II.
Sep 88 - HQDA redefined Block II to include concept approval for FIREFINDER Radar HMMV Configuration.
Oct 88 - HQDA approved PIP for 23 units.
Jan 89 - THEC approved HMMV PIP.
Oct 89 - Block IIIB configuration requirements defined by TRADOC.
Apr 90 - DA MSG authority to proceed with Block IIB, HMMV.
Sep 90 - SAAD tasked to fabricate five FIREFINDER Radar HMMV Configuration preproduction models.
Oct 90 - Materiel Change approved by PEO-IEW.
Nov 91 - Fielding 7th ID.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PRODUCTION AWARD					-----																							
IOC																												

REQUIREMENTS DOCUMENT: Materiel Change 1-88-07-0004.

TYPE CLASSIFICATION: Standard, 2QFY92.

FIREFINDER RADAR HMMV CONFIGURATION, AN/TPQ-36, IS A MORTAR AND ARTILLERY LOCATING RADAR.

PM, RADAR

AN/TPQ-36, FIREFINDER ELECTRONICS UPGRADE

PRODUCT MANAGER: LTC Paul Wolfgramm, DSN 908-5018
COM 908/544-5018

PE & LINE #: SSN: 827325

DESCRIPTION: FIREFINDER Electronics Upgrade will be highly mobile, phased array radar which automatically and accurately detects mortar, artillery, and short range rocket projectiles and determines the location of the enemy weapon(s) which fired the projectile(s). Major components will be the shelterless Operations Control Group (OCG) Antenna-Transceiver Group (ATG), and two 100kW MEP 112A2 Diesel Generators. Three will be deployed to each active Army Division and one to each separate Infantry/Armored Brigade. Radar operations will be controlled by a laptop computer in conjunction with a flat panel display, hard disk drive, and a downsized signal processor. FIREFINDER will be operated and maintained by a six-man crew. The reconfiguration is a product improvement which will enhance probability of target location, increase program memory capability and processing speed, and decrease emplacement/displacement time.

HISTORICAL BACKGROUND:

Mar 84 - VCSA approved Block concept.
Oct 89 - Block IIB configuration requirements defined by TRADOC.
Jul 90 - DA authorized phasing of Block IIB.
Jan 91 - CCB concurred with AN/TPQ-36 MC package.
Feb 92 - Request for Proposal released.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
LRIP																												
FULL RATE PRODUCTION AWARD																												
MILESTONE III																												
FUE																												

REQUIREMENTS DOCUMENT: Materiel Change 1-90-07-0016.

TYPE CLASSIFICATION: FIREFINDER Electronics Upgrade will be type classified standard, 1QFY95.

FIREFINDER ELECTRONICS UPGRADE, AN/TPQ-36, IS A MORTAR AND ARTILLERY LOCATING RADAR.

AN/TPQ-37 FIREFINDER ARTILLERY LOCATING RADAR

PROJECT MANAGER: LTC Paul Wolffgramm, DSN 906-6018
COMN 906/544-5018

PE & LINE #: SSN: 8Z7325

DESCRIPTION: FIREFINDER AN/TPQ-37 is a mobile Phased Array Artillery Locating Radar System. The operations shelter is identical to that used with the AN/TPQ-36 and consists of an Operations Control Group mounted on an M-35 series Truck, and the MEP 115A 60kw, 400Hz Generator Set mounted on a five-ton Truck. This truck also tows the Antenna Transceiver Group consisting of the Phased Array Antenna, Transmitter, Receiver and associated electronics mounted on the MX-1048 Trailer, a six-ton four wheel flatbed Cargo Trailer. Two AN/TPQ-37s are assigned to the Target Acquisition Battery of each division and employed with the AN/TPQ-36. AN/TPQ-37 is larger than the AN/TPQ-36 and its target acquisition range is greater. The system uses a combination of radar techniques and computer controlled functions to detect and accurately locate enemy artillery and rocket weapons to permit rapid engagement with counterfire.

HISTORICAL BACKGROUND:

Jun 72 - DA approved Materiel Need Statement; contract Research and Development (R&D) award.
Nov 75 - DT/OT-I report.
Dec 76 - Low Rate contract award.
Feb 79 - Extended Low Rate contract award.
Dec 80 - DT-III Test report; IOC 1st Cav Div, Ft. Hood.
Jun 81 - OT-III Test report.
Feb 81 - ASARC IIIA.
May 81 - Full Scale Production (FSP) contract award.
Feb 83 - Initial Operational Capability (IOC) complete, Europe.
Jul 83 - IOC Korea.
Feb 84 - IOC FORSCOM, w/82nd ABN.
Feb 86 - Production complete, for U.S. Army.

REQUIREMENTS DOCUMENT: Mission Need Statement, 1 Jun 78.

TYPE CLASSIFICATION: Standard, 18 Feb 81.

FIREFINDER AN/TPQ-37 IS A MOBILE PHASED ARRAY ARTILLERY LOCATING RADAR SYSTEM.

PH. RADAR

ADVANCED TARGET ACQUISITION COUNTERFIRE SYSTEM (ATACS)

PROJECT MANAGER: LTC Paul Wolfgramm, DSN 996-5018
COM 908/544-5018

PE & LINE #: 64823.DL83; SSN: BA5100, BA5120

DESCRIPTION: ATACS is a program which is intended to modernize and extend range of the AN/TPQ-37 FIREFINDER Radar capability. It will be a strategically deployable, tactically mobile, long range, target acquisition system, which can operate in low to high intensity environment. Survivability, range, mobility, transportability, target processing capability or target identification capability to support the requirement of Air Land Battle-Future (ALB-F) will exceed that of the AN/TPQ-37. It will have enhanced survivability improved Electronics Counter Countermeasure (ECCM), self survey, increased range, and be able to identify target type while retaining and improving many of the positive capabilities of the present FIREFINDER system (i.e., target prioritization, zones, jam strobe, software/hardware side lobe cancelling location averaging, auto censoring and friendly fire capability). It is anticipated that ATACS will have a crew member following replacement.

HISTORICAL BACKGROUND:

This program has not been initiated to date.

REQUIREMENTS DOCUMENT: Draft O&O Plan, Mar 91; new ORD will be developed and staffed in FY93.

TYPE CLASSIFICATION:

ATACS WILL BE A STRATEGICALLY DEPLOYABLE, TACTICALLY MOBILE, LONG RANGE, TARGET ACQUISITION SYSTEM, WHICH CAN OPERATE IN LOW TO HIGH INTENSITY ENVIRONMENT.

FORWARD AREA GROUND SENSOR (GBS)

PRODUCT MANAGER: LTC Michael Howell, DSN 708-1673
COM 205/722-1673

PE & LINE #: 64820.DE10 SSN: WK5053

DESCRIPTION: The GBS is an NDI system capable of providing search and track functions against fixed and rotary wing aircraft. The GBS is a part of the Forward Area Air Defense (FAAD) System. There will be six GBS located in the Air Defense Battalion of all divisions. Each GBS will be netted with the Command, Control and Intelligence (C²I) network to report those targets it is tracking. In CONOPS, GBS will communicate directly to the Fire Control system of support FAAD weapons. Each GBS will incorporate the capability to provide the IFF function to identify friendly aircraft and will have Noncooperative Target Recognition (NCTR) technology to passively identify friendly and hostile aircraft.

HISTORICAL BACKGROUND:

1986 - JRMB approved MDR, II/IIIA.
Jun 89 - First Solicitation terminated.
Jun 90 - NDI Best Value RFP.
Sep 90 - Seven Proposals received.
Feb 92 - NDI development contract award.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
PRE-PRODUCTION CONTRACT		I							I																			
TESTING (PRODUCTION & PSI)									I			I				I					I							
LRIP										I							I											
FUE (*PRE-PRODUCTION)													I*					I										
FULL RATE PRODUCTION														I														

REQUIREMENTS DOCUMENT: FAAD GBS (ROC), Jan 88, revision 1 - Nov 89, revision 2 - Nov 90.

TYPE CLASSIFICATION: Milestone IIIA anticipated 3QFY94.

GBS WILL BE AN NDI SYSTEM CAPABLE OF PROVIDING SEARCH AND TRACK FUNCTIONS AGAINST FIXED AND ROTARY WING AIRCRAFT.

PH. RADAR

NON-COOPERATIVE TARGET RECOGNITION (NCTR)

PRODUCT MANAGER: Mr. Martin Shuhandler, DSN 996-5016
COM 908/544-5016

PE & LINE #: 64709.D356 NCTR-1 (FY90-91)
64709.D356 NCTR-4 (FY90-91)
64817.D356 NCTR-1 (FY92-on)
64817.D494 NCTR-4 (FY92-on)
64817.D495 NCTR-2

DESCRIPTION: NCTR devices provide positive identification of aircraft for air defense weapon systems operators. They are needed because air defense weapon systems can detect and engage targets at longer ranges than current systems can positively identify them. They complement cooperative IFF systems and permit operations at extended ranges while reducing the risk of targeting friendly aircraft. The devices consist of a sensor, processor and digital display deployed on an individual air defense weapon systems (FAADS and HIPADS). Two models are in development. They will be integrated into the AVENGER, GBS and HAWK weapons systems either individually or in combinations consistent with battlefield requirements.

HISTORICAL BACKGROUND:

Mar 90 - NCTR 4 Engineering and Manufacturing Development contract award.
Mar 91 - NCTR 1 Engineering and Manufacturing Development contract award.

EVENT SCHEDULE: NCTR 1

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
END AWARD: MODEL 2																												
LRIP AWARD: MODEL 1																												
MODEL 2																												
FRP AWARD: MODEL 1																												
MODEL 2																												
FUE																												

EVENT SCHEDULE: NCTR 4

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
END																												
HAWK INTEGRATION																												
MS III																												
FRP AWARD																												
FUE																												

REQUIREMENTS DOCUMENT: FAAD Capstone ROC, Jul 86; NCTR 4, ORD/ROC TAB, Mar 90.

TYPE CLASSIFICATION:

NCTR DEVICES PROVIDE POSITIVE IDENTIFICATION OF AIRCRAFT FOR AIR DEFENSE WEAPON SYSTEMS OPERATORS.

SMALL AEROSTAT SURVEILLANCE SYSTEM (SASS)

PRODUCT MANAGER: LTC(P) Nelson Johnson, DSN 229-5189
COM 703/349-5189

PE & LINE #:

DESCRIPTION: Small Aerostat Surveillance System (SASS) is a tethered aerostat carrying a multimode radar system for detection of air, sea, and ground targets. SASS consists of a 55,000 cubic foot helium filled aerostat carrying a modified AN/APG-66 radar. The aerostat tether is attached to a ground mooring system located either on the ground or on ship. The aerostat is designed to operate at altitudes from 1500 to 2500 feet and detect low flying aircraft, small vessels, and ground moving vehicles at extended ranges. A full complement of communications and navigation equipment is on board the SASS ship to assist in accurate target location and reporting of detected targets to interested command elements. The SASS is interoperable with the Grizzly Hunter and any other aircraft or UAV using a commercially available communications suite. The communications on SASS permit freeze frame video to virtually any location via military or commercial satellite, telephone, and UHF, VHF, or HF data links. Planned improvements include upgrading current radar performance against moving ground targets, militarizing selected components for ground based applications, upgrading the communications capabilities for interoperability, site surveillance capabilities, and integration of an ESM capability into each of the deployed ships. SASS I shipborne system is currently operating in support of an OCONUS low intensity conflict (LIC), counter narcotic (CN) mission. SASS II shipborne system is currently operating in support of DOD JTF-Four drug interdiction activities.

HISTORICAL BACKGROUND:

- Oct 84 - USCINCSO revised Statement of Need for Aerostat Systems.
- Jan 85 - Dep Sec Def established SASS program.
- Mar 86 - JCS decision to deploy SASS to Korea.
- Apr 86 - SASS I/SASS II ground-based versions deployed.
- May 89 - SASS I deployed OCONUS.
- Apr 90 - Shipborne SASS III option exercised.
- Jul 90 - Shipborne SASS II deployed to JTF-Four; Shipborne SASS II completed acceptance testing and is operationally deployed to JTF-Four.
- Oct 91 - Congressional director to transfer management of Coast Guard assets (SBA) to Army management.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
SASS I/II OPERATIONAL																												
SASS III OPERATIONAL																												
SBA TRANSFER																												
SBA OPERATIONS																												
MILESTONE DECISION FOR COMMON CONFIGURATION (5 SYSTEMS)																												
5 SYSTEMS OPERATIONAL																												
SYSTEMS UPGRADES																												

REQUIREMENTS DOCUMENT:

TYPE CLASSIFICATION: Limited Procurement Urgent, May 87.

SASS IS A TETHERED AEROSTAT CARRYING A MULTIMODE RADAR SYSTEM FOR DETECTION OF AIR, SEA, AND GROUND TARGETS.

PH. RADAR

GRISLY HUNTER

PRODUCT MANAGER: LTC(P) Nelson Johnson, DSN 229-5189
COMN (703) 349-5189

PE & LINE #:

DESCRIPTION: Grisly Hunter is an aircraft equipped with multiple sensors to detect, locate, recognize and/or identify land and water based targets. Primary sensors on board the aircraft are an Infrared Linescanner (IRLS), a Forward Looking Infrared (FLIR) system, and a day imaging system. Six Grisly Hunter systems are to be procured to meet an urgent OCONUS statement of need. The system is designed to operate in low intensity conflict environments, with emphasis on the detection, location, recognition, and/or identification of personnel and larger ground targets plus small vessels operating in protected waters. Per congressional guidance, the Grisly Hunter program was being combined with the Airborne Radio Direction Finding (ARDF) program to form a program called Airborne Reconnaissance Low (ARL). The initial production systems for both Grisly Hunter and ARDF will exercise their original respective designs, because of the similarities, with the intent of retrofitting the initial systems into a single production design. Some of the growth sensors under consideration include Moving Target Indicator (MTI) radars, Low-light Level Televisions (LLTV), multi-spectral cameras, and Synthetic Aperture Radar (SAR). (See ARL COMINT under PH, SW.)

HISTORICAL BACKGROUND:

Mar 87 - SON validated.
Mar 88 - Demo system solicitation issued; acquisition Plan approved.
Apr 88 - Demo system contract awarded.
Aug 89 - Demo aircraft participates in FAA search for a DC-10 rotor hub in Sioux City, IO.
Sep 89 - Demo aircraft received FAA certification.
Feb 90 - Grisly Hunter RFP released; Demo test report complete.
Mar 90 - OCONUS message revalidating requirements.
Apr 90 - JSC validation.
Mar 91 - Contracts awarded.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				1				1				1				1				1			
INITIAL SYSTEM ACQUISITION																												
OPTION FOR 3 MULTI-FUNCTION A/C																												
SYSTEMS DELIVERY																												

REQUIREMENTS DOCUMENT: USASOUTHCOM SON, Jun 90.

TYPE CLASSIFICATION: Limited Procurement, Urgent, May 90.

GRISLY HUNTER/ARL IS AN AIRCRAFT EQUIPPED WITH MULTIPLE SENSORS TO DETECT, LOCATE, RECOGNIZE, AND/OR IDENTIFY LAND AND WATER BASED TARGETS.

PM SW

PH. SN

AIRBORNE RECONNAISSANCE LOW (ARL)

PRODUCT MANAGER: LTC(P) Nelson Johnson, DSN 229-5189
COM 703/349-5189

PE & LINE #:

DESCRIPTION: ARL is an airborne day/night reconnaissance asset designed for Low Intensity Conflict/Counter Narcotics applications. ARL collects, processes, and disseminates intelligence in real-time. The system is designed for forward deployment. A total of three systems (three aircraft each) will be procured.

HISTORICAL BACKGROUND:

May 90 - Requirement identified by USASOUTHCOM Statement of Need.
Jan 91 - Sole Source RFP released.
Mar 91 - Contract awarded.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
OPERATIONAL DEMONSTRATION				I																								
SYSTEM DELIVERY (COMINT)				I																								
SYSTEM DELIVERY (ININT)					I																							
OPTION FOR THREE MULTI-FUNCTION A/C						I																						
SYSTEMS DELIVERY												I																

REQUIREMENTS DOCUMENT: USASOUTHCOM SON approved Jun 90.

TYPE CLASSIFICATION: LPU, May 90.

ARL IS A TACTICAL FIXED WING COMMUNICATIONS INTERCEPT AND DIRECTION FINDING SYSTEM.

PG. 20

**AN/PRD-12, LIGHTWEIGHT MANTRANSPORTABLE RADIO DIRECTION
FINDER SYSTEM (LNRDFS)**

MANAGER: Mr. John Holzman DSN 229-6816
COMN 703/349-6816

PE & LINE #: 3.58.85 (TCP); **SSN:** K06800

DESCRIPTION: LNRDFS is a mantransportable ground based communications intercept, processing, and direction finding system. It consists of a receiver/processor and antenna subsystems that can be deployed by two personnel. There are six AN/PRD-12 systems per Light Division and twelve systems per FORSCOM Special Forces SOD. A total of 110 systems are being procured for FORSCOM and TRADOC. Ninety-nine additional systems are being procured for the TEAMMATE HF frequency extension material change. The system searches for, intercepts, and provides for direction finding locations of enemy HF/VHF/UHF communications emitters. Ongoing materiel change increases the frequency range. The PRD-12 will interoperate with the TEAMMATE system via communications links in the direction finding mode.

HISTORICAL BACKGROUND:

Jun 86 - QRC Requirements document approved.
Dec 87 - Contract awarded.
Jun 89 - System confidence demonstration.
Aug 90 - Completed customer test at Fort Huachuca.
Nov 90 - Contract Modifications awarded to demonstrate frequency extension.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
PRODUCTION DELIVERIES																												
FIELDING		1																										

REQUIREMENTS DOCUMENT: QRC-59 approved by AEWIC.

TYPE CLASSIFICATION: LPI based on QRC-59, type classification standard scheduled 4QFY92.

LNRDFS IS A MANTRANSPORTABLE GROUND BASED COMMUNICATIONS INTERCEPT, PROCESSING, AND DIRECTION FINDING SYSTEM.

PH. SN

AN/TLQ-17A(V)3, TRAFFICJAM

PRODUCT MANAGER: Ms. Susan Baker, DSN 229-6814
COMM 703/349-6814

PE & LINE #: SSN: BA6101

DESCRIPTION: TRAFFICJAM is a tactical communications jammer. The original vehicle configuration for the AN/TLQ-17A(V)1 TRAFFICJAM system was deployed using two M151 vehicles (jeeps) and two M416 towed trailers. This configuration has safety limitations and jeeps are being purged from Army inventory. Consequently, the AN/TLQ-17A(V)1 is being reconfigured in CUCV and HMMV variants without trailers. The reconfigured system has a Log Periodic Array (LPA) antenna mounted on an S-250 shelter. The effort is basically repackaging of existing Army systems: vehicle, shelters, intercoms, environmental and power systems, radio sets, antenna masts and the jammer. TRAFFICJAM also provides the jamming subsystem used in QUICKFIX helicopter COMINT and jamming system. The airborne version is the AN/TLQ-17A(V)2. There are no further product improvements planned for TRAFFICJAM.

HISTORICAL BACKGROUND:

Mar 85 - PIP #1-85-07-0491 approved.
Apr 85 - AR 70-15 waived.
Aug 87 - Production started.
Oct 88 - First AN/TLQ-17A(V)3 (CUCV Version) fielding.
May 89 - CUCV Version fielding completed.
FY90-91 - HMMV fielding on-going. System deployed to Operation Desert Storm.

REQUIREMENTS DOCUMENT: PIP #1-85-07-0491.

TYPE CLASSIFICATION: Standard, Jul 88.

TRAFFICJAM IS A TACTICAL GROUND BASED AND AIRBORNE COMMUNICATIONS JAMMER.

TEAMMATE/GBCS-L IEW Common Sensor-Light (UFGS-1)

PRODUCT MANAGER: LTC Jeffrey Sorenson, DSN 229-7071
COMN 703/348-7071

PE & LINE #: 3.58.85 (TCP); **SSN:** BZ9752 (TH)
BZ7326 (GBCS-L)

DESCRIPTION: TEAMMATE/GBCS-L is a tactical ground based communications intercept, processing and direction finding system. TEAMMATE is mounted in a shelter carried on a CUCV. There are three TEAMMATE systems per Division, two systems per separate Bde/ACR and six per Corps. The system is used to search for, intercept, record, locate and report on radio signals in the HF/VHF/UHF frequency ranges. The system operates in a netted configuration for direction finding purposes. AN/TRQ-32(V)2 includes Data Link and KG-84 CONSEC to interoperate with processing centers. Ongoing material changes include addition of HF direction finding; an enhanced self location capability; a Host Interface Unit for connectivity with TCAC and ASAS; replacement of AN/VRC-47 with SINCGARS radio; and a feature to permit internetting with QUICKFIX for DF. Planned Block improvements will evolve TEAMMATE into the IEW Common Sensor-Light. This evolution is required to keep the fielded operational capability current with the threat. It will be built with an "open systems architecture" to accommodate rapid genealogy insertion and keep pace with changes in threat characteristics and will utilize common sensor sub-systems used in the family of IEW systems.

HISTORICAL BACKGROUND:

Jun 82 - Contract awarded.
Mar 84 - First Article Test (FAT).
May 84 - IOC for AN/TRQ-32(V)1.
Jul 85 - Materiel Release.
Mar 87 - FAT for the AN/TRQ-32(V)2 completed.
Jan 89 - DTSR Production and Integration contract awarded.
Apr 90 - AN/PRD-12 Integration contract awarded.
Sep 91 - EMD contract award (GBCS-L/AQF/GBCS-H).

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
TEAMMATE MATERIAL CHANGES																												
PRODUCTION																												
FIELDING																												
GBCS-L																												
SYSTEM INTEGRATION																												
PRODUCTION																												
FIELDING																												
BLOCK UPGRADES																												

REQUIREMENTS DOCUMENT: TEAMMATE ROC, Jun 74; OWS LP(U), May 90; GBCS-L ROC, Dec 90.

TYPE CLASSIFICATION: TEAMMATE, Standard-A (V1), Jul 85; Type classification standard, GBCS-L scheduled 2QFY95.

TEAMMATE/GBCS-L IS A TACTICAL GROUND BASED COMMUNICATIONS INTERCEPT, PROCESSING, AND DIRECTION FINDING SYSTEM.

PH. SW

AN/TSQ-138, TRAILBLAZER/GROUND BASE COMMON SENSOR-HEAVY (GBCS-H)

PROJECT LEADER: LTC Larry Arrol, DSM 229-6771
COMN 703/349-6771

PE & LINE #: 3.58.85 (TCP); SSN: 829751

DESCRIPTION: TRAILBLAZER is a high capacity ground based communications intercept, processing, and direction finding system. It is mounted in a shelter carried on a M1015 Tracked Vehicle which tows a Trailer Support Unit (TSU). AAO is for five TRAILBLAZER systems to be assigned to each Heavy division. A total of 68 systems were procured. The system is used to search for, intercept, record, identify, locate and report on radio signals in the HF/VHF/UHF frequency ranges. The system operates in a netted configuration and interoperates with the airborne QUICKFIX system for direction finding. Current block improvements include addition of: an enhanced self location capability; a digital temporary storage recorder; a Host Interface Unit for connectivity with TCAC, ASAS, and other Intelligence and Electronic Warfare Systems. The planned block improvement program to evolve TRAILBLAZER into the GBCS-H is required to keep the fielded operational capability current with the threat. GBCS-H will be fielded in increments of six-nine per division. These carriers with supporting HHMV trucks will replace the 34 trucks, trailers and tracked vehicles currently fielded in each heavy CEMI battalion to conduct SIGINT/EN operations. The system will be developed with an "open systems architecture" to accommodate rapid technology insertion to keep pace with changes in threat/target characteristics and will utilize common sensor subsystems used in the family of IEN systems.

HISTORICAL BACKGROUND:

Jul 85 - AN/TSQ-138 Production contract awarded.
Apr 88 - TRAILBLAZER/QUICK FIX interoperability demonstration.
May 88 - NDI contract for Prototype EFVS awarded.
Jul 88 - Block II EFVS CEP at Fort Huachuca successfully completed.
Aug 88 - FUE AN/TSQ-138.
Sep 90 - Fielding completed.
Sep 91 - EMPD contract award (GBCS-L/AQF/GBCS-H)

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				1				1				1				1				1			
BLOCK I - TRAILBLAZER: PRODUCTION FIELDING																												
BLOCK II - GBCS-H: SYSTEM INTEGRATION																												
PRODUCTION																												
FIELDING																												

REQUIREMENTS DOCUMENT: TRAILBLAZER ROC, Jun 84; GBCS-H ROC, Oct 90.

TYPE CLASSIFICATION: TRAILBLAZER, Standard, Sep 90; Type classification standard GBCS-H scheduled 2QFY95.

TRAILBLAZER/GBCS-H IS A HIGH CAPACITY GROUND BASED COMMUNICATIONS INTERCEPT, PROCESSING, AND DIRECTION FINDING SYSTEM.

SECRET

AN/TRD-27 TRACKWOLF

PRODUCT MANAGER: LTC J. A. Sorenson, DSN 229-7071
COM 703/349-7071

PE & LINE #: SSN: V18200

DESCRIPTION: TRACKWOLF is a mobile, ground based High Frequency (HF) skywave communications intercept and direction finding system. It consists of a Direction Finding Subsystem (DFS) and a Collection and Processing Subsystem (CPS). TRACKWOLF is an Echelon Above Corps (EAC) asset assigned to MI Battalions. The first of five required systems is currently being procured on a Quick Reaction Capability (QRC) basis. The second system, which is scheduled for procurement in FY92, will be reduced in number of shelters and downsized to fit on heavy HMMV's to satisfy rapid deployment mission requirements. The system capabilities include automated direction finding using single station location technology coupled with collection, processing, analysis and reporting functions. TRACKWOLF replaces the obsolete Operational Unit Transportable Systems (OUTS) which utilizes tube technology and does not possess the necessary mobility to be deployed on today's battlefield. TRACKWOLF DFS consists of AN/TRD-27 Direction Finding/Single Station Location Shelters and AN/TRQ-41 HF Sounder/Communications Shelters carried on standard five-ton trucks. CPS consists of AN/TRR-36 Communications/Signal Search Shelters, AN/TSY-1 Collection/Processing Shelters, and AN/TSX-1 Analysis Shelters also on standard Army five-ton trucks. The system will interoperate with EAC Intelligence/Electronic Warfare Analysis systems including TOPGALLANT/SSP-S/ASAS. A large portion of the mission equipment being procured is Non-Developmental Items (NDI) module originally developed by NSA for strategic sites.

HISTORICAL BACKGROUND:

Nov 86 - QRC Requirements document approved.
Sep 88 - Contract awarded.
May 89 - CDR conducted.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
10T&E																												
FIRST UNIT EQUIPPED																												
PRODUCTION AWARD (ENHANCED TRACKWOLF)																												
FIELDING (ENHANCED TRACKWOLF)																												

REQUIREMENTS DOCUMENT: QRC-60, Nov 86.

TYPE CLASSIFICATION: LPU, Nov 86.

TRACKWOLF IS A MOBILE GROUND BASED HF SKYWAVE COMMUNICATIONS INTERCEPT AND DFS EMPLOYED AT EAC.

PH, SN

EH-60A, QUICKFIX/ADVANCED QUICKFIX (AQF)

PRODUCT MANAGER: Mr. James Hunt, DSN 229-6768
COMN 703/349-6768

PE & LINE #: 6.47.20.DK12; SSN: AB3000

DESCRIPTION: QUICKFIX is a tactical helicopter communications intercept, direction finding, and jamming system. QUICKFIX consists of AN/ALQ-151 intercept and direction finding mission equipment, an AN/TLQ-17A communications jammer, and airborne self-protection equipment mounted in a modified UH-60A helicopter. The Army Acquisition Objective (AAO) is three systems per Division and Army Cavalry Regiment (ACR). A total of 66 systems were procured. The system is used to search for, intercept, record, locate, report on and jam radio signals in the HF/VHF frequency ranges. QUICKFIX systems interoperate with each other and TRAILBLAZER in a netted configuration for direction finding purposes. Current materiel changes include development of a Host Interface Unit (HIU) for connectivity with Tactical Commanders Analysis Center (TCAC) ASAS and development of features to permit netting with TEAMMATE for direction finding. This will dramatically improve performance in Light Divisions and ACRs. Block improvements will evolve QUICKFIX into the AQF. This evolution is required to maintain the fielded operational capability current with the threat. The improved system will be built with an "open systems architecture" to accommodate rapid technology insertion to keep pace with threat characteristics and will utilize common sensor subsystems in the IEW family of common sensors.

HISTORICAL BACKGROUND:

Apr 83 - YEH-60A Prototype delivered.
Sep 84 - Production contract awarded.
Feb 88 - First Unit Equipped.
Apr 88 - TRAILBLAZER/QUICKFIX interoperability demonstration.
Mar 90 - Product completed.
Jun 90 - Fielding completed.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
BLOCK I QUICKFIX: PRODUCTION FIELDING																												
BLOCK II AQF: SYSTEM INTEGRATION PRODUCTION FIELDING																												

REQUIREMENTS DOCUMENT: AQF ORD, Sep 91; QUICKFIX ROC, May 84. ROC, May 84.

TYPE CLASSIFICATION: Standard, Nov 77; Type classification standard AQF scheduled 2QFY95.

QUICKFIX/AQF IS A TACTICAL HELIBORNE COMMUNICATIONS, INTERCEPT, DIRECTION FINDING, AND JAMMING SYSTEM.

PROJECT OFFICER: Mr. John Holzman, DSN 229-8816
COMN 703/349-8816

PE & LINE: SSN: 829753

DESCRIPTION: TIGER system is a Net Radio Protocol (NRP) relay. It consists of a GRID 1535 computer, a MAGNAVOX NRP card, an ARC-164 Radio and KG-84 Crypto. The system is contained in a transistor case and can be powered from standard tactical vehicles or aircraft. There are six TIGERs per division and four per aircraft and separate brigade. The IEW sensors (i.e., TRAILBLAZER and TEAMMATE) communicate with Tactical Command and Control (TCAC) over an NRP data link. This link allows timely dissemination of critical battlefield intelligence data. The NRP data link is UNF and requires radio line of site to operate. This requires the sensor and the fusion system to be deployed relatively close together. The TIGER NRP relay allows the fusion system to be deployed at a more reasonable standoff distance and still communicate with the sensors. The TIGER system is also configured to allow for control and termination of the NRP data line if the TCAC is not deployed, or is being relocated.

HISTORICAL BACKGROUND:

Nov 88 - 108th MI BN tests a Prototype TIGER.
Dec 89 - 110th MI BN utilizes Prototype TIGER in REFORGER.
Mar 90 - ONS submitted for staffing.
Nov 90 - DA directs immediate procurement to support Operation Desert Shield; MAGNAVOX directed to produce TIGER.
Jan 91 - Initial deployment (Operation Desert Shield).

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				2				3				4				1				2			
PRODUCTION DELIVERIES																												
FIELDING																												

REQUIREMENTS DOCUMENT: ONS and HQDA message, Nov 90.

TYPE CLASSIFICATION: N/A

PH. SH

**COMMUNICATIONS HIGH ACCURACY LOCATION SYSTEM-X (CHALS-X)
PRECISION EMITTER LOCATION**

PRODUCT MANAGER: Mr. James Walker, DSN 229-6810
COMN 703/349-6810

PE & LINE #: 3.58.85 (TCP)

DESCRIPTION: CHALS-X delivers precision emitter locations. This capability is a break through in targeting technology that can be deployed in ground and airborne systems supporting Army divisions. It uses Time Difference of Arrival/Differential Doppler (TDOA/DD) techniques. This technology was originally developed as the Communications High Accuracy Airborne Location System (CHAALS) which is in production for the GUARDRAIL/Common Sensor (GR/CS) program. The technology is being further developed and adapted as a common subsystem for the IEW Family of CS. This capability builds upon the lessons learned through the CHAALS development process and provides extended frequency coverage and the capacity to locate Low Probability of Intercept (LPI) emitters. Production funding will be provided by the host CS programs.

HISTORICAL BACKGROUND:

- FY80 - Coherent Emitter Location Techniques using TDOA/DD demonstrated.
- FY81 - CHAALS Advanced Development contract to IBM awarded.
- FY84 - CHAALS Engineering Development contract to IBM awarded.
- FY88 - EDM system performance in GR/CS demonstrated.
- FY89 - CHAALS Production contract awarded; CHALS-X Architecture Study contract to IBM awarded.
- FY90 - CHAALS-X Developmental contract awarded.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PROTOTYPE DELIVERY								I																				
GR/CS INTEGRATION								I																				
EDM DELIVERY									I																			
FULL RATE PRODUCTION													I															
GR/CS FIELDING														I	I													
FIELDING (GBCS-H/AQF/GBCS-L)																	I											

REQUIREMENTS DOCUMENT: ROC for Host System (IEWCS-H, IEWCS-L, AQF).

TYPE CLASSIFICATION: Based on host systems.

CHALS-X IS A GROUND BASED AIRBORNE PLATFORM COMMUNICATIONS HIGH ACCURACY LOCATION SYSTEM WHICH DELIVERS PRECISION EMITTER LOCATIONS.

PROJECT SUMMARY

PROJECT MANAGER: Mr. L.J. VanSickle, DSN 229-8830
CDDN 703/349-8830

FE & LINE #: 0004270A.DK12; SSN: 827327

DESCRIPTION: HIU is a rack mounted IBM at based computing system implemented with a Versa Module Europe (VME) 6U architecture that will provide the necessary digital interpreters and operator support to enable IEM Systems to communicate digital data over the Enhanced Position Location Reporting System (EPLRS) and Net Radio Protocol (NRP) Networks. This capability will establish an interoperability among IEM sensor assets and the Tactical Control and Analysis Center/All Source Analysis System (TCAC/ASAS) to a level which previously had not existed. HIU is to function independently of the IEM System's mission computers, receiving and storing digital messages as they arrive from the various networks. Additionally, HIU shall provide the control functions for the TEAMMATE/QUICKFIX Interoperability Direction Finding (DF) Network.

HISTORICAL BACKGROUND:

Jun 89-Mar 90 - Proof of Principle.
Sep 90 - Design contract awarded.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
EMWD DELIVERIES																												
PRODUCTION																												
QUICKFIX INTEGRATION																												

REQUIREMENTS DOCUMENT: ROC, Oct 73.

TYPE CLASSIFICATION: Based on host system.

PM, SN

SANDCRAB

PROJECT OFFICER: Ms. Susan Baker, DSN 229-6814/6588
COMM 703/349-6814

PE & LINE #: SSN: BZ7327

DESCRIPTION: SANDCRAB is a Band One Communications Jamming system which utilizes the AN/TLQ-17A Tactical Communications Jammer and provides for an effective and efficient means of disrupting extremely high priority strategic command and control communications. The transmission propagation is effective against Skywave and Near Vertical Incident Skywave (NVIS) signals. SANDCRAB was originally produced to counter a specific Operation Desert Storm threat, however, it additionally provides a special ECM capability which could be used in other military applications.

HISTORICAL BACKGROUND:

Aug 90 - Requirement identified by INSCOM.
Sep 90 - System designed, built, and tested.
Oct 90 - NET completed.
Nov 90 - Hand-off to 201 MI Bn.
May 91 - Future requirements under consideration.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
FOUR ADDITIONAL SYSTEMS ENHANCEMENT																												

REQUIREMENTS DOCUMENTS: HQDA Letter of Authorization (LOA), Nov 90.

TYPE CLASSIFICATION: Standard (based on TLQ-17A), Jul 88.

SANDCRAB IS A HIGH FREQUENCY (HF) TACTICAL COMMUNICATIONS JAMMING SYSTEM.

TACJAW-A/TEAMMATE LOW PROBABILITY OF INTERCEPT COMMON IEW MODULES PROGRAM

PRODUCT MANAGER: Mr. Thomas Robertson, DSN 229-7085
COMN 703/349-7085

PE & LINE #: 6.42.70.DL12.3.58.85.TCP

DESCRIPTION: TACJAW-A was conceived as a product improvement to the AN/MLQ-34 system to expand the frequency range, to provide for a capability to intercept, process, or jam emerging signal types and to increase signal handling capacity. As the TACJAW-A program entered FSD, it was combined with the Army's TEAMMATE Low Probability of Intercept (LPI) program, which was developing a similar intercept, processing, and direction finding subsystem to be used against emerging signals types. The TEAMMATE LPI subsystem was to be applied via product improvements to fielded TRAILBLAZER and TEAMMATE COMINT systems. Now the integrated program is developing common modules (antennas, receivers, processors, direction finders and jamming transmitters) for use in the GBCS-H, GBCS-L, and ACS-O systems described elsewhere. This approach will yield significant savings in development, production and operational costs. It will also facilitate keeping pace with the threat through technology insertion in the family of IEW systems using common modules.

HISTORICAL BACKGROUND:

Feb 89 - ESM Preliminary Design review.
Jun 89 - Integrated Program developed. Phase II contract redirected toward common module development.
Aug 89 - ESM Critical Design review conducted.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
PROTOTYPE DELIVERY: ESM ECM			I				I																					
E&MD DELIVERY: ESM ECM																												
PRODUCTION: ESM ECM																												

ESM - Electronic Warfare Support Measures Subsystem; ECM - Electronic Countermeasures Subsystem.

REQUIREMENTS DOCUMENT: ROC, Jul 86.

TYPE CLASSIFICATION: Based on host system (GBCS-H/GBCS-L/AQF).

TACJAW-A/TEAMMATE IS AN INTEGRATED PROGRAM FOR PRODUCTION OF COMMON MODULES FOR USE IN THE IEW FAMILY OF COMMON SENSORS.

CECOM RD&E CENTER

C3 SYS DIR

CSFOTS 21

AN/GAC-4 OPTICAL COMMUNICATIONS SET FIBER OPTIC TRANSMISSION SYSTEM LOCAL DISTRIBUTION (FOTS (LD))

PROJECT OFFICER: Mr. James Wright, DSN 906-2819
COM 908/544-2819

PE & LINE #: 1C463707 0246

DESCRIPTION: FOTS (LD) is the term used for a Fiber Optic system that replaces CX-4566 (26-pair) metallic cable. The current FOTS (LD) model is the AN/GAC-4 Optical Communications Set. Two locations, up to 9km apart, can be connected with TFOCA (Tactical Fiber Optic Cable Assemblies) without repeaters by using an AN/GAC-4 Set at each end. An AN/GAC-4 installation/deinstallation takes minutes and is reversible. Once installed, the operation is fully automatic and transparent to the user. Each AN/GAC-4 Set mounts on a U-1858/6 26-pair connector normally found on shelters, junction boxes, and 26-pair cables. The AN/GAC-4 has been tested to interface with analog signals over the frequency range of 300 to 3400 Hz. Although not part of the most recent contract, Digital and Push-To-Talk interface capabilities have been developed by the contractor. Each AN/GAC-4 TFOCA combination provides many Fiber Optic benefits including the absence of ground loops and power line bum. The AN/GAC-4 contract was an Army program which built on the knowledge gained from a previous Joint Army/Air Force program, the TACTICAL GENERIC CABLE REPLACEMENT (TGR).

HISTORICAL BACKGROUND:

- Sep 82 - TGR contract award.
- Jun 87 - TGR Contract completed.
- Aug 87 - AN/GAC-4 Memorandum of Agreement between V Corps and CECOM signed.
- Sep 87 - AN/GAC-4 contract award to GTE Govt Systems.
- Oct 87 - Discussions with Signal Center representative on requirements development.
- Aug 88 - First AN/GAC-4 deliveries to V Corps.
- Jul 89 - Final AN/GAC-4 deliveries to V Corps.
- Sep 89 - AN/GAC-4 Demonstration with 25th Infantry Division (Light), Hawaii.
- Dec 89 - AN/GAC-4 Digital Demonstration with 22nd Sig Bde, V Corps; TFOCA Repair Training provided to 22nd Sig Bde.
- Apr 90 - AN/GAC-4 Demonstration with 82nd Sig Bn and 35th Sig Bde, Ft Bragg.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				1				1				1				1				1			
JOINT SPECIFICATION	I																											
DECISION REVIEW II	TBD																											

REQUIREMENTS DOCUMENT: O&O Plan for the fiber Optic Transmission System (FOTS), May 86.

TYPE CLASSIFICATION:

FOTS (LD) IS A GENERAL TERM USED FOR A FIBER OPTIC SYSTEM THAT REPLACES (CX-4566) 26-PAIR METALLIC CABLE.

C3 SYS DIR

CX-13295/G, TACTICAL FIBER OPTIC CABLE ASSEMBLY (TFOCA) AND ANCILLARY ITEMS

PROJECT OFFICER: Mr. Nick Karalekas, DSN 995-4784
COMH 908/544-4784

PE & LINE #: CUSTOMER

DESCRIPTION: TFOCA is utilized as a component of ground tactical fiber optic communications systems. These cable assemblies and ancillary items can be effectively utilized in deployment of ground tactical field communications systems which are lightweight, small in size, and which support dispersed operations due to extended non-repeatable transmission lengths. A completed cable assembly on a standard RC-453/G reel consists of a specified length (up to 1 kilometer) of 6mm outer diameter cable containing two tightly-buffered, radiation hard, 50/125um multimode fibers terminated with duplex hermaphroditic biconic connectors. The connector is rugged, field installable, waterproof, and resistant to the stringent environment typical of tactical military applications. The cable assembly is rated and tested for operation at temperatures ranging from -55 C to +85 C. Cable assemblies are made in several lengths to meet various deployment configurations. Also companion connector component such as jam-nut bulkhead, flange-mount biconic feedthrough, flange-mount biconic-to-2.5mm, jam-nut mount, 2.5mm coupling receptacle and loopbacks were developed as part of the ancillary items. Also available are cable assembly adaptors; 2.5mm bayonet-to-2.5mm bayonet, in-line-to-2.5mm bayonet, and bulkhead-to-2.5mm bayonet, in-line-to-2.5mm bayonet, and bulkhead-to-2.5mm bayonet. A repair kit is available for repair purposes. The cable assemblies are easy to install, use no adhesives, and have excellent stability with temperature variations.

HISTORICAL BACKGROUND:

Aug 84 - TFOCA R&D contract awarded to AT&T.
Jan 86 - TFOCA adopted by DoD as the standard for all ground tactical applications.
Mar 89 - Production contract awarded to AT&T by PH, multi-service communications systems.
May 90 - First Article Test (FAT) successfully completed.
Oct 90 - Proposal for requirements contract received.
Mar 92 - TFOCA requirements contract awarded to AT&T Technologies.

EVENT SCHEDULE:

Future events are dependent upon customer orders.

REQUIREMENTS DOCUMENT: Requirements documents apply to TFOCA customer's system and not to the TFOCA itself.

TYPE CLASSIFICATION: CX-13295/G.

TFOCA IS UTILIZED AS A COMPONENT OF GROUND TACTICAL FIBER OPTIC COMMUNICATIONS SYSTEMS.

CL 301-200**ID-1406/VRC. FREQUENCY HOPPING MULTIPLEXER (FHMUX)**

PROJECT OFFICER: Mr. Steve Goodall, DSN 992-0445
COMN 908/532-0445

PE & LINE #: 62782 **DEV LIN:** Z28333

DESCRIPTION: Tactical C3 vehicles frequently support installations of four radios and four whip antennas. The multiple antennas readily identify the vehicle as a C3 platform and invite enemy firepower. FHMUX will mask tactical C3 functions by reducing the vehicle's antenna visual signature. The FHMUX will allow up to four SINCGARS and/or VRC-12 radios, in frequency hopping or fixed frequency modes of operation, to use a single high power broadband antenna. The FHMUX will replace the manually tuned, fixed frequency ID-1289 multiplexer currently in Army inventory. Additional benefits of the FHMUX are a reduction of antenna setup and teardown times, and a well defined radio frequency isolation between radios, controlling cosite interference.

HISTORICAL BACKGROUND:

May 84 - Exploratory Development contract awarded to Xetron.
Jun 86 - Two exploratory prototypes delivered.
Jul 87 - O&O plan approved.
Sep 89 - Development contract awarded to Xetron.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
FOUR UNITS DELIVERED				1																								
SIXTEEN UNITS DELIVERED								1																				
IOT&E								1																				
MDR III									1																			
TRANSITION PH									1																			
PRODUCTION CONTRACT AWARD													1															
FUE DATE																	1											
IOC																				1								

REQUIREMENTS DOCUMENT: FHMUX ROC approved, May 91.

TYPE CLASSIFICATION: Data for TC Standard submitted at MDR III IPR.

FHMUX WILL EXTEND A MULTIPLEXING CAPABILITY TO SINCGARS FREQUENCY HOPPING RADIOS AND WILL REDUCE COSITE INTERFERENCE.

CS SYS DIR

ADVANCED CONCEPTS AND TECHNOLOGY FREQUENCY AGILE SOLID-STATE TUNER (ACTFAST)

PROJECT OFFICER: Mr. Wilbur Guertin, DSN 992-0464
COM 908/532-0464

PE & LINE #: 62782 AH92

DESCRIPTION: ACTFAST is a frequency-hopping coupler used to match HF power amplifiers into whip, shorted loop, and long-wire antennas for ground and aircraft applications. Hopping can occur over the entire 2-30 MHz HF band at full power 400 Watts (USA) and 2 KW (USAF), contrasted with present day hoppers restricted to a narrow frequency range and long tuning times. Innovative cooling techniques and solid-state switches eliminate the need for slow and unreliable electromechanical devices to assure high reliability, fast speed and quiet operation, all contributing to maximum security against hostile jammers and increased transmission efficiency. Ability to tune in 50 microseconds enhances interoperability with Automatic Link Establishment systems mandated by MIL-STD-188-141A, and at hopping rates up to 10,000 hops per second, greatly increases the ability to evade jammers. Development efforts are slated for immediate insertion into the Improved High Frequency Radio (IHFR) Program as a form, fit and function replacement for the Short Term Anti-Jam (STAJ) AN/GRC-193 radio antenna coupler, for use by USAF on C-130 aircraft, and for anticipated insertion into future Product Improvements of the IHFR and the Multiband/Multimode Radio Program. Additionally, the coupler will be considered for its ability to perform as a high power jammer component.

HISTORICAL BACKGROUND:

Dec 83 - Harris Corp. Final Technical Report, "Rapid Tunable HF Transmission," RADC-TR-83-275.
Nov 88 - The ACTFAST concept was originally submitted in response to FSNPAC solicitation but was not accepted.
Nov 89 - The ACTFAST concept was resubmitted in response to Broad Agency Announcement from Advanced Concepts and Technology (ACT) Committee (LABCON).
May 90 - Accepted by ACT for FY91 funding; Additional funds HPR's from USAF for joint participation and earlier start.
Sep 90 - Contract awarded to AEL.
Jan 92 - Contract extended to produce deliverable prototype.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
DESIGN PLAN/CDR	TBD																											
CONTRACT EXTENDED					1																							
CONTRACT COMPLETION									1																			

REQUIREMENTS DOCUMENT: IHFR ROC.

TYPE CLASSIFICATION:

ACTFAST WILL DEVELOP ECM AND ECCM EQUIPMENT EMPLOYING VERY FAST HOPPING RATES TO ENSURE EFFECTIVE ANTI-JAM COMMUNICATIONS FOR ARMY AND AIR FORCE APPLICATIONS, AND REDUCE LINK ESTABLISHMENT TIMES IN ALE, AND CONVERSELY, TO INCREASE THE EFFECTIVENESS OF JAMMING SYSTEMS.

**ARMY CONFIGURATION MANAGEMENT FOR PROPOSED CHANGES TO JOINT
INTEROPERABILITY ENGINEERING ORGANIZATION (JIEO)**

(Formerly JTC3A Interoperability Documentation & Army-Managed
Transitioned TRI-TAC Equipment Performance Specifications)

PROJECT OFFICER: Mr. Michael A.G. Kroll, DSN 995-3425
COM 909/544-3425

PE & LINE #: 6.5B.01A M44

DESCRIPTION: Army Configuration Management of Joint documents involves the management, control and processing of all change proposals against JIEO TRI-TAC Equipment Interface Specifications, Technical Interface Specifications (TISs) and Interface Control Documents (ICDs) that affect joint architectural and interoperability requirements. CECOM's C3 Sys Dir, Standardization Office, as the HQDA designated Executive Agent for the Army, is responsible for providing Army representation on the JIEO and other Service/Agency Technical Configuration Control Boards (TCCBs). Army Configuration Management Plan (CMP), JIEO Circular 9000 and MIL-STD-480B provides the policy, procedures & organizational responsibilities for Army configuration management joint documentation as well as Army-managed transitioned TRI-TAC equipment performance specifications. The Army Technical Review Board (ATRB) and Army TRI-TAC Equipment Configuration Control Board (ATECCB) have been established to implement the Army's configuration management procedures.

HISTORICAL BACKGROUND:

- Jul 84 - JTC3A Chapter approved.
- Jan 85 - DA Tasked PH ACCS (formerly CENSEI) to assume Army Configuration Management responsibility for Joint Documents; JTC3A started transition to the Army of the TRI-TAC Equipment Performance Specifications.
- Feb 85 - Formation of ATECCB.
- May 85 - JTC3A CMP (Circular 9000) approved and published.
- Dec 85 - Army CMP approved by HQDA.
- Feb 87 - Army CMP published and distributed; documents approved and distributed.
- Jan 88 - Distribution of first of 45 projected JTC3A TISs for joint review and approval. These OJCS directed TISs will be used for joint certification testing and further identify JTC3A TISs approved by TCCB action and those Army organizations responsible for reviewing and providing technical input.
- Jul 88 - Publication and distribution of long-awaited MIL-STD-480B, superseding MIL-STD-480A dated Apr 78.
- Oct 89 - Distributed Army TIS Distribution Listing identifying JTC3A TISs approved by TCCB action and those Army organizations responsible for reviewing and providing technical input.
- May 90 - JTC3A has published 20 of the projected 45 TISs.
- Oct 90 - As a result of the deactivation of Interoperability and Standardization Dir, Army Configuration Management Responsibility of Joint Documents and Army-managed TRI-TAC Equipment Performance Specifications was transferred to C3 Sys Dir, Standardization Officer, effective 15 Oct 90.
- Oct 91 - Defense Communications Agency, (DCA), active member on the JIEO TCCB and the Army's ATECCB, reorganized and changed to the Defense Information Systems Agency (DISA).
- Dec 91 - JTC3A reorganized and changed to JIEO.

ONGOING ACTIONS:

Coordinate and establish Army position for proposed changes to JIEO-managed TRI-TAC Equipment Interface Specifications, TISs and ICDs. Provide Army representation on the JIEO TCCB.

Coordinate and provide Army position to proposed changes to the AF/MC/Navy/NSA-managed transitioned TRI-TAC equipment performance specifications. Provide Army representation on other service/agency CCBs.

Publish/distribute to all service/agency users the Specification Change Notice (SCN) directed by service/agency CCB.

Distribute, coordinate and render ATECCB decision on change proposals submitted against Army-managed transitioned TRI-TAC Equipment Performance Specifications, to include the publication, distribution and implementation of the ATECCB Directive and SCN documenting the approved change proposal. Provide Chairman for ATECCB.

Formally submit to the JIEO TCCB Chairman, for joint board action, all change proposals submitted to the ATECCB that are determined to impact JIEO architectural or interoperability parameters or documentation.

Distribute, coordinate and render ATRB decision on change proposals submitted by the JIEO or Army users against Army-managed transitioned TRI-TAC Equipment Performance Specifications, not affecting joint interoperability, to include the publication, distribution and implementation of the SCN. Provide Chairman for ATRB.

ARMY CONFIGURATION MANAGEMENT FOR PROPOSED CHANGES TO JIEO PROVIDES A PROGRAM FOR MANAGEMENT AND CONTROL OF PROPOSED CHANGES TO ARMY-MANAGED TRI-TAC EQUIPMENT PERFORMANCE SPECIFICATIONS AND JOINT C3 DOCUMENTS.

G3 SYS DIR

ARMY KEY MANAGEMENT SYSTEM (AKMS)

PROJECT MANAGER: Mr. George Gedge, DSN 985-3300
COMN 908/544-3300

PE & LINE #: 3080021A

DESCRIPTION: AKMS addresses total Army cryptographic key management automation. AKMS provides the framework for interface to the NSA developed Electronic Key Management System (EKMS) which allows joint service interoperability between individual service automated key management systems. AKMS is constituted of two distinct subsystems, the Automated COMSEC Management and Engineering System (ACHES) and the Army Electronic Generation and Distribution System (AEGADS). ACHES addresses key management automation in the tactical environment while AEGADS will automate key management in the strategic & sustaining base environments. AKMS will replace the current common key fill devices and cryptonet control devices now in the field with enhanced key transfer devices capable of system specific prompting and user friendly operation. AKMS will allow for distribution of electronic key and introduce the capability for encrypted key handling. Additionally, AKMS will provide for automations of the current manual cryptonet planning and cryptonet management functions for all current and projected electronically keyed cryptosystems. Both AEGADS and ACHES will consist of three major functional elements which will interoperate in a system configuration to meet the full range of operational requirements. These elements are the Workstation, the Automated Net Control Device (ANCD) and the Key Distribution Device (KDD). The Workstation consists of a host computer with Net Planner (NP), Local Management Device (LMD) application software and an external Key Processor. The Workstation will provide automated key management and cryptonet planning as well as local key generation, key encryption and electronic distribution of key within EKMS. The ANCD consists of Army system specific application software hosted on the full keyboard version of the NSA developed Data Transfer Device (DTD) and provides automated cryptonet control functions along with key storage, loading and transfer. The KDD consists of Army software hosted on the limited keyboard DTD and is intended for use by the general purpose user to transfer and load key into user-owned and operated crypto equipment.

HISTORICAL BACKGROUND:

Jun 87 - ACHES O&O Plan approved.
May 89 - NP Proof of Principle Contract award.
Jul 90 - DTD Low Rate Production Contract award.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
KP/LMD LPR MAND																												
AKMS TOTAE																												
ACHES IPR III																												
AEGADS MAISRC III																												
KDD, ANCD & NP PROD TASKS START																												
ACHES & AEGADS FUE																												
AKMS IOC																												

REQUIREMENTS DOCUMENT: ACHES ROC approved, Aug 90. AEGADS Mission Need Statement (MNS) approved Jan 91.

TYPE CLASSIFICATION:

PROVIDES CRYPTOGRAPHIC KEY MANAGEMENT, AUTOMATED CRYPTONET PLANNING AND ELECTRONIC KEY DISTRIBUTION IN SUPPORT OF ELECTRONICALLY KEYPED CRYPTOGRAPHIC EQUIPMENT.

PROJECT OFFICER: Dr. Dirk R. Kline, DSN 986-2213
COM 986/844-2213

DE A LINE #: 63772.D101

DESCRIPTION: This project encompasses the transition of automated decision aid and information management tools to enhance tactical commander and staff planning and operational C2 functions at Force Level (i.e., corps, division, brigade) through LE battalion and below). These items will exploit advanced computing technology in the area of artificial intelligence, expert systems, knowledge based techniques from Army/DoD, industry, and academia exploratory techbase developments. They will embody refined operational user requirements/specifications in automated decision aid applications, support environment prototypes and system architectures. The tools developed will be demonstrated in operational tests, transitioned to and integrated with PED-CCS, PH FBA systems on ATCCS CHS and Common ATCCS Support Software (CASS). Iterative rapid prototyping techniques and interactive storyboarding with subject matter experts and operational users will be applied in the development of the products. AI/Expert System automated planning capabilities developed in Force Level Information Management thrust, i.e. the ALBM ATTD Program, will be extended and adapted to C2 functions to be evolved into an integrated interoperable Force Level & LE C2 Info/Knowledge system. Functional capabilities to be provided by this program include: decision aid advisors for enemy-threat situation, battlefield area-terrain, friendly situation-capability, plan-task generation, course of action evaluation, situation execution monitoring, and plan-OPORD dissemination, automated freetext message reading, filtering, information extraction, correlation and alerting, analog voice recognition and output. The capabilities provided will be accessible through a generic, intelligent, multi-media interactive, user-friendly soldier machine interface. The benefits to be derived include reduced planning-decision/reaction times, more effective plans, minimized troop workload, improved combat sustainment, reduced orders/responsibility and misunderstanding, and faster and more effective plan/order dissemination and execution. The activities under this program are to be accomplished in coordination and cooperation with the user community through TRADOC CAC, the developer PED-CSS/BFA PMs, and JDL.

HISTORICAL BACKGROUND:

1987-1990 - Army/DARPA ALBM Program.

1990 - C2 plan automated for LE forces; Initiated evaluation for existing prototype decision support SW; Completed LE C3/ASH action plan; Initiated ATCCS/ASH interoperability study; Developed LE C3 ATTD concept.

Dec 1990 - AirLand Battle Management Advanced Technology Transition Demonstration (ALBM ATTD) contract award.

May 1991 - ALBM ATTD TQM.

Oct 1991 - ALBM ATTD General Officer Review.

Dec 1991 - ALBM ATTD Quarterly Review.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
LE UPGRADE FOR BN/WH APPLICATIONS																												
LE INTEGRATION, TEST, DEMO "TACTICIAN"																												
LE INTEGRATION, TEST, DEMO AT AES																												
LE DECISION SUPPORT HARDWARE ACCELERATOR																												
LE FORCE ALLOCATION & COA ANALYZER																												
LE INTEGRATION, TEST, DEMO OPERATIONS MONITORING																												
ALBM ATTD DECISION SUPPORT ENVIRON TOOLS																												
ALBM ATTD DECISION AID APPLICATION: TERRAIN ADVISOR																												
ALBM ATTD DECISION AID APPLICATION: CAPABILITY ADVISOR																												
ALBM ATTD DECISION AID APPLICATIONS: COA EVAL ADVISOR																												
ALBM ATTD DECISION AID APPLICATION: ENEMY/THREAT ADVISOR																												

REQUIREMENTS DOCUMENT: ALBM ATTD functional description/requirements specification, TRADOC CAC-CD, Future Battle Laboratory, Ft. Leavenworth, KS., 8 Jan 91; Force level knowledge system concept, Lower Echelon knowledge system concept, Army CSIEW master plan, 29 Sep 89.

TYPE CLASSIFICATION:

ALBM ATTD & LE C2 PROVIDES AUTOMATED ARTIFICIAL INTELLIGENCE/EXPERT SYSTEM PLANNING & DECISION SUPPORT FOR ATCCS.

C3 SYS DIR

FREQUENCY-AGILE SOLID-STATE HIGH FREQUENCY POWER AMPLIFIER AND COUPLER (FSHPAC)

PROJECT OFFICER: Mr. Wilbur Guertin, DSN 992-0464
COMN 908/532-0464

PE & LINE #: 62782 AM92

DESCRIPTION: FSHPAC is a 400 Watt High Frequency (HF) power amplifier and antenna coupler capable of frequency-hopping at rates up to 2400 hops per second, enhancing jammer evasion capability. Hopping can occur over the entire 2-30 MHz range at full power, contrasted with present day hoppers restricted to a narrow band of frequencies and long tuning times. Innovative cooling techniques and use of PIN diodes eliminate the need for electromechanical devices, assure high reliability, fast speed, and quiet operation, all contributing to maximum security against hostile jammers, and increased transmission efficiency. Ability to fast tune in support of automatic Link Establishment (ALE) per MIL-STD-188-141A is also provided. Development efforts are slated for immediate insertion into the Improved High Frequency Radio (IHFR) Program as a form, fit and function replacement for corresponding components of the Short Term Anti-Jam (STAJ) AN/GRC-193 radio, and for anticipated insertion into future Product Improvements of the IHFR and the Multiband/Multimode Radio Program.

HISTORICAL BACKGROUND:

Dec 83 - Harris Corp. Final Technical Report, "Rapidly Tunable HF Transmission," RADC-TR-83-275.
1QFY91 - Interim Design Review.

EVENTS SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
COR (POSTPONED)																	1											
SCHEDULED DELIVERY (POSTPONED)																		1										

REQUIREMENTS DOCUMENT: IHFR ROC.

TYPE CLASSIFICATION:

FSHPAC WILL PROVIDE IMPROVED ECCM CAPABILITIES FOR C3I RADIO SYSTEMS, AND REDUCE LINK ESTABLISHMENT TIMES IN ALE SYSTEMS.

INTEGRATED SYSTEM CONTROL (ISYSCON)

PROJECT OFFICER: Mr. Paul A. Major, DSN 998-2334
COMM 908/544-2334

PE & LTR #: 111.62701.AH92

DESCRIPTION: The Integrated System Control (ISYSCON) will provide the capability to manage the availability of C2 means in support of Airland Battle-Future. ISYSCON will provide the tools necessary to perform the communications/automation management process by automating essential functions including: Network Planning and Engineering, Battlefield Spectrum Management (BSM), Wide Area Network (WAN) management, CONSEC management, and the Command and Control of Signal units. This program/project will deal specifically with BSM for all battlefield emitters and those related portions of network planning and engineering. This includes the terrain analysis associated with propagation loss predictions, assignment of frequencies to all links and nets, and the resolution of conflicts between users of the RF spectrum. This program/project will deal with developing the necessary algorithms and software to perform the total Army BSM mission within ISYSCON. It will capitalize on previous efforts under the Army Tactical Frequency Engineering System (ATFES) Test Bed as well as several other system or frequency band unique BSM efforts.

HISTORICAL BACKGROUND:

FY78 - ATFES Feasibility Study.
FY83 - ATFES Test Bed established.
FY88 - ATFES Test Bed expanded.
May 88 - ISYSCON White Paper.
Jul 89 - DISCA approved ISYSCON concept.
Nov 89 - HQ TRADOC approved O&O plan.
Oct 90 - ROC approved - CG Sig Cen and HQ TRADOC.
Dec 91 - RFP released.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98							
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
ISYSCON CONTRACT AWARD					1																											
ALGORITHM/SOFTWARE DEVEL - ONGOING																																

REQUIREMENTS DOCUMENT: ROC approved, Oct 90.

TYPE CLASSIFICATION:

THE BATTLEFIELD SPECTRUM MANAGEMENT PORTION OF ISYSCON WILL PROVIDE SIGNAL C2 INFORMATION ON THE LOCATIONS OF ALL COMMUNICATIONS AND NON-COMMUNICATIONS EMITTERS, COSITE FREQUENCY ENGINEERING, FREQUENCY ASSIGNMENTS, AND MANAGEMENT AND CONTROL OF FREQUENCY USAGE.

CS SYS DIR

NETWORK SECURITY

PROJECT OFFICER: Mr. Robert Cicero, DSN 995-2684
COM 908/544-2684

PE & LINE #: 39800 D21A

DESCRIPTION: The long term objective of network security is to secure all voice and data within every Army network system that communicates and/or processes any information of intelligence value. The goal is to develop small, user friendly low power equipment tailored to meet the Army system requirements in a cost effective manner. This effort will apply NSA generic hardware modules and software cryptographic algorithms by embedding them into host equipment. This will meet unique Army requirements to include the development of techniques to increase the physical protection of COMSEC equipment and keying material and will result in Army communication systems that are robust, automated and secure. This will be accomplished through the use of black gateways, and investigation of technologies to assure authentication, and access control, for multilevel secure networks and multi-user terminals. Secure gateways will permit the soldier in the field to cross communication boundaries without the need to decrypt information within a red gateway.

HISTORIC BACKGROUND:

TECHNICAL:

Army Regulations require securing all classified information. Modules developed for the CCEP program have been incorporated within network encryption equipment. Investigation of NSA's developed software for embedding into host equipment. Investigation of techniques used in BLACKER and CANEMARE COMSEC systems. Finalization of Army's needs.

PROGRAMMATIC:

To date, internal effort has been expended for the above work. Contractual effort is programmed for FY93 time frame.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
PREPARATION OF PROCUREMENT DOCUMENT	1	2	3	4																								
AWARD OF CONTRACTS FOR EXPLORATORY DEVELOPMENT MODULE					1	2	3	4																				
FIELD TESTING OF EXPLORATORY DEVELOPMENT MODULE													1	2	3	4												
TECHNOLOGIES FOR FUTURE WORK																												
MODULE WRAPAROUND																					1	2	3	4				

REQUIREMENTS DOCUMENT: The Signal Center is in the process of generating a requirements document.

TYPE CLASSIFICATION:

NETWORK SECURITY'S GOAL IS TO SECURE ALL NETWORKS WITHIN EVERY ARMY WEAPON SYSTEM THAT COMMUNICATES AND/OR PROCESSES ANY INFORMATION OF INTELLIGENCE VALUE.

SOLDIER'S COMPUTER

PROJECT OFFICER: Mr. James G. Wright, DSN 995-2819
COMN 908/544-2819

TECHNICAL LEADER: Mr. Almon Gillette, DSN 995-4442
COMN 908/544-4442

PE & LINE #: 63772.D701

DESCRIPTION: Soldier's Computer is a small, lightweight, portable, hands-free computer system designed for the individual soldier. This system will extend automation to the soldier level. Soldier's Computer system will incorporate a small sized, standard architecture computer with modular application cards (i.e., graphics, digital radio, voice recognition, video and mass memory storage), permitting easy configuration based on user's needs; a radio for wireless Local Area Network (LAN) operations, which can transmit integrated speech, data and video; a helmet or wrist mounted display (providing the resolution of a desk top monitor); manual, voice and video input devices; and a Global Positioning System (GPS) Receiver, permitting the soldier to view a map depicting friendly, enemy and his own position on the battlefield. Soldier's Computer will also integrate night vision devices and various sensors, to include medical monitoring. The modular architecture of Soldier's Computer will allow mission configurable applications to include (but not limited to) battlefield status, message management, training, field diagnostics and maintenance.

HISTORICAL BACKGROUND:

FY89 - ASCO concept.
1QFY90 - Funding.
2QFY90 - In-House development of Prototype.
4QFY90 - Concept demonstration at ANC Technology Expo, Aberdeen, MD.
FY91 - Computer development for Soldier's Integrated Protective Ensemble (SIPE) ATTD.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
BRASS BOARD FAB & TEST					1																							
PARTICIPATION IN SIPE ATTD									1	1																		
SIPE TRANSITION SUPPORT												1																

REQUIREMENTS DOCUMENTS: Draft O&O, The Enhanced Integrated Soldier System, Jan 92.

TYPE CLASSIFICATION:

SOLDIER'S COMPUTER WILL EXTEND AUTOMATED COMMAND, CONTROL AND COMMUNICATIONS TO THE INDIVIDUAL SOLDIER LEVEL VIA A SMALL, LIGHTWEIGHT, PORTABLE, MISSION-CONFIGURABLE, INTEGRATED COMPUTER SYSTEM.

C3 SYS DIR

SPEAKEASY/MULTIMODE MULTIBAND RADIO

PROJECT ENGINEER: Mr. John J. Jeski, DSN 992-0444
COMN 908/532-0444

PE & LINE #: 1L1.62782.AH92

DESCRIPTION: SPEAKEASY is a software reconfiguration radio; by modifying the software of the radio the function or band of the radio can be changed. The Multimode Multiband radio will be able to be modified by changes in its software. Ultimately all modes of the radio can be adjusted by modifying the radio's software. Since the majority of the system will be entirely reconfigurable by software, changes to that software will enable the radio to perform the functions associated with various frequency bands and radio systems. With the possible exception of some frequency unique components, all modes and functions which currently require individual radio systems can be emulated in the Multimode Multiband radio. The Multimode Multiband radio system is not intended to immediately replace any radio system but instead, is designed as a short term transition item, which can both interoperate with existing waveforms, and future improved waveforms as they come into existence.

HISTORICAL BACKGROUND: The Multiband Multimode Radio program is a Tri-Service effort whose beginnings stem from a US Army CECOM effort to make a software reconfigurable all digital radio system. The program, currently being administered by the USAF at Rome Laboratories, with equal Army financial and technical responsibility, is "SPEAKEASY." The purpose of "SPEAKEASY" is to develop a powerful signal processing element, and software to emulate selected current waveforms while being powerful enough to emulate future waveforms as they come into existence. In order to verify proper operation of the system, breadboard RF stages will be developed and interoperability with existing systems will be shown. Follow-on efforts to this phase of the program will develop a standard backplane into which standard modules will be connected. Standard architecture descriptions will be produced to allow companies to develop plug in cards that will do the processing necessary in this programmable radio system. The standard architecture and the fact that all waveforms will be generated entirely in reconfigurable software makes this program ideal for international cooperation. Information regarding standardization of the modules and backplanes and any unique software waveforms will be made public as soon as possible.

EVENT SCHEDULE: (AIR FORCE LEAD)

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
CONTRACT AWARD																												
BREADBOARD																												
ENG DEV MODEL																												
FSED SPEC																												
LRIP																												
PRODUCTION																												

REQUIREMENTS DOCUMENT: Army Signal School, Draft.

TYPE CLASSIFICATION: Major system, available post 2000.

SPEAKEASY IS A SOFTWARE RECONFIGURATION RADIO; BY MODIFYING THE SOFTWARE OF THE RADIO THE FUNCTION OR BAND OF THE RADIO CAN BE CHANGED.

ATCCS OBJECTIVE SYSTEMS TECHNOLOGY DEMONSTRATION (SASTD)

PROJECT MANAGER: Mr. Jerry Levine, DSN 982-4506
COM 908/544-4506

PE & LINE #: 63005 D247

DESCRIPTION: SASTD is an advanced development program whose objectives are the integration of new technological capabilities in communications and distributed processing and the demonstration of these capabilities to the PW/PEO Community. The SASTD program is structured to facilitate the transition of emerging communication and distributed processing technologies into the ATCCS Objective System. The program will also address the Army's longer term vision, known as BIS-2015. The local access portion of the ATCCS Objective System will provide the networked battlefield computers to support all five of the Battlefield Functional Areas (BFAs). It will also provide the communications interconnectivity to support real-time command and control by use of integrated data, voice, images, video, and facsimile facilities, both among the elements of a dispersed command post through interconnection into a wide area network. The CECOM Center for C3 Systems manages a set of advanced technology programs that are directly related to the requirements of the ATCCS Objective System. The key components of these technology programs include: The integration of Fiber Distributed Data Interface (FDDI) fiber optics as a high capacity backbone local area network (LAN) supporting voice, data, and video; The development of a prototype wireless LAN to support the wideband interconnection of mobile and dispersed command post assets; The development of interfaces between FDDI fiber optic LANs and external communications networks using protocols such as ISDN; The integration of a LAN resident multimedia gateway capability that makes intelligent use of available narrowband tactical communications media in a dynamic scenario; The development of automated network initialization, configuration and management tools to enable a dispersed command post to operate effectively in a dynamic tactical environment; The development of advanced communications protocols, including tactical enhancements to Open Systems Interconnection (OSI) protocols; The integration of security devices and technology for protection of dispersed command post assets.

HISTORICAL BACKGROUND:

Jun 90 - Program Definition.
Dec 90 - Program approval by SAG.
Aug 91 - Briefed to Deputy Assistant Secretary of the Army; Briefed Deputy Commanding General, AMC.
Sep 91 - Revised Technical Plans.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				1				1				1				1				1			
NETWORK MANAGEMENT DEMO																												
NARROW BANDWIDTH WIRELESS LAN DEMO																												
FOTLAN MIGRATED TO CHS																												
WIDE BANDWIDTH WIRELESS LAN DEMO																												
TRANSITION TO ATCCS																												

REQUIREMENTS DOCUMENT:

TYPE CLASSIFICATION:

SASTD WILL DEMONSTRATE A SET OF ADVANCED TECHNOLOGIES WHICH ARE APPLICABLE AND EASILY TRANSITIONED INTO THE LOCAL ACCESS PORTION OF ATCCS.

C3 SYS DIR

VEHICULAR INTERCOMMUNICATIONS SYSTEM (VIS)

PROJECT MANAGER: Mr. Christopher Wantuck, DSN 995-2421
COMN 908/544-2421

PE & LINE #: 37/B71100

DESCRIPTION: VIS is an intercom and radio access communications system, primarily for crew members of armored track vehicles. It consists of a Master Control Station (MCS), Full Function Crew Stations (FFCS), Monitor Only Stations (MOS), Radio Interface Unit (RIU), Active Noise Reduction (ANR) headsets, and power signal cables. The MCS allows for 1) programming of radios to crew members; 2) radio listening silence; 3) connection to field phone or other vehicle; and 4) connection to two combat radios. A FFCS provides volume adjustment and radio selection whereas a MOS only provides volume adjustment. The RIU is used for applications where three or four radio capability is required. The ANR headsets are provided in a helmet liner with a noise canceling microphone. The ANR earcups will phase cancel noise that penetrates the earcup seal, thereby providing improved sound reduction. Initial VIS fielding will be front line vehicles (force package I) such as Abrams tanks (M1A1/M1A2), Bradley Fighting Vehicles (M2, M3), M577's, M109A6 Paladins, and Standardized Integrated Command Post System (SICPS). Other vehicles will be considered as their requirements deem necessary. VIS is procured as a Non-Developmental Item.

HISTORICAL BACKGROUND:

Sep 86 - HASC/SASC zero VIS funding.
Mar 87 - Committee Reports: Vehicles fund for VIS.
Aug 87 - TRADOC re-evaluates ROC.
Aug 88 - VIS transferred from PEO COMN to CECOM.
Oct 88 - \$10M OPA-2 appropriated for VIS.
Feb 89 - HASC/SASC uphold authorization for funds.
Feb 90 - Five candidate VIS tested.
May 90 - DA level IPR postponed.
Nov 90 - Two candidate VIS tested.
Jan 91 - SPR decision - procure VIS.
Sep 91 - Solicitation released.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1 2 3 4				1 2 3 4				1 2 3 4				1 2 3 4				1 2 3 4				1 2 3 4			
SOURCE SELECTION																												
CONTRACT AWARD																												
INTEGRATION/ENGINEERING																												
FIRST ARTICLE BUILD-UP																												
FIRST ARTICLE TEST																												
USER TEST																												
FIRST ARTICLE DELIVERIES																												
EXERCISE FIRST OPTION																												
BEGIN DELIVERIES																												

REQUIREMENTS DOCUMENT: Required Operational Capability approved Jul 86.

TYPE CLASSIFICATION: Generic, May 1991; Standard, Jul 1992.

VIS IS AN INTERCOM AND RADIO ACCESS COMMUNICATIONS FOR CREW MEMBERS OF ARMORED TRACK AND COMMAND POST VEHICLES.

EW / RSTA DIR

EM/RSTA DIR

AN/PDR-75, RADIAC SET

PROJECT OFFICER: Mr. Michael Basso, DSN 995-3202
COMN 908/544-3202

PE & LINE #: A-16-05187 BLIN 605187

DESCRIPTION: AN/PDR-75, Radiac Set consists of the Computer Indicator Radiac CP-696/PDR-75 (Reader), Carry Case CY-8420/PDR-75, and three power cables. The Dosimeter (DT-236/PDR-75) is designed to measure short duration, high intensity neutron radiation and prompt gamma radiation resulting from nuclear explosions and gamma rays from fallout. The dosimeter is contained in a two-part case and is a type that can be worn the same as a wristwatch. The reader is capable of opening, reading, and closing the dosimeter. Two separate reading elements contained in the Reader consisting of an ultra violet light source, filters, and a light detector for reading the gamma dose, plus a constant current source and a peak reading voltmeter for reading the neutron dose. A digital meter displays a combined reading of the two separate reading elements. The range of the system is one to one thousand centigrays. The CP-696/PDR-75 is powered from a 24 volt DC source.

HISTORICAL BACKGROUND:

Mar 80 - DT/OT completed.
Aug 83 - DEVA IPR.
Aug 83 - Type Classification (TC), Standard.
Sep 84 - 1st Production contract awarded to Fisher Controls Limited.
Sep 85 - First Article Test (FAT) completed.
Aug 86 - 2nd Production contract awarded to Fisher Controls Limited (now Plessey Controls Limited).
Jul 87 - 3rd Production contract award, (two contractors) 50 percent Small Business Set Aside - Sechan Electronics, Lititz, PA, and 50 percent unrestricted - Marshaw/Filtrol (now Engelhard Corporation), Solon, OH.
Aug 87 - Delivery of equipment from first Production contract (with secure lighting retrofit).
Jun 89 - First Unit Equipped Date (FUED).

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
AWARD CONTRACT (FY92-95)				1																								
FIRST EQUIP DELIVERY								1																				

REQUIREMENTS DOCUMENT: DA approved Materiel Need for individual (Personal) Dosimetry Equipment dated, 13 Feb 73, CARDS Paragraph 1212b(28).

TYPE CLASSIFICATION: DEVA IPR held Jul/Aug 83. TC STD (LCC-A), Aug 83.

AN/PDR-75 IS A NUCLEAR RADIATION DETECTION SYSTEM USED TO MEASURE AND READ-OUT NEUTRON AND GAMMA RADIATION RESULTING FROM NUCLEAR EXPLOSIONS AND GAMMA RAYS FROM FALLOUT.

AN/PPN-19 TRANSPONDER SET

PROJECT LEADER: Mr. Paul King, DSN 908-5191
COM 908/544-5191

PE & LINE #: BLIN 906163

DESCRIPTION: AN/PPN-19(V), Transponder Set is a Multifunction Radar Transponder Beacon (MRTB) that is self contained, man-portable and can be deployed and operated by a single individual. The system is of modular construction with integral antenna and weighs approximately 24 pounds with its battery. During operation, the AN/PPN-19(V) responds to interrogations by tactical aircraft radars with beacon modes and provides terminal guidance for ordnance delivery or drop zone location. AN/PPN-19(V) replaces the PPN-18, GAR-I and UPN-34.

HISTORICAL BACKGROUND:

Sep 79 - LR USATRADOC ACN 45305.
Apr 81-Jun 83 - Engineering Development contract.
Jan 83-Jun 83 - DT/OT II.
Jun 84 - Milestone III IPR.
Sep 84 - Initial production contract award, 160 units for the Army.
Sep 85 - Production option contract award, 112 for Marine Corps, 8 for Navy, 4 for Air Force.
Jun 86 - Second production option contract award, 184 for Marine Corps, 6 for Navy.
Nov 86 - Completed First Article Test (FAT).
Jun 87 - First production delivery.
Feb 88 - Initial Operational Capability.
Sep 89 - Follow-on production contract awarded to United Telecontrol Electronics (UTE) for 106 units (101 - Army, 5 Navy).
Sep 91 - Option quantity awarded for 60 additional units.
Dec 91 - Completed FAT.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
INITIAL QUANTITY FIELDING COMPLETE					1																							
166 UNITS DELIVERED									1																			

REQUIREMENTS DOCUMENT: Letter Requirement, approved 20 Sep 79. The equipment is a nonmajor item with CARDS Reference Number 1301-R.

TYPE CLASSIFICATION: Standard A.

AN/PPN-19(V), TRANSPONDER SET IS A MULTIFUNCTION RADAR TRANSPONDER BEACON.

EW/RSTA DIR

AN/VDR-2. RADIAC SET

PROJECT OFFICER: Mr. Walter Swaylik, DSN 995-3155
COMN 906/544-3155

PE & LINE #: BLIN 805185

DESCRIPTION: AN/VDR-2 as a single instrument can perform ground radiological surveys in vehicles or, in the dismounted mode, by individual soldiers as a hand held instrument. It can also provide a quantitative measure of radiation to decontaminate personnel, equipment and supplies. The components of the radiac set include the Radiacmeter IM-243, Probe DT-616, and Pouch with strap. The M1, M2, M80, M113/577, M151, M880, M998 and M1008 vehicles are designated for radiac installation by the user. Installation kits for these vehicles are CTA items. Initial fielding of kits to USAREUR is for M1, M2/3, M113, M998, and M1008 vehicles. The Army Chemical Research and Development Center, APG, MD uses a specially modified AN/VDR-2 in the NBC Reconnaissance Concept Evaluation Program. This program provides for a RECON vehicle (M113 and M2) to survey contaminated areas, and the AN/VDR-2 modified with a digital serial port computer interface, will detect radiation levels and display them remotely on a vehicular computer. AN/VDR-2 is intended to replace, on a one-to-one basis, the Radiac Sets IM-174/PD and AN/PDR-27().

HISTORICAL BACKGROUND:

- 1971 - Qualitative Materiel Requirement (QMR) for Tactical Survey Meter and Vehicle Radiac System.
- 1976-7 - Procurement of prototype digital radiac sets from MDH Industries, Xetex, Inc., and RCA.
- 1979 - Procurement of Advanced Developmental model of AN/VDR-2 from Xetex, Inc.
- 1980 - QMR revalidated; Procurement of advanced model digital radiac (breadboard) from NRC.
- 1982 - Cancellation of AN/VDR-1 in favor of AN/VDR-2.
- 1983-4 - Procurement of NRC test models and DT Testing of Xetex and NRC radiacs.
- 1984 - OT Testing of Xetex and NRC radiacs.
- 1986 - Award Production contract DAAB07-86-C-P038 to NRC.
- May 87 - Exercised Option for 2167 units.
- Aug 87 - Exercised Option for 238 units.
- Nov 87 - Begin production.
- Mar 88 - Exercised Option for 3019 units.
- Sep 89 - Competitive Production contract awarded.
- May 90 - Second program year awarded.
- Jan 91 - Third program year awarded.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1 2 3 4				1 2 3 4				1 2 3 4				1 2 3 4				1 2 3 4				1 2 3 4			
FOLLOW-ON-COMPETITIVE FY89 PRODUCTION					1												1											

REQUIREMENTS DOCUMENT: QMR for Tactical Survey Meter and Vehicle Radiac System, AN/VDR-1 (CARDS Para 1239a(17))(U), 3 Mar 71, revalidated by USATRADOC, Mar 80 for the AN/VDR-2.

TYPE CLASSIFICATION: Standard, NDI, 1985.

AN/VDR-2 PERFORMS GROUND RADIOLOGICAL SURVEYS IN VEHICLES, OR BY INDIVIDUAL SOLDIERS AS A HAND HELD INSTRUMENT.

NVEOD

INDEX**ADVANCED AIR DEFENSE ELECTRO-OPTICAL SENSOR (AADEOS)****PROJECT OFFICER:** Mr. Michael St. Peter, COMN 703/704-1231**PE & LINE #:** 63710/DK70-33

DESCRIPTION: AADEOS is an advanced ground-based Infrared Search and Track (IRST) system, capable of providing autonomous, 360 degree, passive acquisition and simultaneous tracking of multiple aircraft against various backgrounds at Forward Area Air Defense (FAAD) engagement ranges. Detection of helicopter utilizing pop-up tactics in high clutter environments has high priority. The system consists of an Infrared Receiver, a Signal and Data Processor and a Display and Control Module. AADEOS was selected as one of the Army's Advanced Technology Transition Demonstration (ATTD) programs. The maturity level of IRST technology has made this possible. Potential candidate applications for AADEOS within FAAD include Avenger, a stand alone scout for light and special forces divisions and as an adjunct to the Ground Based Sensor (GBS).

HISTORICAL BACKGROUND:

Dec 88 - AADEOS Acquisition Plan Approved.
Jan 89 - Milestone 0 Decision.
Aug 89 - Contract award to General Electric (GE).
Nov 91 - AADEOS delivery.

EVENTS SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PROGRAM REVIEW				I																								
TECHNICAL TEST				I	I																							
USER DEMO					I	I																						
TWIG						I																						
IPR I/II							I																					

REQUIREMENTS DOCUMENT: FAAD Capstone ROC, 6 Jun 1986.**TYPE CLASSIFICATION:** N/A

AADEOS IS AN ADVANCED GROUND-BASED IRST SYSTEM, CAPABLE OF PROVIDING AUTONOMOUS, 360 DEGREE, PASSIVE ACQUISITION AND SIMULTANEOUS TRACKING OF MULTIPLE AIRCRAFT FOR FAAD.

PROJECT NAME AND (APA) PROJECT NUMBER:
PROJECT OFFICER: Mr. Edward J. Bender, COM 703/704-1316

PE & LINE #: PE 63710A/UK86

DESCRIPTION: APA ATTD is directed toward satisfying expressed user needs for increased field-of-view (FOV) and improved visual acuity in an intensified night pilotage system. These performance improvements will be achieved through the utilization of novel optical technologies and advanced technologies for intensifier tube fabrication. APA ATTD will additionally address expressed user needs for integrated symbology, and will utilize experience gained from currently fielded intensifier systems to improve human factors. These advancements will significantly improve operational effectiveness and reduce pilot workload. APA is intended as a follow-on to the AN/AVS-6, Aviator's Night Vision Imaging System (ANVIS). It is intended for use in the Army's cargo, utility, and current scout aircraft.

HISTORICAL BACKGROUND:

Dec 90 - APA ATTD approved by Senior Advisory Group.

EVENTS SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
AWARD CONTRACTS (TUBE/SYSTEM)																												
INITIAL TUBE DELIVERY																												
PRELIMINARY DESIGN REVIEW																												
PROTOTYPE SYSTEM DELIVERED																												
CRITICAL DESIGN REVIEW, IPR																												
IN PROCESS REVIEW																												
FINAL TUBE DELIVERIES																												
SYSTEM DELIVERIES																												
C2NVED LAB/FIELD TESTS																												
USER OPERATIONAL TESTS																												
TEST REPORT COMPLETE																												
TRANSITION TO PH, NV																												

REQUIREMENTS DOCUMENT: Plan is to modify ANVIS ROC for added Performance Capabilities provided by APA.

TYPE CLASSIFICATION: N/A

APA IS AN ADVANCED INTENSIFIER PILOTAGE SYSTEM PROVIDING KEY FOV, VISUAL ACUITY, SYMBOLOGY, AND HUMAN FACTORS TO ENHANCE OPERATIONAL EFFECTIVENESS AND REDUCE PILOT WORKLOAD.

MEMO

**DAY-NIGHT SENTRY/PERIMETER SURVEILLANCE ADVANCED
TECHNOLOGY TRANSITION DEMONSTRATION (DNPS ATTD)**

PROJECT MANAGER: Mr. Edward Guckian, COMN 703/704-1263

PE & LINE #: 63710 DK70 53

DESCRIPTION: DNPS ATTD is a program to demonstrate multi-sensor techniques which can be applied toward developing compact, affordable, lightweight, electro-optical modular systems for use in both remote area and fixed site installations. With the need for reduced manpower, a low-cost autonomous sensor capability is critical to fill the gap to provide remote surveillance. DNPS ATTD will provide a demonstration of compact, low-cost, covert multi-sensor technologies for all weather, day/night, unmanned surveillance and target acquisition. The program merges sensors, processors and transmission technologies into an ATTD to demonstrate autonomous surveillance. DNPS ATTD will synergistically process information derived from ground and electro-optical sensors to acquire targets. DNPS ATTD will apply multiple coincidence capability for low false alarm rate of targets and will contain selectable sensor modules which are integrated with a mission programmable processor to provide a flexible perimeter or area surveillance network. Sensor technology will include the utilization of Uncooled Infrared, Low Cost Radar, Image Intensifier devices, Charge Coupled Device (CCD) Camera and other ground sensors.

HISTORICAL BACKGROUND:

Nov 90 - DAY-NIGHT Sentry/Perimeter - approved by Senior Advisory Group.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
APPROVAL OF ATTD PROGRAM					1																							
AWARD SYSTEM MODULES PROCUREMENT						1																						
PROGRAM POR									1																			
GO-AHEAD CDR									1																			
DEMONSTRATION															1													
TECHNICAL DATA PACKAGE															1													

REQUIREMENTS DOCUMENT: Technical Development Plan approved by HQ, TRADOC.

TYPE CLASSIFICATION: N/A

DNPS ATTD IS DIRECTED TOWARDS SATISFYING THE EXPRESSED USER NEEDS TO AUTONOMOUSLY ACQUIRE AND SERVICE TARGETS IN REMOTE AREAS AND FOR PERIMETER SECURITY.

PROJECT NAME: LCHS/THREAT TARGET ACQUISITION SYSTEM (LCMS)

PROJECT MANAGER: Mr. David Randall, COM 783/704-1330

FE & LINE #: 15463774 D131-02

DESCRIPTION: LCMS is needed to provide the ability for light forces to degrade threat Optical and Electro-Optical (OEO) systems at short to moderate ranges. The threat military forces worldwide are equipped with numerous air-to-ground and ground-to-ground weapon systems that have OEO subsystems. These OEO subsystems are utilized for combat surveillance, target detection, and fire control. Suppression of these devices will provide enhanced protection for U.S. forces. The system consists of day/night Sight, a backpack for power, and a handheld laser device.

HISTORICAL BACKGROUND:

May-Jun 89 - Concept Evaluation Program Test conducted by TEXCOM.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
ADVANCED DEVELOPMENT																																
TTI/UTI																																
MILESTONE REVIEWS																																
SPECIAL IPR (ROC)																																
FULL SCALE DEVELOPMENT																																
CRITICAL DESIGN REVIEW																																
PHYSICAL CONFIGURATION AUDIT																																
SYSTEM SUPPORT PACKAGE TT/UT																																
TT II/UT II																																
IPR III																																
PRODUCTION CONTRACT																																
FUE/IOC																																

REQUIREMENTS DOCUMENT: O&O Plan from USAIS approved, 1 Jun 90 by TRADOC; ROC approved 11 Sep 91.

TYPE CLASSIFICATION: N/A

LCMS PROVIDES THE INDIVIDUAL SOLDIER THE ABILITY TO JAM OPTICAL AND THREAT TARGET ACQUISITION SYSTEMS.

INVED**MULTI-SENSOR TARGET ACQUISITION SYSTEM (MTAS)****PROJECT OFFICER:** Dr. Ward Trussell, COM 703/704-1679**PE & LINE #:** 1S463774 D131-01

DESCRIPTION: MTAS is a multipurpose sensor system being developed to support the extended range target surveillance, acquisition, and engagement requirements of Heavy Force Modernization (HFM) Block III Tank and Future Infantry Fighting Vehicle. MTAS integrates five advanced technologies - millimeter wave (MMW) radar, thermal imaging, CCD TV, laser rangefinder, and laser adjunct - into three "building block" sensor packages to be developed by C2INVED. MTAS Package A will provide automatic detection, classification, and rapid engagement of multiple ground and airborne targets in all adverse battlefield environments.

HISTORICAL BACKGROUND:

- 1978-1982 - Surveillance and Target Acquisition Radar for Tank Location and Engagement (STARTLE) Concept Feasibility Program.
- 1983-1985 - Integrated STARTLE Firing Tests.
- 1986 - Draft O&O for MTAS developed by USAARMS, Ft Knox, KY; Acquisition Plan for MTAS approved.
- 1987 - Draft MOA for integration of MTAS with ARDEC Advanced Tank Cannon System.
- Jul 1988 - MTAS Package A contract award.
- Aug 1988 - Draft MOA for integration of MTAS with TACOM Component Advanced Technology TestBed.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
DELIVERY UNIT 1	1																											
2ND UNIT DELIVERY									1																			
CATTB INT & TEST													1				1											

REQUIREMENTS DOCUMENT: Capstone O&O Plan for Armored Family of Vehicles, 8 Jun 87; O&O Plan for MTAS, Draft, Jul 87; Required Operational Capability for Block III Tank System, Draft, Mar 89.

TYPE CLASSIFICATION: N/A. MTAS is a Technology Demonstrator for the Future Main Battle Tank.

MTAS IS A MULTIPURPOSE SENSOR SYSTEM BEING DEVELOPED TO SUPPORT THE EXTENDED RANGE TARGET SURVEILLANCE, ACQUISITION AND ENGAGEMENT REQUIREMENTS OF HFM BLOCK III TANK AND FUTURE INFANTRY FIGHTING VEHICLE.

NSAT-AIR DEMONSTRATION AND TRANSFER FOR AIRBORNE SYSTEMS

PROJECT OFFICER: Dr. Donald Range, COMN 703/704-1301

PE & LINE #: 63710 DK70

DESCRIPTION: NSAT-AIR demonstrates multi-sensor fusion in an operational environment against tactical targets utilizing second generation Forward Looking Infrared (FLIR) and Millimeter Wave (MMW) radar sensors. This demonstration will result in a technical data package for an operations effectiveness of multi-sensor target acquisition for the Light Helicopter (LH) and Apache programs. This effort is directed toward satisfying LH needs to transition from Aided Target Detection and Classification (ATD/C) to Aided Target Recognition (ATR) at longer ranges, over larger search sectors, and within shorter time lines. The potential also exists to explore the application of the technology demonstrated from NSAT-AIR fusion processing to ground combat vehicles.

HISTORICAL BACKGROUND:

- 1986-89 - Multi-sensor Fusion Demonstration.
- 1988-90 - Multi-sensor Feature Level Fusion Program.
- 1990-91 - AAMS and Infrared Data Evaluation Program.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1 2 3 4				1 2 3 4				1 2 3 4				1 2 3 4				1 2 3 4				1 2 3 4			
SOFTWARE - DEVELOP/SIMULATE																												
ALGORITHM EVALUATION																												
SHOP PROCESSOR																												
AIR PROCESSOR																												
INTEGRATION - PROCESSOR CHECK																												
DEMONSTRATION																												
TECH DATA PACKAGE																												
PHYSICAL DESIGN REVIEW																												
CRITICAL DESIGN REVIEW																												
ICMG																												

REQUIREMENTS DOCUMENT: Generic Technology Prototype. Future Army requirements are addressed in LH ROC.

TYPE CLASSIFICATION: N/A. This is a technology prototype.

NSAT-AIR PROVIDES MULTISENSOR ATR WITH FEWER FALSE ALARMS AT LONGER RANGES, OVER LARGER SEARCH SECTORS, AND WITHIN SHORTER TIME LINES.

NVEDD

OBSTACLE AVOIDANCE SYSTEM (OASYS)

PROJECT OFFICER: Mr. Robert Branigan, COMN 703/704-1373

PE & LINE #: 63710 DK86

DESCRIPTION: OASYS is an active laser scanning system for detection and warning of obstacles located within the flight path of a helicopter. The system uses a laser diode to detect obstacles and then processes the data to determine if a hazard exists. A warning or guidance command is displayed on the helicopter pilotage system.

HISTORICAL BACKGROUND:

1988-89 - Draft O&O Plan; Flight Simulation Study; Non-Developmental System Evaluation.
1990 - OASYS development contract awarded.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				1				1				1				1				1			
OASYS DEVELOPMENT																												
USER FLIGHT TEST																												
FSD																												

REQUIREMENTS DOCUMENT: Draft O&O Plan, Feb 89.

TYPE CLASSIFICATION: N/A

OASYS IS A WARNING SYSTEM TO ALERT HELICOPTER PILOT OF OBSTACLES WITHIN THE FLIGHT PATH.

SED

SED

ARMY INTEROPERABILITY NETWORK (AIN)

PROJECT OFFICER: Dr. Myron Holinko, DSN 992-8288
COMH 908/532-8288

PE & LINE #: 64818 DC36

DESCRIPTION: AIN is the Army's nationwide distributed network for supporting software and interoperability of Army systems throughout their life-cycle. AIN's Central Control at Fort Monmouth, New Jersey interconnects Army Tactical Command and Control System Life Cycle Software Engineering Center (LCSEC) sites, the tactical communications LCSEC site, other Army test agencies/sites, joint services/agencies tactical C3I systems/testbed, and combined allied systems/testbeds (future). AIN provides the capability to develop, test, and maintain the software and interoperability of C3I systems from remote locations, by affording access to the actual interfacing C3I systems. AIN is a means of ensuring C3I systems work before and after fielding through proper software, integration and interoperability testing. It is available for use by developers, testers, evaluators, and maintainers of Army C3I systems. The AIN is operational and successfully serving a growing number of users.

HISTORICAL BACKGROUND:

- Mar 84 - ACCS Systems Engineering Implementation Plan (SEIP) was approved.
- Aug 87 - Conduct demonstration of JINTACCS Automated Message Processing System (JAMPS) interoperability with soldier-operators from TRADOC; conducted one week JINTACC training of 513th MI Det using AIN facility.
- Sep 87 - EJSE contract award to Analysis and Computer System Inc. (ACSI).
- Jan 88 - System Requirements Review (SRR) and System Design Review (SDR) for the Enhanced JTIDS System Exerciser (EJSE) - subsystem for TADIL J testing.
- Nov 88 - Established connection to satellite facilities.
- Sep 89 - Awarded System Integration Support contract to ARINC.
- May 90 - Block-0 Architecture completed.
- Jun 90 - Block-0 Design completed.
- Nov 90 - Established connection to satellite facilities.
- Apr 91 - AIN Central Control operations began; First customer test support using T1 (1.544Mbps) communications.
- Jun 91 - MSE connectivity established.
- Sep 91 - Transportable Remote Site System developed.
- Nov 91 - Block-0 Remote Sites installations completed; TACSAT interface capability established.
- Feb 92 - SINCGARS Radio Interface capability established.

EVENT SCHEDULE:

FISCAL YEAR	91				92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4												
BLOCK-1																																
SUR																																
TOP LEVEL DESIGN																																
ACQUISITION STRATEGY																																
COMPLETE PLANNING																																
FINILIZE DESIGN AND PLANS																																
SUBSYSTEM DESIGN																																
BUILD																																

REQUIREMENTS DOCUMENT: HQ AMC approved ACCS CHIT Plan, Jun 86; System Engineering Implementation Plan, Feb 84; JINTACCS Army Management Plan (JAMP), Mar 86. ATCCS Test an Evaluation Master Plan (Revision 1), Jan 88. O&O Plan approved Apr 90; Statement of Requirement approved Dec 90.

TYPE CLASSIFICATION:

ARMY INTEROPERABILITY NETWORK PROVIDES THE TOOLS TO EFFECTIVELY CLOSE THE GAP BETWEEN THE DEVELOPER, TESTER, TRAINER, AND IMPLEMENTOR OF ARMY C3I SYSTEMS AND THE METHODOLOGY FOR CREATING AND MAINTAINING INTEROPERABILITY AMONG THEM.

SSD

SSD

AN/FSQ-124, DEFENSE SATELLITE COMMUNICATIONS SYSTEM (DSCS)
GROUND MOBILE FORCES CONTROL LINK (DGCL)

TECHNICAL PROJECT LEADER: Mr. Edward Hrycak, DSN 992-3169
COMM 908/532-3169

PE & LINE #: K49500

DESCRIPTION: AN/FSQ-124, DGCL will be a part of the Ground Mobile Forces (GMF) Satellite Communications Control System (SCCS). The DGCL shall have a three-fold purpose:

1) Satellite GMF orderwire communications between the DCSCS SATCOM Controller and the GMF SATCOM Controller in the AN/MSQ-114.

2) Control of the DSCS-GMF Gateway Link.

3) Contingency control of a SATCOM Network when the AN/MSQ-114 is not available. The DGCL shall consist of equipment from the AN/MSQ-114 in 5 racks, plus a desk size console. The equipment shall be normally installed at certain dual Earth Terminals. Two additional DGCLs are being procured for the Air Force NABS mission.

HISTORICAL BACKGROUND:

Sep 81 - NDI IPR approval for production.
Jun 82 - Production contract award.
Aug 84 - First Artical Test.
Apr 85 - Initial Operational Capability.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PRODUCTION CONTRACT					1																							

REQUIREMENTS DOCUMENT: DSCS Program Plan FY 82-86.

TYPE CLASSIFICATION: Standard, Sep 81.

DGCL IS A SET OF EQUIPMENT FOR MANAGING THE GMF SATELLITE COMMUNICATIONS SUBNETWORK. THE SYSTEM INCLUDES EQUIPMENT FOR COMMUNICATING DIRECTIVES AND MEASURING PERFORMANCE.

**AN/FSS-173/174 NABS/SKYNET SATELLITE COMMUNICATIONS
CONTROL CENTER (SCCC)**

PROJECT LEADER: Mr. Edward Hryczyk, DSN 992-3169
COMN 908/532-3169

PE & LINE #: K49500

DESCRIPTION: The NATO Air Base Satcom (NABS) and SKYNET SCCC are comprised primarily of equipment common to the AN/FSSQ-124 SCCC and are designed to control GWF type terminals. The NABS-SCCC (AN/FSSQ-173) will be installed at, and operate within NATO SATCOM facilities to control the NABS network. The SKYNET-SCCC AN/FSSQ-174 will be installed at and operate within a UK Satellite Communications Control facility and will control a GWF Satellite Communications Network operating on the SKYNET Satellite.

HISTORICAL BACKGROUND:

Sep 87 - NABS/SKYNET SCCC contract award.
Sep 88 - ECP-001 awarded. ECP added a VAX based SAMS and a Control Monitor and Alarm (CMA) system in NABS.
Sep 89 - ECP-002 awarded. ECP modified SAMS AJ re-host design.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PRODUCTION CONTRACT																												
INSTALLATION OF NABS, KESTER, BELGIUM																												
INSTALLATION OF NABS, FOLLY LAKE, NOVA SCOTIA																												
INSTALLATION OF SKYNET, RAF OAKHANGER, UK																												

REQUIREMENTS DOCUMENT: DSCS Program Plan FY 82-86.

TYPE CLASSIFICATION: Standard, Sep 81.

NABS/SKYNET SCCC WILL PROVIDE OPERATIONAL CONTROL OF A TRANSPORTABLE SATELLITE COMMUNICATION SUB-NETWORK OPERATING ON THE NATO SATELLITE FOR SUPPORT OF NATO AIRBASES AND UNDER THE DIRECTION OF THE NATO SATCOM CONTROL CENTER.

SSD

AN/GSC-40, COMBINED GROUND COMMAND POST TERMINAL

PROJECT LEADER: Mr. Nathan Smith, DSN 992-2128
COMN 908/532-2128

PE & LINE #: 738017Q2

DESCRIPTION: The UNF Special Communication System (SCS) ground segment consists of two satellite communications terminals: AN/GSC-40 Combined Ground Command Post Terminal and the AN/MSC-64 Force Terminal. AN/GSC-40 is a non-transportable rack configuration designed for installation into fixed command centers. It will operate the SCS Force Terminal nets using from one to three KHz AFSATCOM channels depending on the number of AN/MSC-64s in the net. The system will have limited anti-jam (AJ) capability and on-line encryption.

HISTORICAL BACKGROUND:

Sep 80 - Production MOU signed with Naval Ocean Systems Center (NOSC).
Mar 81 - Army directed to provide for two terminals to communicate simultaneously through two satellites (dual satellite access).
Apr 81 - First Article Test (FAT) completed.
Sep 81 - MOU modified to include dual access.
Oct 82 - Installation of first two terminals.
Apr 83 - FOE (Europe).
May 87 - IOC for first 7 terminals.
Dec 86 - Contract award for AN/UYK-42(V)3 Message Processing Unites.
May 87 - IOC for NAVEUR.
Dec 87 - Remote Operations Capability fully operational.
Sep 89 - Firm requirements received to install SCTRs in GSC-40.
Nov 90 - Transitioned to C2S2 Level II Management.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
TRANSITION																												

REQUIREMENTS DOCUMENT: ROC approve Jan 77.

TYPE CLASSIFICATION: Standard, May 83.

AN/GSC-40 IS A SATELLITE COMMUNICATIONS CONTROL TERMINAL FOR THE UNF SPECIAL COMMUNICATION SYSTEM WHICH HAS LIMITED ANTI-JAM CAPABILITY AND ON-LINE ENCRYPTION. THE AN/GSC-40 IS THE COMMAND POST TERMINAL FOR NETWORKS MADE UP OF AN/MSC-64s AND AN/GSC-40s.

ANALOG-42, SINGLE CHANNEL TRANSPONDER RECEIVING SET (SCTRS)

PROJECT LEADER: Mr. Nathan Smith, DSN 992-2128
COMM 908/532-2128

PE & LINE #: NC

DESCRIPTION: SCTRS is a PIP to the AN/MSC-64(V)2 Single Channel UHF Satellite Communications Terminal that will permit reception of EAMs in the SHF Band. The SCTRS consists of a 3-foot parabolic antenna, demodulator and printer. It is a special purpose receiver. The SCTRS receives from the Single Channel Transponder on DSCS III Satellites.

HISTORICAL BACKGROUND:

Feb 87 - NDI contract award to MA/COM.
Mar 89 - Awarded printer ECP.
Nov 90 - Transitioned to Level II C2S2 Management.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PRODUCTION CONTRACT																												
FUE																												
QA																												
TRANSITION																												

REQUIREMENTS DOCUMENT: Original ROC 8-74.

TYPE CLASSIFICATION: Standard, Jun 77.

SCTRS RECEIVE EAMs JOFF OF THE SINGLE CHANNEL TRANSPONDER ON DSCS III SATELLITES.

SSD

AN/MSC-64, SINGLE CHANNEL UHF SPECIAL COMMUNICATIONS SYSTEM - FORCE TERMINAL

PROJECT LEADER: Mr. Nathan Smith, DSN 992-2128
COMN 908/532-2128

PE & LINE #: 331.42 & E7090

DESCRIPTION: AN/MSC-64 is a UHF Satellite Communication System which receives emergency action messages transmitted from the AN/GSC-40. There are three versions, the AN/MSC-64(V)1 (Mobile Command Post) AN/MSC-64(V)2, and AN/MSC-64(V)3 (devanized). Secure record traffic communication is provided by all terminal types. The system makes use of satellites under the AFSATCOM and Navy Fleet Satellite programs. 114 AN/MSC-64 terminals (34 AF and 80 Army) are being equipped with a Single Channel Transponder Receiver (SCTR) to provide a secondary receive only capability at certain critical sites to insure reception of critical messages. The SCTR is funded as the Enhanced FAM PIP. A second PIP has been identified by EUCON ROC 28-80 for an electronic interconnect between the Regency Net and FAM Terminals.

HISTORICAL BACKGROUND:

Jan 74 - NDI decision.
Sep 78 - Production contract awarded for AN/MSC-64 (all deliveries).
Feb 81 - IOC/FUE.
Jan 86 - Last operational terminals released to users.
Feb 87 - Production contract awarded to MA/COM for SCTR PIP.
Sep 89 - Firm requirement received to install SCTR in AN/MSC-64(V).
Nov 90 - Transitioned to C2S2 Level II Management.

EVENT SCHEDULE:

FISCAL YEAR	91				92				93				94				95				96				97			
	QTR				1				1				1				1				1				1			
SCTR PRODUCTION CONTRACT																												
TRANSITION																												
IOC SCTR																												
SCTR QA																												

REQUIREMENTS DOCUMENT: Original ROC 8-74.

TYPE CLASSIFICATION: Standard, Jun 77.

AN/MSC-64 IS A UHF SATELLITE COMMUNICATIONS SYSTEM WHICH RECEIVES EMERGENCY ACTION MESSAGES TRANSMITTED FROM THE AN/GSC-40.

AN/MSQ-114 SATELLITE COMMUNICATIONS CONTROL TERMINAL

TECHNICAL LEADER: (Hardware) Mr. Arnold Pearson
DSN 992-3169
COMN 908/532-3169

PRODUCT LEADER: Mr. Edward Hryczyk, DSN 992-3169
COMN 908/532-3169

PE & LINE #: K49500

DESCRIPTION: AN/MSQ-114 is part of the Ground Mobile Forces Satellite Communications Control System which is used to manage the satellite communication capability assigned to the satellite terminals operating within the tactical network. The primary function of the AN/MSQ-114 is to continuously monitor satellite communications transmissions for the purpose of assuring that all network terminals are operating within the proper limits of frequency, power output and channel capacity. The AN/MSQ-114 will also reconfigure the network in the event of jamming, satellite degradation or other disruptions of the satellite links. The AN/MSQ-114 can control up to 50 GNF Satellite Communications terminals. The SAMS is a computer based system used for the management of a GNF Satellite Communications Network (SCN). The network is being "upgraded" to use Spread Spectrum Multiple Access (SSMA) carriers in addition to the frequency division multiple access. The AJ modem has been "retrofitted" into the AN/MSQ-114 van 4 at Tobyhanna. Van 4 will be swapped with Vans 2 and 3 will be retrofitted with AJ Modems on site. The AJ modem provides the SSMA carrier capability to the network.

HISTORICAL BACKGROUND:

- Sep 78 - Production contract for four control terminals awarded to RCA Corp.
- Sep 79 - Production contract for Satellite Automatic Monitoring Systems (SAMS) awarded to Ford Aerospace Communications Corp. (FACC).
- Feb 80 - First delivery of terminals.
- Jun 82 - Last delivery of terminals.
- Dec 82 - Follow-On Evaluation.
- Dec 86 - FFP contract DAAB-07-87-C-D001 to FACC for SAMS Software Upgrade: \$5.7M.
- Jul 87 - SAMS AJ Upgrade Preliminary Implementation Review.
- Nov 87 - SAMS AJ Update Critical Implementation Review.
- Mar 89 - Van 4 modification completed.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1 2 3 4				1 2 3 4				1 2 3 4				1 2 3 4				1 2 3 4				1 2 3 4			
VAN 1 SWAP WITH VAN 4																												
VAN 2 A/J ON-SITE RETROFIT																												
VAN 3 A/J ON-SITE RETROFIT																												
VAN 4 FIELD																												

REQUIREMENTS DOCUMENT: TACSATCOM Qualitative Materiel Requirement (QMR) approved 12 Nov 71.

TYPE CLASSIFICATION: Standard Apr 77.

AN/MSQ-114 SATELLITE COMMUNICATIONS MONITORING AND CONTROL CENTRAL PROVIDES REALTIME COMMAND AND CONTROL FOR UP TO 50 GNF SHF SATELLITE COMMUNICATIONS TERMINALS.

SSD

AN/USC-28(V), SATELLITE COMMUNICATIONS SET

PROJECT LEADER: Mr. Brian C1111, DSN 992-2538
COMM 908/532-2538

PE & LINE #: BA8300

DESCRIPTION: AN/USC-28(V) (Ground) is an advanced spread spectrum modulation system which operates with Defense Satellite Communications System (DSCS) satellite communications terminals to provide jamming resistant SATCOM network control and digital user communications. The AN/USC-28(V) can be configured to accommodate up to fifteen user data channels. The equipment interfaces with the Digital Communications Satellite Subsystem (DCSS) in fixed terminals and is also installed in the transportable AN/GSC-49(V) terminals. A special airborne version of the AN/USC-28(V) is installed in the Super High Frequency (SHF) terminal aboard the National Emergency Airborne Command Post (NEACP), the E-4B. The equipment interoperates with the Navy shipboard OM-55 Spread Spectrum equipment. The AN/USC-28(V), by virtue of the jamming protection it affords, insures the military utility of the DSCS. The AN/USC-28(V) modem was modified to mitigate the scintillation effects caused by high altitude nuclear event. The modification has backward capability so that the AN/USC-28(V) can operate in the normal mode or in the mitigated mode.

HISTORICAL BACKGROUND:

Jun 78 - IPR/Type Classification approval.
Sep 78 - Production contract award.
Jul 81 - Production award for JRSC.
Nov 81 - FUE.
Apr 82 - Initial Operational Capability.
Jun 84 - Follow-on Production contract awarded.
Feb 87 - Mitigation Mod award.
Sep 87 - Awarded Depot Repair Service contract.
Dec 87 - Contractor completed last delivery of this system.
Feb 87 - Mitigation mod award.
May 90 - Mitigation/NRM Hybrid Retrofit mod award.
Nov 90 - Transitioned to C2S2 Level II Management.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PRODUCTION CONTRACT																												
TRANSITION																												

REQUIREMENTS DOCUMENT: Defense Satellite Communications System Program Plan as approved by Asst Sec of Defense.

TYPE CLASSIFICATION: Jun 78, Standard.

AN/USC-28(V) PROVIDES AN ELECTRONIC COUNTER COUNTER MEASURE (ECCM) CAPABILITY FOR STRATEGIC SATCOM SYSTEMS.

DEFENSE COMMUNICATIONS SATELLITE SYSTEM (DCSS)

PROJECT LEADER: Mr. Cathry Disbrow, DSN 992-3232
COMN 908/532-3232

PE & LINE #: BB8501

DESCRIPTION: DCSS is a CECOM Level II managed program. It encompasses the modulation, multiplex, coding and processing equipment necessary to assemble various types of user data into a digital form suitable for transmission over a Satellite Link, in both the protected and unprotected modes. The protected mode will employ spread spectrum multiple access techniques utilizing the AN/USC-28. The DCSS is deployed as part of the Defense Satellite Communications System (DSCS) and essentially provides a unique wide band digital transmission capability. In the unprotected mode, the DCSS can feed the AN/FSC-78, AN/GSC-52, or AN/GSC-39 Terminal with up to 90 megabits of user data. A DCSS will be installed at each Earth Terminal complex within the DSCS and will be housed in either a building or a van configuration.

HISTORICAL BACKGROUND:

Jul 74 - Assigned to TOAD.
Jun 77 - OT II test.
Jul 78 - First FUE complete.
Jan 80 - Second FUE complete.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				2				3				4				1				2			
PRODUCTION DELIVERIES																												

REQUIREMENTS DOCUMENT: DCA DSCS FY89-93 Program Plan.

TYPE CLASSIFICATION:

DCSS PROVIDES DIGITAL EQUIPMENT CAPABILITIES FOR DSCS TERMINAL SITES.

SOF

AN/USC-80A, LIGHTWEIGHT DEPLOYABLE COMMUNICATIONS (LDC)

PROJECT OFFICER: Mr. Howard Hamer, DSN 995-2581
COMN 908/544-2581

PE & LINE #: D474

DESCRIPTION: LDC is a suitcase deployable digital communications system modular in design. It provides message processing and staff automation support above team level, using organic transmission equipment. The LDC configuration consists of an intelligent computer workstation, radio and wireline communications interface, and a letter/graphics printer.

HISTORICAL BACKGROUND:

Mar 89 - LPU Authorization.
1QFY91 - LPU extension granted; Production contract awarded.

EVENTS SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PRODUCTION																												
TECH TEST																												
FUE																												
USER TEST																												

REQUIREMENTS DOCUMENT:

TYPE CLASSIFICATION: LPU, 22 Mar 89 extended until withdrawal or obsolescence.

LDC IS A RUGGEDIZED, FIELD GRADE PORTABLE COMMUNICATIONS SYSTEM FOR USE BY THE SPECIAL OPERATIONS FORCES IN TACTICAL GROUND ACTIONS.

SOF

AN/GRC-233, SPECIAL OPERATIONS COMMUNICATIONS ASSEMBLAGE
(SOCA V.1)

PROJECT OFFICER: Mr. Fred Kobylarz, DSN 995-2217
COM 908/544-2217

PE & LINE #: D474

DESCRIPTION: SOCA V.1 is a secure voice, data and compressed video communications system. The Digital Message Processor (DMP-122) provides two capabilities to generate, display, store, transmit and receive data via HF and UHF communications systems. The HF Communications Suite (AN/PRC-133) provides the system's HF transmit and receive functions. The UHF Communications Suite (AN/VRC-130) provides the capability to transmit and receive information via a SATCOM link.

HISTORICAL BACKGROUND:

Feb 87 - Department of the Army (DA) directed Limited Procurement Urgent (LPU).
Sep 89 - Contract award.

EVENTS SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
FIRST UNIT EQUIPPED (FUE)	1																											
DELIVERY	1				1																							

REQUIREMENTS DOCUMENT: Nov 88, Operational Needs Statement.

TYPE CLASSIFICATION: LPU, Feb 87.

AN/GRC-233 CONSISTS OF TRANSIT CASE DEPLOYABLE COMMUNICATIONS ASSEMBLAGES TO PROVIDE NON-SI INTELLIGENCE, C2, ADMINISTRATION, AND LOGISTICS TRAFFIC TO THE SPECIAL OPERATIONS FORCES (SOF) COMMUNITY.

AN/MSQ-858. MOBILE AUDIO-VISUAL SYSTEM

PROJECT OFFICER: Mr. Ignatius Phillips, DSN 995-4327
COM 908/544-4327

PE & LINE #: D476

DESCRIPTION: AN/MSQ-858 is a mobile visual information collection and dissemination system housed in an S-250 shelter and is transported by CUCV. The system has the capabilities to receive radio and TV signals, record, edit and reproduce for local presentation. The system processes and reproduces still photo and provides loudspeaker, still picture and TV projection capability.

HISTORICAL BACKGROUND:

May 90 - Type Classified (TC) Limited Procurement, Urgent (LPU) approved.

EVENTS SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PRODUCTION																												
MATERIEL RELEASE	I																											
FIRST UNIT EQUIPPED (FUE)	I																											

REQUIREMENTS DOCUMENT:

TYPE CLASSIFICATION: LPU May 90.

AN/MSQ-858 IS A MOBILE AUDIO-VISUAL INFORMATION COLLECTION AND DISSEMINATION SYSTEM USED FOR PSYCHOLOGICAL PURPOSES.

SOF

AN/PPN-19. RADAR TRANSPONDER

PROJECT OFFICER: Mr. Fred Kobylarz, DSN 995-2217
COMN 908/544-2217

PE & LINE #: D475

DESCRIPTION: The AN/PPN-19 is a device that responds to an airborne radar interrogation, and provides to the aircraft the beacon ID and position it is used for, enroute navigation, drop zone location, air strip marking and ordnance delivery.

HISTORICAL BACKGROUND:

Sep 89 - Production Contract awarded.
2-3QFY91 - First Article Test.

EVENTS SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PRODUCTION CONTRACT																												

REQUIREMENTS DOCUMENT: Approved ROC.

TYPE CLASSIFICATION:

AN/PPN-19 IS A DEVICE THAT RESPONDS TO AN AIRBORNE RADAR INTERROGATION, AND PROVIDES TO THE AIRCRAFT THE BEACON ID AND POSITION.

SSE

AN/TSC-122. COMMUNICATIONS CENTRAL

PROJECT OFFICER: Mr. Robert Yee, DSN 995-2279
COMN 908/544-2279

PE & LINE #: D474

DESCRIPTION: AN/TSC-122 will provide the U.S. Army Special Forces with multichannel radio access to the Defense Communications System (DCS) (AUTODIN and AUTOVON) and provide intra-theater communications between operating bases. The assemblage will consist of non-developmental components configured in an S-250 or equivalent shelter which will be mounted on a customer-owned M-1028 CUCV. The system will communicate with the current family of DCS communications centrals, provide single-channel High Frequency (HF) data communications with the present standard radio teletypewriter sets, AN/GRC-122 and GRC-142, and single-channel voice communications with standard Army HF radios including the IHFR family. A 2,500 mile communications range will be provided by Sloping "V" antennas included as part of the system.

HISTORICAL BACKGROUND:

Jun 86 - AMC Procurement Request Notice issued.
Jul 86 - Market Investigation.
Jan 87 - User technical requirements re-defined.
Apr 89 - Contract Award.
4QFY90 - Materiel Release.
1QFY91 - FUE.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
PROD CONTRACT																												
MS III																												

REQUIREMENTS DOCUMENT:

TYPE CLASSIFICATION: LPU, Dec 86, HQDA.

AN/TSC-122 IS A MULTICHANNEL HF RADIO COMMUNICATION CENTRAL THAT WILL PROVIDE ACCESS TO THE DEFENSE COMMUNICATIONS SYSTEMS AS WELL AS PROVIDING LONG RANGE POINT-TO-POINT VOICE AND DATA COMMUNICATIONS IN THE 2 TO 30 MHz FREQUENCY RANGE.

SOF

ELECTRONIC FILMLESS CAMERA SYSTEM (EFCS)

PROJECT OFFICER: Mr. M. Kass, DSN 992-0398
COMM 908/532-0398

PE & LINE #: D476

DESCRIPTION: EFCS consists of a forward area outstation and rear area base station. The outstation still-video camera (hand-held or tripod mounted) captures, electronically stores, and converts the picture/image data to a digital format suitable for radio transmission. The base station converts the data to a TV picture and/or a printed image. Identification: Aircraft at 1000 meters; Faces at 200 meters; Personnel gear/weapons at 600 meters; Base Station: copies of document.

HISTORICAL BACKGROUND:

1QFY91 - Contract award.

EVENTS SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
TECHNICAL TEST																												
DELIVERY																												
USER TEST																												
FUE																												

REQUIREMENTS DOCUMENT: ROC, 20 Nov 89.

TYPE CLASSIFICATION: Generic.

EFCS PROVIDES SURVEILLANCE AND INTELLIGENCE GATHERING CAPABILITY (SCENES, PERSONNEL I.D., DOCUMENTS).

SOE

SPECIAL OPERATIONS FORCES LASER MARKER (SOFLAM)

PROJECT OFFICER: Mr. Edmund Erskin, DSN 995-2246
COMN 908-544-2246

PE & LINE #: D474

DESCRIPTION: SOFLAM is a small lightweight laser target marker capable of marking area targets to 5 kilometers and range findings to 10 kilometers. The system, capable of remote or manual operations, is battery powered. SOFLAM will weigh approximately 9 pounds and have a volume of less than 450 cubic inches.

HISTORICAL BACKGROUND:

3QFY91 - Production contract awarded (Navy).

EVENTS SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				1				1				1				1				1			
PRODUCTION CONTRACT (NAVY)																												
FIRST ARTICLE TESTING					I	I																						
FIRST UNIT EQUIPPED (NAVY)																												
FIRST UNIT EQUIPPED (ARMY)																												

REQUIREMENTS DOCUMENT: ROC Approved, Aug 90.

TYPE CLASSIFICATION:

SOFLAM IS A MAN-PORTABLE SOLID STATE LASER MARKER USED TO ILLUMINATE TARGETS FOR LASER SEEKER EQUIPPED AIRCRAFT AND LASER GUIDED MUNITIONS.

SOF

OP-177/U, POWER SUPPLY ASSEMBLY

PROJECT OFFICER: Mr. William Krajenski, DSN 992-0787
COMH 908/532-0787

PE & LINE #: D474

DESCRIPTION: OP-177/U, Power Supply Assembly provides a kit of small non-depleting electrical power producing devices. It is a family of three electronic power sources and interconnecting appliques used to recharge SOF rechargeable batteries. The OP-177/U, Power Supply Assembly configuration is as follows:

- 1 ea System Carrying Bag w/Sling
- 1 ea Generator Bag containing:
 - 1 ea G-67B/G Generator, direct current
 - 1 ea Interconnecting Cable
- 2 ea Solar Bags, each containing:
 - 2 ea Solar Panels
 - 2 ea Power Supply Adapters
 - 2 ea DC/DC Adapters
 - 4 ea Interconnecting Cables
- 1 ea AC/DC power converter
 - 1 ea Int'l/Univ'l Wall Socket Adapter.

EVENTS SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
USER & TECH TEST (LPU)	I																											
FUE (LPU)					I																							
MS I/III (TC STD)					I																							
STD PROD AND					I																							
START PROD DELIVERY									I																			

REQUIREMENTS DOCUMENT: Validated ORD, Nov 91.

TYPE CLASSIFICATION: LPU, Mar 89 HQ DA; TC Standard, May 92.

SEE

OE-452/PRC. ANTENNA GROUP

PROJECT OFFICER: Mr. Jerry Mohr, DSN 995-2391
COMN 908/544-2391

PE & LINE #: D474

DESCRIPTION: OE-452/PRC Antenna Group is a kit of lightweight components for constructing and erecting mission specific HF or VHF antennas for tactical outstation use.

HF Antennas: Terminated Sloping Dipole - short range
117 ft. Sloping "V" - short or medium range
234 ft. Sloping "V" - medium to long range
438 ft. bent longwire - long range
VHF Antenna: 176 ft. Inverted "V"

HISTORICAL BACKGROUND:

Sep 89 - Contract Award.
Nov 92 - First Delivery.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
DELIVERY	1																											
FUE	1																											
IOC	1																											

REQUIREMENTS DOCUMENT: Approved ROC, Aug 89.

TYPE CLASSIFICATION: Generic. Anticipate Standard 4QFY92.

OE-452/PRC, ANTENNA GROUP IS A KIT OF ANTENNAS USED WITH HF AND VHF RADIO SETS.

C3I LRC

IMMC

IMMC

AN/MLO-34, TACJAM

PRODUCT MANAGER: Dave Zedo, DSN 229-6492
COMN 703/349-6492

PE & LINE #: 6.42.70.DK-12/DL-12; SSN: V07200

DESCRIPTION: TACJAM is tactical ground based communications denial, deception, and disruption system. The system consists of mission equipment mounted in a shelter carried on a M-1015 tracked vehicle with an on board generator. There are three TACJAM systems per heavy division, three per separate ACR/BDE, and three per Corps. A total of 104 systems have been produced. The system contains four receivers and three transmitters. The receivers are used to search for target signals and are tuned by computer. The transmitters permit simultaneous jamming of three separate frequencies. TACJAM also has a Signal Initiated Jam function that permits automatic detection and jamming of preselected frequencies. Up to 20 frequencies or frequency bands may be protected from jamming. Ongoing materiel changes include addition of a Host Interface Unit for connectivity with TCAS, ASAS, and other Intelligence and Electronic Warfare systems. TACJAM functions will be incorporated into the Ground Based Common Sensor-Heavy (GBCS-H) when that system is fielded. GBCS-H will incorporate the technology needed to exploit and jam the next generation of threat signals. Much of this technology is being developed in the TACJAM-A program described separately.

HISTORICAL BACKGROUND:

Sep 79 - First production contract award.
May 83 - Second production contract award.
May 84 - First Unit Equipped (FUE).
Mar 87 - Third production contract award.
Mar 88 - FUE (second production).
Sep 89 - Fielding to active Army units completed.
Sep 91 - Transitioned TACJAM from PW, SW to IMMC.

REQUIREMENTS DOCUMENT: ROC approved by HQDA, 1 Oct 73.

TYPE CLASSIFICATION: Standard, 20 Jul 79.

TACJAM IS A TACTICAL GROUND BASED COMMUNICATIONS DENIAL, DECEPTION, AND DISRUPTION SYSTEM.

SMD

SND

AN/APN-209(V), RADAR ALTIMETER SET

PROJECT MANAGER: Mr. Chris Cardinale, DSN 992-5271
COMM 908/532-5271

PE & LINE #:

DESCRIPTION: AN/APN-209(V) Radar Altimeter Set provides a continuous indication of altitude of an aircraft 0 to 1500 feet above the surface of the earth and the features upon it by transmitting a radar signal to the ground, receiving the reflected signal and indicates the altitude of the aircraft on the Receiver-Transmitter (RT) unit and a remote indicator. The Altimeter Set operates from an aircraft supply having a nominal voltage of 27.5 volts DC. In addition, the RT, Height Indicator displays analog altitude, digital altitude warnings. There is no planned replacement of the AN/APN-209(V). Production quantities are identified through FY95 to support helicopter platforms. A helicopter flying at night is classified as nonmission capable if there is no working Radar Altimeter on board.

HISTORICAL BACKGROUND:

Aug 72 - Operational evaluation.
Nov 73 - Competitive contracts awarded to Honeywell.
Jun 78 - Release of AN/APN-209.
Apr 79 - Transition from AVRADA to CECOM.
Jul 85 - Reliability improvement, reducing number of components.
Jul 89 - Transition from DMM Level III to SND Level II.
Nov 90 - Antenna first competitive Production award.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				1				1				1				1				1			
SYSTEM PRODUCTION																												
COMPETITIVE PRODUCTION - ANTENNA																												
ARMY ORGANIC DEPOT																												

REQUIREMENTS DOCUMENT: Materiel Needs Statement, DA approved 21 Mar 73.

TYPE CLASSIFICATION: Standard, Jun 76.

AN/APN-209(V) PROVIDES AN ACCURATE INDICATION OF ALTITUDE OF AN AIRCRAFT OVER AN ALTITUDE OF 0 TO 1500 FEET. THE ALTIMETER IS REQUIRED IF THE AIRCRAFT IS FLYING AT NIGHT OR OVER FEATURELESS TERRAIN, FOR EXAMPLE, SAND DUNES.

AN/ASC-15B, COMMUNICATIONS CENTRAL-CONSOLE

PROJECT OFFICER: Mr. Anthony Noyalis, DSN 992-5271
COMN 908/532-5271

LIN & BLIN #: C59313 AA0710

DESCRIPTION: AN/ASC-15B console functions as an airborne or ground command post, providing tactical voice/data communications in both secure and nonsecure modes. AN/ASC-15B is interfaced with the aircraft or ground auxiliary equipment to function as a secure/nonsecure automatic retransmission station and satellite communications command post and to provide channel scanning, intercommunication facilities for up to nine users and communication management for up to four operators. AN/ASC-15B provides AM and FM communications in the applicable HF, VHF and UHF frequency ranges and provides NATO and Tri-Service interoperability during all types of military operations.

HISTORICAL BACKGROUND:

Oct 85 - Proof of Concept/Prototype Testing.
Jan 86 - O&O Plan Approved.
Apr 86 - Command & Control In-Process Program Review.
Jun 86 - Senior Data Review Board Approval.
Jul 86 - Solicitation Issued.
Sep 86 - Contract Award - 8 systems.
Jul 87 - Airworthiness Qualification.
Jul 87-Sep 87 - User Testing.
Aug 87-Sep 88 - Contract Modifications - Add 26 systems (total 34 systems).
Sep 90-Jan 91 - Unpriced contract awards for Desert Storm - 10 systems, additional support.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98							
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Contract modification - 4 systems					1																											
Contract modification - 6 systems					1																											

REQUIREMENTS DOCUMENT: ROC approved March 1991.

TYPE CLASSIFICATION: Limited Production - Urgent.

AN/ASC-15B PROVIDES BATTEFIELD COMMANDERS WITH THE C2 CAPABILITY FOR JOINT SERVICE OPERATIONS TO DIRECTLY CONTROL AND INFLUENCE THE BATTLE.

SHD

AN/GRQ-27(V)1, GOLDWING POWER SUPPLY

PROJECT OFFICER: Mr. Michael Travisano, DSN 992-5108
COMM 980/532-5108

PE & LINE #: NYA

DESCRIPTION: GOLDWING provides dedicated IEW communications capability required by USAF weather teams supporting tactical Army operations. GOLDWING is a low density, secure data communications system employing HF FSK packet radio in the 1.6 to 30 MHz frequency band. It operates at speeds up to 1200 baud and is designed to support meteorological operations. GOLDWING is a FORSCOM NDI procurement. It is scheduled to officially replace RATT rigs on USAF weather team modified tables of organization and equipment in the FY92/93 timeframe.

GOLDWING SYSTEM II AN/GRQ-27(V)2 augments the capabilities of the current V1 system to include support for automatic weather bulletin processing, automatic weather watch, reception of weather data.

HISTORIC BACKGROUND:

- FY87 - Purchase of initial GOLDWING IEW Communication system.
- FY88 - Interface of GOLDWING and UAMS; Purchase of WRAASE Satellite Receiver Systems.
- Sep 88 - 50 systems issued to the 1st Weather Sqdrn Ft Gillem with spare and Comm TMs.
- FY89 - Merger of Air Force Quick Reaction and Army GOLDWING Programs.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
TECHNICAL MANUALS DELIVERY																												
SPARES DELIVERY																												
DEPOT SUPPORT																												
TRANSITION TO LEVEL III																												

REQUIREMENTS DOCUMENT: Awaiting O&O approval.

TYPE CLASSIFICATION:

GOLDWING PROVIDES DEDICATED COMMUNICATIONS CAPABILITY REQUIRED BY USAF WEATHER TEAMS SUPPORTING TACTICAL ARMY OPERATIONS.

SND

AN/GSS-10, TACFIRE

PROJECT OFFICER: Mr. Ed. Marcinkiewicz, DSN 992-5271
COMN 908/532-5271

PE & LINE #: F55750 (CORPS DIVARTY)
F55818 (DIVISION DIVARTY)
F83626 (BATTALION)

DESCRIPTION: TACFIRE consists of computers and remote devices linked by digital communications using existing radio and wire communications equipment. TACFIRE automates selected field artillery command and control functions to provide efficient management of fire support resources.

HISTORICAL BACKGROUND: The last TACFIRE fielding was completed in 1987. Installations of the two major modifications (Upgraded Counterfire Equipment and CP-1822) were completed in 1990. The TACFIRE/MSE interface device is currently being procured and fielded. Replacement of TACFIRE by AFATDS is scheduled to begin in 1994.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
TAC/MSE ID																												
TAC/MSE ID AWARD																												
TAC/MSE ID FIELDING																												
AFATDS FIELDINGS BEGIN REPLACING TACFIRE																												

REQUIREMENTS DOCUMENT: QMR, Mar 66.

TYPE CLASSIFICATION: Standard, Oct 78.

TACFIRE AUTOMATES SELECTED FIELD ARTILLERY COMMAND AND CONTROL FUNCTIONS TO PROVIDE EFFICIENT MANAGEMENT OF FIRE SUPPORT RESOURCES.

SMD

AN/MYO-4, DECENTRALIZED AUTOMATED SERVICE SUPPORT SYSTEM
(DAS-3)

PROJECT OFFICER: MAJ Kenneth Hill, DSN 992-8941
908/532-8941

PE & LINE #: D78075

DESCRIPTION: DAS-3 is a computer system project conceptualized in 1975 and contract awarded in 1979 to General Electric/MATSCO. The field systems consist of automatic data processing equipment housed in mobile 35 ft. air conditioned vans powered by standard military generators and/or commercial power. DAS-3 environment is any of the non-divisional Direct Support Unit/General Support Units (DSU/GSU) of supply and maintenance management. DAS-3 is the ADPE interface between the direct support level and intermediate level of supply. DAS-3 is not field programmable, will utilize functional application programs developed at central CONUS facilities; will be employed in all types of geographical areas. System fielded from Dec 80 to Sep 83. There were 203 systems fielded; cost about \$700K each. This is an Information Systems Management Activity (ISMA) item supported by SMD.

HISTORICAL BACKGROUND:

Dec 80 - First unit fielded (without supportability).
Apr 83 - Supportability achieved.
May 83 - Materiel Release approved.
Sep 83 - Last production system fielded.
Feb 86 - Under Secretary of the Army was briefed on the recommended phase out plan for the DAS-3.
May 86 - CECOM awarded contract to Honeywell for \$2.6M worth of spare parts for the DAS-3.
Jul 87-Aug 87 - Revised DAS-3 Acquisition Plan forwarded from CECOM to AMC, then to DA; CECOM procured \$5.2M worth of spare parts from Honeywell.
Oct 87 - Transition of DAS-3 from TACHIS to Logistics Support Center, ISEC, Ft Monmouth.
Nov 87 - Draft DOD Inspector General report of Honeywell overpricing was received at CECOM for comment.
Apr 88-Sep 88 - CECOM procured \$11.1M worth of spare parts from various contractors for the DAS-3.
Jan 88 - CECOM provided comments to draft DOD IG report on Honeywell overpricing.
Sep 90 - Service & Maintenance contract awarded to ICT.
Oct 90 - Honeywell contracts terminated.
Dec 91 - Transition of DAS-3 Program from ISMA to CECOM.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
PHASE OUT (PENDING TRADOC SCHEDULING)	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

REQUIREMENTS DOCUMENT: ROC approved 11 May 1977, USA TRADOC ACN 29055, Revised by Logistics and Soldier Support Centers 22 Sep 80.

TYPE CLASSIFICATION: Standard, Sep 80.

DAS-3 WAS DEVELOPED TO PROVIDE DECENTRALIZED AUTOMATED SERVICE SUPPORT SYSTEMS SUITABLE FOR USE BY THE ARMY IN THE FIELD.

SND

AN/MYQ-4A, DECENTRALIZED AUTOMATED SERVICE SUPPORT SYSTEM
(DIVISION/CORPS) DAS-3(D/C)

PROJECT OFFICER: MAJ Kenneth Hill, DSN 992-8941
COM 908/532-8941

PE & LINE #: D 78325

DESCRIPTION: DAS-3 (D/C) was conceptualized in 1981 to produce an enhanced version of the original DAS-3 (AN/MYQ-4). The system is similar to the basic DAS-3 (AN/MYQ-4) with the following distinguishing changes: additional ADP devices, communications interface section and provisions for a modular collective protection equipment unit. DAS-3 (Div/Corps) consists of a data processing center housed in a 35 foot, 10 ton semi-trailer van, XH971, an administrative center housed in a 5 ton expandable van, and a dual generator mobile power plant. The system is comprised of the following subsystems: ADP Subsystem, AC Power Subsystem, Environmental Subsystem, Communications Subsystem, Remote Subsystem, semi-trailer van unit, expandable van, and power plant. The hardware configuration is capable of immediately fulfilling the requirements for mobile dedicated automated data processing systems using Standard Multi-Command Management Information Systems developed and maintained at a central location, but operational at multiple user sites. The initial operational environment of the DAS-3 (D/C) will be in divisions, separate brigades, COSCOM's, medical and port facilities to support supply, maintenance, personnel, medical, port facilities, ammunition movement management as well as other Military Combat Service Support functions. This is an Information Systems Management Activity (ISMA) item supported by SND.

HISTORICAL BACKGROUND:

Oct 82 - Ltr contract to Management and Technical Services Co. of GE to proceed under \$4M ceiling.	Jul-Aug 87 - Revised DAS-3 Acquisition Plan forwarded from CECOM through AMC to DA; CECOM procured \$5.2M worth of spare parts from Honeywell.
Aug 83 - First Unit Equipped.	
Sep 83 - IPR conducted to approve continuing fielding of limited production.	Oct 87 - Transition of DAS-3(D/C) from TACHIS to Logistics Support Center, ISEC, Ft Monmouth.
Apr 84 - Initial Operational Capability.	Nov 87 - Draft DOD IG report of Honeywell overpricing was received at CECOM for comment.
Sep 84 - Maintainer/Users conference scheduled in USAREUR; Gain full Military Logistics Support.	Apr-Sep 88 - CECOM procured \$11.1M worth of spare parts from various contractors for DAS-3.
Oct 84 - Honeywell "BOA" under investigation due to suspected overpricing for spare parts.	Jan 88 - CECOM provided comments to draft DOD IG report on Honeywell.
Jan 86 - Final fielding completed.	Sep 90 - Service & Maintenance contract awarded to ICT.
May 86 - CECOM awarded contract to Honeywell for \$2.6M worth of spare parts for the DAS-3.	Oct 90 - Honeywell contracts terminated.
Sep 86-Jun 87 - Communication upgrade of DAS-3.	Dec 91 - Transition of DAS-3 from ISMA to CECOM.

EVENT SCHEDULE:

FISCAL YEAR	92			93			94			95			96			97			98		
	QTR	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
REDISTRIBUTION		1																			
PHASE OUT (PENDING TRADOC SCHEDULING)		1								1											

REQUIREMENTS DOCUMENT: Revised DAS-3 ROC approved 22 Sep 83, originally approved Sep 82.

TYPE CLASSIFICATION: LP, Jan 84.

DAS-3 (D/C) WAS CONCEPTUALIZED IN 1981 TO PRODUCE AN ENHANCED VERSION OF THE ORIGINAL DAS-3 (AN/MYQ-4).

282

AN/WR-29, BATTERY COMPUTER SYSTEM (BCS)

PROJECT OFFICER: Mr. Ed Marcinkiewicz, DSN 992-5271
COMN 908/532-5271

PE & LINE #: C40499

DESCRIPTION: BCS is a small, on-line, militarized computer system used by the Army's cannon batteries, Multiple Launch Rocket System (MLRS) and LANCE. BCS increases field artillery mission effectiveness by providing two-way digital communications between TACFIRE and the battery, and by enabling accurate and rapid individual piece firing data computations.

HISTORICAL BACKGROUND:

1QFY88 - Transition to Systems Management Directorate

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
ATCCS-COMMON HARDWARE REPLACING BCS					1																							

REQUIREMENTS DOCUMENT: ROC approved, Oct 75.

TYPE CLASSIFICATION: Standard, Sep 79.

BCS IS A SMALL, ON-LINE, MILITARIZED COMPUTER SYSTEM USED BY THE ARMY'S CANNON BATTERIES, MULTIPLE LAUNCH ROCKET SYSTEM (MLRS) AND LANCE.

SND

AN/PRC-127, NON-HARDENED SMALL UNIT RADIO (NSUR)

PROJECT OFFICER: Mr. Mario Ambrosio, DSN 992-8941
COMM 908/532-8941

PE & LINE #: N17818

DESCRIPTION: AN/PRC-127 is a short range, handheld, non-militarized radio for use primarily by support troops. AN/PRC-127, is a small, lightweight, VHF, radio capable of providing two-way voice communication at ranges up to three kilometers. The approximate size of the radio is 7.8" by 2.5" by 1.5", weighing approximately 24 ounces, covering at minimum, the frequency range of 136-160 MHz. AN/PRC-127 will be employed at the lowest echelon of command to control squad and team-sized elements of Combat Service and Combat Service Support units whose mission requires the use of a radio for control of supply areas, construction areas, convoys, base defense and dismounted rear battle operations.

HISTORICAL BACKGROUND:

May 85 - VCSA decision on MDI approach to replace AN/PRC-68 radio.
Jan 86 - Market Investigation.
May-Jun 86 - TECOM, USA SIGCEN evaluation of candidates.
Jan 87 - ROC approval.
Mar 87 - AP approval; Milestone I/III IPR.
Nov 87 - Source Selection Decision.
Feb 88 - Contract Award - Bendix/King for 7,700 radios.
Feb 89 - Option exercised for 7,700 radios.
Dec 90 - Option exercised for 6,000 radios.
Feb 91 - Option exercised for 4,000 radios.
Sep 91 - Option exercised for 10,000 radios.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				2				3				4				1				2			
FOLLOW-ON FIELDING																												

REQUIREMENTS DOCUMENT: ROC approved, 7 Jan 87.

TYPE CLASSIFICATION: Standard, 29 Jan 88.

AN/PRC-127 IS A NON-HARDENED SMALL UNIT RADIO IS A COMPACT, LIGHTWEIGHT, HAND HELD TRANSCEIVER. IT IS SIMPLE TO USE AND IS CAPABLE OF PROVIDING SMALL UNIT LEVEL COMMUNICATIONS OVER DIVERSE TERRAIN AND UNDER A WIDE RANGE OF CLIMATIC CONDITIONS.

AN790-11, MINI-FIX

PROJECT OFFICER: Ms. B.K. Seenson, DSN 992-5108
COMM 980/532-5108

PE & LINE #: R36561 SSN: W2340000GMD

DESCRIPTION: MINI-FIX is a man-portable direction finding system. It is comprised of a man-portable vehicular radio receiver and direction finder (DF) processor system, signal monitor, DF processor (the controlling unit in the DF system), and DF antenna. MINI-FIX can be easily transported and maintained in the field, while providing highly accurate intercept and Line-of-Bearing (LOB) information. This system was initially provided to Communications Electronics Warfare Intelligence (CEWI) units via the Intelligence and Security Command (INSCOM) program, as an NDI training system.

HISTORIC BACKGROUND:

- Dec 79 - First unit equipped, purchased by FORSCOM for readiness training, total of 75 original systems purchased without ILS.
- Jul 84 - CECOM tasked by DA to support FORSCOM in developing ILS.
- Aug 86 - Fielding of all ILS by on-site delivery team commenced, to Korea Nov 86 and Panama Dec 86.
- Aug 87 - Full organic support to all FORSCOM and OCONUS activities.
- Jun 88 - Full provisioning parts list purchased.
- Mar 89 - System upgraded to include battery charger, high frequency capability, upconverter CV4090.
- Sep 89 - Full life cycle support provided.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
TYPE CLASSIFICATION					I																							
TRANSITION TO CECOM LEVEL III MANAGEMENT									I																			

REQUIREMENTS DOCUMENT: HQDA message authorized procurement, 231742Z Nov 83.

TYPE CLASSIFICATION:

MINI-FIX IS A MAN-PORTABLE DIRECTION FINDING SYSTEM.

SMD

AN/TRC-180(V), RADIO TERMINAL SET

PROJECT MANAGER: Mr. Raphael Casanova, DSM 992-8941
COMM 908/532-8941

PE & LINE #: Z45447

DESCRIPTION: AN/TRC-180(V) is a vehicular, transportable, multichannel communications (voice/data) assemblage. The set consists of three complete Radio/Cable systems capable of operating as a Cable/Radio Terminal or Repeater. The TD-5064 provides 15 channels, dial through telephone interface, high speed data capability and Built in Test (BIT). The TD-1390 provides capability to combine two 15-channel groups into a 30-channel group for transmission over a single radio. The CV-3837/U provides an interface between the KG-27S and the TD-5064. The system is installed in a S-335(), AN/TRC-113(V) shelter (modified S-250), and transported on a 5/4 ton truck or by air.

HISTORICAL BACKGROUND:

Jun 81 - Canadian Marconi Co developed a new (15) channel Delta Modulation Multiplexer.
Jun 82 - 9th ID identified a requirement to upgrade Radio Terminal Set AN/TRC-145(V).
Dec 83 - Contract awarded for prototypes of AN/TRC-180.
Aug 86 - Procurement Contract Awarded.
Sep 87 - Delivery of AN/TRC-180 completed.
Nov 90-Pres -Systems turned in to SAAD (BCR II).

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
TRANSITION TO CECOM LEVEL III MANAGEMENT								1																				

REQUIREMENTS DOCUMENT: Quick Reaction Program 2-22, Multichannel Upgrade of AN/TRC-145 approved by HQDA, 25 Feb 1983.

TYPE CLASSIFICATION: Limited Procurement.

AN/TRC-180(V) PROVIDES SECURE MULTIPLEX TERMINAL AND REPEATER FACILITIES.

NO/PRO-92. TACFIX

PROJECT OFFICER: Ms. B.K. Swenson, DSN 992-5108
COM 980/532-5108

PE & LINE #: NYA

DESCRIPTION: TACFIX is a shelter mounted direction finder system. It is used by Communications Electronics Warfare Intelligence (CEWI) units. This equipment is designed with two direction finder (DF) receivers, a quick erecting DF antenna/mast assembly and a DF processor. TACFIX provides Line-of-Bearing data only and must be manually controlled to provide true DF.

HISTORICAL BACKGROUND:

- Sep 79 - First unit equipped, purchased by FORSCOM for readiness training, total of 35 original systems purchased without lifecycle ULS.
- Jan 84 - CECOM tasked by DA to support FORSCOM by developing ULS.
- Aug 84 - ILS MGT team established.
- Jun 86 - Spare and repair parts in place.
- Dec 86 - Fielding of ILS by on-site delivery team commenced - to Panama Dec 86.
- Sep 87 - Antenna design change to install in shelter.
- Apr 89 - Procurement data package submitted to upgrade system capabilities.
- Jun 89 - Full depot support established at TOAD.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
FULL PROVISIONING PARTS LIST DELIVERED				I																								
DELIVERY OF ADDITIONAL SYSTEMS AND SPARES							I																					
TRANSITION TO CECOM LEVEL III MANAGEMENT							I																					

REQUIREMENTS DOCUMENT: HQDA message authorized procurement 231742Z Nov 83.

TYPE CLASSIFICATION: Standard, Dec 89.

TACFIX IS A SHELTER MOUNTED DIRECTION FINDER SYSTEM.

SHD

AN/TRS-2(V), PLATOON EARLY WARNING SYSTEM

PROJECT OFFICER: Ms. Rosemarie LaMacchia, DSN 992-8941
COMN 908/532-8941

PE & LINE #: P06148

DESCRIPTION: An operational AN/TRS-2(V) consists of ten detector anti-intrusion devices, two radio receivers, two interface wire links and other accessories packaged in two carrying bags. The system will operate in a variety of different types of terrain and under extreme temperature and climatic conditions with a very low false alarm rate.

HISTORICAL BACKGROUND:

Apr 76 - Milestone Decision Review.
Jul 78 - Contract Award.
Sep 80 - Test.
Dec 80 - First Unit Equipped.
Mar 81 - Initial Operational Capability.
Sep 92 - Transition.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98				
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
TRANSITION TO LEVEL III						1																							

REQUIREMENTS DOCUMENT: Initial ROC approved, 26 Nov 62; Final ROC approved, 19 Oct 72.

TYPE CLASSIFICATION: Standard A, Apr 78.

AN/TRS-2(V) IS AN OPERATIONAL SYSTEM CONSISTS OF 10 DETECTORS, 2 RADIO RECEIVERS, TWO INTERFACE WIRE LINKS AND OTHER ACCESSORIES PACKAGED IN TWO CARRYING BAGS.

IN/TSO-164, DRAGONFIX

PROJECT OFFICER: Mr. Michael Travisano, DSN 992-5108
COMN 908/532-5108

PE & LINE #: NYA

DESCRIPTION: DRAGONFIX is a FORSCOM, NDI "GO TO WAR" system that performs high frequency direction finding, intercept and collection. DRAGONFIX system is designed to automatically detect and permit intercept, analysis and reporting of emitter operating in 0.5-30 MHz range by means of azimuth triangulation. DRAGONFIX is comprised of three sets of shelters, each set consisting of two S-250 shelters (DF collection and analysis communications). Each shelter has two operators. The operators receive taskings. The sheltered equipment detects, collects, and determines azimuth and evaluates angle of target signals; determines height of ionosphere; calculates location, and prepares/ issues reports.

HISTORICAL BACKGROUND:

Original contract production of one set was tested, accepted and delivered to the Government. Improvements to the set are ongoing for new delivery date 3QFY92.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
TECHNICAL MANUAL DELIVERY					I																							
DEPOT SUPPORT					I																							
TRANSITION TO LEVEL III					I																							

REQUIREMENTS DOCUMENT: Operational Needs Statement, DA approved.

TYPE CLASSIFICATION: Anticipate Standard 1QFY92.

DRAGONFIX IS A FORSCOM, NDI "GO TO WAR" SYSTEM THAT PERFORMS HIGH FREQUENCY DIRECTION FINDING, INTERCEPT AND COLLECTION.

SND

AN/TSW-7A, AIR TRAFFIC CONTROL CENTRAL

PROJECT MANAGER: Mr. Mark DiPaola, DSN 992-5271
COMM 908/532-5271

PE & LINE #: A27624 SSN: P454010

DESCRIPTION: AN/TSW-7A is a mobile Air Traffic Control facility that can be deployed to tactical air fields for visual control of airborne and ground flight operations. This facility consists of a communications shelter and an ancillary equipment pallet. The communications shelter contains HF/UHF/ VHF communications equipment and can accommodate up to three air traffic controllers at one time. Ancillary environmental control and power generating equipment contained on the pallet assembly provides the self-contained capability for operation of this system. Transport of the communications shelter and pallet assembly is accomplished via two each 2-1/2 ton trucks which permits tactical deployment of this facility.

HISTORICAL BACKGROUND:

Nov 78 - Statement of Need Document approved.
Sep 79 - Production contract award for 22 systems.
Jun 82 - First Unit Equipped.
Jul 84 - Five additional systems procured by National Guard.
Nov 84 - System transition from AVRADA to CECOM.
Jun 86 - Six additional systems procured by active Army.
May 88 - ECPs approved for communications equipment upgrade.
Dec 89 - Initial fielding of upgraded communications equipment.
Jan 91 - Completion of fielding activities.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
INSTALLATION OF UPGRADED COMMUNICATIONS EQUIPMENT																												
TRANSITION TO LEVEL III																												

REQUIREMENTS DOCUMENT: Statement of Need prepared by USAISC in Nov 78 to modify an existing Air Force system for Army use.

TYPE CLASSIFICATION: Standard, Oct 80.

AN/TSW-7A AIR TRAFFIC CONTROL CENTRAL IS A TRANSPORTABLE FACILITY THAT CAN BE DEPLOYED AT TACTICAL AIR STRIPS FOR AIRBORNE AND GROUND CONTROL OF AIRCRAFT.

AN/TTC-41(V), CENTRAL OFFICE, TELEPHONE, AUTOMATIC

PROJECT MANAGER: Mr. Rafael Cananova, DSN 992-8941
COMH 908/532-8941

PE & LINE #: 738017-P1

DESCRIPTION: AN/TTC-41(V) in an air or vehicular transportable system used to provide rapid automatic switching to tactical units in area-type communications system. It provides cordless service to 2-wire common battery signaling (CBS) lines, 20Hz ringdown (RD) lines or trunks, common battery dial pulse or dual tone multi-frequency (DTMF) lines, 4-wire tone signaling trunks, 4-wire DTMF confirmation, tone burst, and converter trunks, 4-wire single frequency signaling AUTOVON access, automatic tandem, five levels of precedence and preemption. Depending upon the number of SB-3614(V)/TT Switchboards in the AN/TTC-41(V) shelter, the system can provide from 30 to 120 lines of service. AN/TTC-41(V) replaces the AN/MTC-3, AN/MTC-7, and AN/TTC-23. Materiel Change program (MC 1-90-07-0015) provides an arctic heater to the AN/TTC-41(V) shelter for those systems operating in arctic weather.

HISTORICAL BACKGROUND:

Sep 76 - Production Contract Awarded to SAAD.
Jul 77 - Prototype Testing.
Jun 90 - Arctic heater MC approved by CCB/SLRB.
Aug 90 - Arctic heater MC applied to units fielded in arctic weather.
May 90-Pres- Systems being fielded under the Battlefield Communication Review Program (BCR).

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				1				1				1				1				1			
BCR FIELDINGS																												

REQUIREMENTS DOCUMENT: Qualitative Materiel Requirement approved Feb 72, amended Jan 73.

TYPE CLASSIFICATION: AN/TTC-41(V)1 to (V)4, Standard, Jul 77. AN/TTC-41(V)5 to (V)7, Limited Production, Mar 78.

AN/TTC-41(V) PROVIDES RAPID AUTOMATIC SWITCHING TO TACTICAL UNITS IN AN AREA-TYPE COMMUNICATION SYSTEM.

SHD

AN/ULQ-19, SIGNAL JAMMER RACJAM

PROJECT OFFICER: MS. B.K. Swenson, DSN 992-5108
COMH 980/532-5108

PE & LINE #: NYA

DESCRIPTION: AN/ULQ-19 RACJAM is a fully automatic, mobile, responsive Very High Frequency (VHF) jammer capable of automatically detecting and jamming signal activity on any one of 16 pre-selected target channels. The system can be programmed to scan several frequencies and while disrupting non-friendly transmissions.

HISTORICAL BACKGROUND:

Dec 83 - First unit equipped, purchased by FORSCOM for readiness training, total of 20 original systems purchased without lifecycle support.
Jan 84 - CECOM tasked by DA to support FORSCOM by developing ILS.
Sep 84 - ILS MGT team established.
Mar 86 - Spare and repair parts list submitted to contractor for price quotes.
Mar 90 - Contract for Heliborne Applique Communications-Jammer (HAC-J) established.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				1				1				1				1				1			
DELIVERY OF FULL PROVISIONING PARTS LIST (SPARES)				1																								
TYPE CLASSIFICATION				1																								
DELIVERY OF HAC-J FULL PROVISIONING PARTS LIST							1																					

REQUIREMENTS DOCUMENT: DA msg 032045Z Jan 84.

TYPE CLASSIFICATION:

AN/ULQ-19 RACJAM IS A FULLY AUTOMATIC, MOBILE, RESONSIVE VHF JAMMER CAPABLE OF AUTOMATICALLY DETECTING AND JAMMING SIGNAL ACTIVITY ON ANY ONE OF 16 PRE-SELECTED TARGET CHANNELS.

SECRET

AN/USD-9, GUARDRAIL V (GRV)

PRODUCT MANAGER: Mr. Rene Acosta, DSN 992-8941
COMN 908/532-8941

PE & LINE #: **SSN:** AZ2900

DESCRIPTION: GRV is an airborne Communications Intelligence (COMINT) collection and Direction Finding (DF) system. AN/USD-9 is comprised of airborne collection platforms (RU-21H), a ground processing facility, data links, Tactical Commanders Terminals (TCT), and auxiliary ground equipment. GRV systems comprised of six aircraft are deployed in the Aerial Exploitation Battalion (AEB) of Corps MI Brigades. GRV is a fifth generation intelligence collection system using a UHF data link to remotely control mission functions on aircraft from the ground-based Information Processing Facility (IPF) where mission analysis and reporting are accomplished. GRV provides near real-time information to Tactical Commanders via the TCT. MIBNLI Corps GRV system has been equipped with a remote relay capability to permit the aircraft to operate overseas while the ground facilities remain in CONUS. Improved GUARDRAIL V (IGR V) (described in separate documents) was a product improvement with new electronics, microwave data links and modified aircraft. These systems are deployed to V Corps and VII Corps. The GUARDRAIL Common Sensor (GR/CS) (described separately) will replace both the GRV and IGR V systems. When GR/CS is fielded, GRV systems will be redeployed to other active and reserve component commands or retired.

HISTORICAL BACKGROUND:

Jun 76 - Contract award.
Nov 78 - GRV System 1 fielded to USAREUR.
Feb 79 - GRV System 2 fielded to Korea.
Apr 80 - GRV System 3 fielded to INSCOM.
Sep 81 - GRV System 3 transferred to XVIII Airborne Corps.
Aug 84 - Prototype remote relay fielded.
Jul 85 - GRV System 1 returned to SAAD for refurbishment.
May 86 - GRV System 1 refielded to III Corps.
Jan 89 - GRV System 2 returned to SAAD for refurbishment.
Oct 89 - GRV System fielded to MIBNLI, Orlando, FL.
Feb 91 - Transitioned to Level II.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
TRANSFER GRV FROM III CORPS TO I CORPS (NG)									1																			
TRANSFER GRV FROM XVIII CORPS TO WESTCOM (NG)												1																
RETIRE I CORPS GRV																												

REQUIREMENTS DOCUMENT: GRV requirement approved, 1975.

TYPE CLASSIFICATION: Standard A, 15 Nov 80.

GRV IS AN AIRBORNE COMINT COLLECTION AND DF SYSTEM.

SMD

AN/USM-410, ELECTRONIC QUALITY ASSURANCE TEST EQUIPMENT (EQUATE)

PROJECT OFFICER: Ms. Linda Johnston, DSN 992-8941
COM 908/532-8941

PE & LINE #: T61973, R09696

DESCRIPTION: AN/USM-410 is a stand alone, computer controlled Automatic Test system providing diagnostic, analog, digital and hybrid test and repair capability at GS and depot levels to numerous weapons systems (i.e. MLRS, TACFIRE, BFVS, FIREFINDER, etc.). The AN/USM-410(V)2 is the primary testing resource in the AN/MSM-105(V)1 field, transportable, electronic test and repair system. The AN/USM-410(V)4 was developed for use within the Electronic Equipment Test Facility (EETF), providing Aviation Intermediate Maintenance (AVIM) support to the APACHE Attack Helicopter. Non tactical versions of the AN/USM-410 are used in depot and contractor facilities for TPS development, production and repair.

HISTORICAL BACKGROUND:

Jun 71 - Pre-production contract award to RCA.
Aug 78 - Type Classified Limited Procurement (LP), authorization for 41 MSM-105's, by Special IPR (SIPR).
May 79 - Additional five AN/MSM-105s authorized by SIPR under extended LP.
Dec 79 - AN/MSM-105 designated by DARCOM to fulfill GS/Depot ATE reqts.
Mar 80 - Letter IPR authorized 17 more MSM-105s.
Jun 83 - Initial Operational Capability (USAREUR).
Apr 90 - Award of ECP-185 Production Contract to General Electric.
Jul 91 - EETF Type Classified.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
ECP-195 MATERIEL RELEASE				1																								
PROD DELIVERIES ECP 185				1																								
FIELDING ECP 185								1																				

REQUIREMENTS DOCUMENT: Required Operational Capability, 22 Feb 80.

TYPE CLASSIFICATION: Standard, May 82 for the AN/USM-410(V)1 and AN/USM-410(V)3; Limited Procurement for the AN/USM-410(V)2, OQ-290(V)1/MSM, and OA-8991/MSM, May 82.

AN/USM-410 IS A GENERAL PURPOSE FAMILY OF COMPUTER CONTROLLED ATE USED FOR TEST, DIAGNOSIS AND REPAIR OF ELECTRONIC LRUs, SRUs AND PRINTED CIRCUIT BOARDS CONTAINED IN NUMEROUS WEAPONS SYSTEMS.

OG-174/VRC. AMPLIFIER POWER SUPPLY

PROJECT OFFICER: Ms. Rosemarie LaMacchia, DSN 992-8941
COMN 908/532-8941

PE & LINE #: A53491

DESCRIPTION: OG-174/VRC Amplifier Power Supply Group is a vehicle applique that permits the installation of an AN/PRC-68A into Self-Propelled Howitzers (M109 and M110) and M577 Command Tracked Vehicles. When the AN/PRC-68A Radio is mounted in this manner, it will provide short range (less than 3KM) vehicle communications. OG-174/VRC also provides an interface for operation with the AN-1780/VRC Amplifier for intercommunication within the vehicle and the AN/GYK-29 Battery Computer System for communication between firing batteries. OG-174/VRC consists of an Amplifier/Power Supply (vehicle applique), Antenna Coupler, Portable Antenna, Antenna Cable Assembly, and Interface Cable Assembly. The vehicle applique has dimensions of: height - 12.4 inches, width - 11.3 inches, depth - 3.9 inches, and weighs 13 lbs.

HISTORICAL BACKGROUND:

Sep 84 - Contract Award.
Nov 86 - Production Qualification Test/First Article Test.
Apr 90 - First Unit Equipped.
May 90 - Initial Operational Capability.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
TRANSITION TO LEVEL III				I																								
COMPLETION OF 35 SET ASSEMBLIES AT DEPOT				I																								

REQUIREMENTS DOCUMENT: ROC, Apr 79.

TYPE CLASSIFICATION: Limited Procurement, Dec 82, Extended Dec 86; Standard, Jul 89

OG-174/VRC CONSISTS OF AN AMPLIFIER/POWER SUPPLY (VEHICLED APPLIQUE), ANTENNA COUPLER, PORTABLE ANTENNA, ANTENNA AMPLIFIER ASSEMBLY AND INTERFACE CABLE ASSEMBLY.

SHD

SB-3614(V)A/TT SWITCHBOARD

PROJECT OFFICER: Mr. Rafael Casanova, DSN 992-8941
COMN 908/532-8941

PE & LINE #: 738017.P1

DESCRIPTION: SB-3614 last production was in Apr 79. The SB-3614 was product improved in Apr 79. Two Product Improvement Programs were applied to the SB-3614. The first, Dual Central Office Interface and Software Changes (PIP #1-81-07-0021), added to the SB-3614 the capability to interface with civilian dial central offices and make software changes to correct/modify some functional features of the switchboard. These changes were made through the addition of a DCO card and a Programmable Read Only Memory card for each switchboard. The second Product Improvement was the Tandem AUTOVON Capability (PIP-#1-83-07-0084) which changes the system from SB-3614 to SB-3614A. The Tandem feature will allow the SB-3614A subscriber to reach a destination caller by merely dialing the destination subscriber's appropriate 7 to 10 digit number. The other user services being provided by this PIP are automatically primary/alternate trunk routing, TRI-TAC numbering plan capability, five levels of precedence, subscriber initiated conferencing, manual/automatic data base entry and dial central office interface. The Marine Corps are the Primary Inventory Control Activity for the SB-3614A switchboard.

HISTORICAL BACKGROUND:

Sep 83 - DCO contract award.
Mar 84 - Tandem AUTOVON Development contract awarded.
Sep 85 - Tandem AUTOVON Production contract award.
Sep 86 - DCO kits distributed and applied.
Jun 87-Apr 90 - Tandem AUTOVON MND applied to units in Germany, COMUS and Korea.
May 90-Pres - System is fielded as part of the AN/TTC-41(V) under the Battlefield Communication Review (BCR).

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				1				1				1				1				1			
BCR FIELDINGS																												

REQUIREMENTS DOCUMENT: Approved Qualitative Materiel Requirement 1972, amendment 31 January 1973.

TYPE CLASSIFICATION: Standard A.

SB-3614(V)A/TT IS A 30-TERMINAL AUTOMATIC SWITCHBOARD WHICH PROVIDES RAPID CORDLESS SERVICE.

TS-4403/U TEST SET, BATTERY

PROJECT MANAGER: Mr. William Schlosser, DSN 992-8941
COMN 908/532-8941

PE & LINE #:

DESCRIPTION: TS-4403/U Test Set is a device that measures charge remaining in Lithium/Sulfur dioxide batteries, specifically BA-5590/U and BA-5598/U. A non-developmental item, it is being procured from Chemtronics Ltd., Yehuda, Israel. Due to the extensive use of these lithium batteries, this device is viewed as a means of reducing battery requirements. This is a CTA item, not TO&E.

HISTORICAL BACKGROUND:

Dec 89 - Contract awarded for 18 units for evaluation.
Aug 90 - Nine units delivered for evaluation to operating units. Nine diverted to Operation Desert Shield.
Dec 90 - Contract awarded for Operation Desert Shield requirements. Initial four delivered to SMA.
Dec 91 - Letter contract awarded for a quantity of 51 each.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1				2				3				4				1				2			
DELIVERY	1								1																			

REQUIREMENTS DOCUMENT: Operational Needs Statement, FORSCOM, Nov 89.

TYPE CLASSIFICATION:

TS-4403/U TEST SET IS A DEVICE THAT MEASURES CHARGE REMAINING IN LITHIUM/SULFUR DIOXIDE BATTERIES, SPECIFICALLY BA-5590/U AND BA-5598/U.

SMD

AN/ARC-164(V), HAVE QUICK II (HQ-II)

PROJECT OFFICER: Mr. Chris J. Cardinale, DSN 992-5271
COM 908/532-5271

PE & LINE #: R13541

DESCRIPTION: Have Quick II radio set provides a 7000 channel UHF tuneable receiver; an auxiliary guard receiver (nominally 243.000 MHz) and a 7000 channel, 10-watt carrier transmitter for normal AM voice and Anti-Jam (AJ) Frequency Hopping communication mode. Have Quick II radio set provides additional AJ improvements and features from the original Have Quick radio such as Electronic Measures Counter Counter Measures.

HISTORICAL BACKGROUND:

Apr 89 - AVRADA brief to CG, CECOM, on HQII requirement; SMD directed to take HQII lead.
Feb 90 - Material change for HQII implementation approved by CG, CECOM.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
MATERIAL CHANGE FUNDS	1																											
TECHNICAL MANUALS & TRAINING		1																										
MOD KIT DELIVERY				1				1																				
FIELDING TIMING SYSTEMS							1					1																
FIELDING DATA RATE ADAPTER										1					1													

REQUIREMENTS DOCUMENT: O&O Plan for Army Aviation UHF Radios approved Sep 90..

TYPE CLASSIFICATION: Standard A.

HQ-II PROVIDES THE ARMY AN ABILITY TO COMMUNICATE TO THE AIR FORCE, NAVY AND NATO IN THE SECURE ECCM HQ-II UHF-AM MODE.

COMBAT THEATER ADP SERVICE CENTER I (CTASC-I)

PROJECT MANAGER: Mr. Ed Marcinkiewicz, DSN 992-5271
COMN 908/532-6271

PE & LINE #: Z25526, Z62937, Z38296, Z41595, Z50481

DESCRIPTION: CTASC-I is a mobile Automatic Data Processing (ADP) system supporting Combat Service Support applications at Corps and Theater levels. CTASC I supports Standard Army Management Information systems automating Personnel, Financial and Logistics management functions. The CTASC-I is comprised of a self-contained complex of three semi-trailer vans housing the central processing unit, mass storage units and tape library facilities. The system is also fielded with a maintenance van and two 100kw generators.

HISTORICAL BACKGROUND:

Feb 80 - O&O Approved.
May 80 - HQDA Procurement Decision Memorandum.
Nov 82 - Contract Award (IBM) - seven Systems.
Sep 83 - First Unit Equiped.
Nov 84 - O&O Annex for Communications Upgrade Approved.
Sep 85 - Contract Modification for Communications Upgrade.
Sep 86 - Contract Award (IBM) - five Additional Systems.
Feb 88 - First Unit Equiped (follow on five).

REQUIREMENTS DOCUMENT: DA directed Procurement.

TYPE CLASSIFICATION: Limited Procurement Urgent, Jun 82.

CTASC-I IS A MOBILE ADP SYSTEM SUPPORTING COMBAT SERVICE SUPPORT APPLICATIONS AT CORPS AND THEATER LEVELS.

SHD

NIGHT VISION INFRARED COMMON MODULES

SUBJECT OFFICER: Mr. Anthony Anania, DSN 992-5271
COMH 908/532-5271

PE & LINE #:

DESCRIPTION: Night Vision Common Modules form the basic building blocks for many of the Army's Far Infrared Night Vision Systems such as the AH-64 Apache; Target Acquisition Designation Sight/Pilots Night Vision Sensor (TADS/PNVS); M1 Abrams, Thermal Imaging System (TIS); M60A3, Tank Thermal Sight (TTS); Bradley Fighting Vehicle, Integrated Sight Unit (ISU); and the Manportable Common Thermal Night Sights (MCTNS). There are currently close to 40 different Common Modules fielded which fall into one of the following four major categories: Mechanical, Optical, Signal Conversion, and Electrical. The common modules are Stock Fund Depot Repairable and removed/replaced at General Support level. Configuration management is maintained by Night Vision and Electro-Optics Directorate. Most of the technical data packages are fully competitive with some prequalification requirements for certain modules due to the state of the art technology.

HISTORICAL BACKGROUND

1974 - Joint Logistics Commanders agree upon a Tri-Service policy of using Common Modules for FLIR development.
1976 - DT-591/UA Detector/Dewar accepted as a Common Module.
1978 - First Unit Equipped DT-591, DT-617, DT-594.
1981 - First follow-on competitive production spares buy DT-591, DT-617, DT-594.
1982 - First follow-on competitive production spares buy HD-1033B/C cryogenic cooler.
1984 - Initiation of optical Improvement Program by Night Vision and Electro-Optics Directorate.
1985 - First follow-on competitive production spares buy HD-1132 cryogenic cooler.
1989 - Night Vision and Electro-Optics Directorate approves FAT for Optically Improving Detector/Dewars.
1990 - First follow-on competitive production spares buy for HD-1033D.

REQUIREMENTS DOCUMENT: Required Operational Capability established at End Item Application/System.

TYPE CLASSIFICATION: Standard.

NIGHT VISION COMMON MODULES FORM THE BASIC BUILDING BLOCKS FOR MANY OF THE ARMY'S FAR INFRARED NIGHT VISION SYSTEMS.

TACTICAL ARMY COMBAT SERVICE SUPPORT COMPUTER SYSTEM
(TACCS)

PROJECT OFFICER: Mr. Nick Petouses, DSN 992-2969
 COMH 908/532-2969

PE & LINE #: C72396 C72626
 C08565 C72876

DESCRIPTION: TACCS is a ruggedized, transportable (two-man carry), user friendly, off-the-shelf computer and software system to be used on the battlefield for missions at various levels of command down to company. The basic TACCS will include a central processing unit, random access mass storage, printer, visual display, keyboard entry device, communications interface, and the capability to both archive the mass storage, and physically transfer data by courier. The system will be operated by military personnel of various grades and ADP skill levels and by functional people with no computer programmer training. Its missions will include personnel, supply, maintenance, medical, ammunition, and transportation. TACCS will interface with DAS-3, TCS, and TCT. This is an Information Systems Management Activity support by SHD item managed by the CECOM Weapons Systems Manager for AMC.

HISTORICAL BACKGROUND:

- Mar 82 - Contract for predecessor program, Division Level Data Entry Device (DLDED), terminated.
- Jan 83 - Released RFP for Phase-II (Fly-off testing and award).
- Sep 83 - Phase-II contract awarded; (three vendors).
- Aug 84 - Production contract awarded.
- May-Jun 84 - DT-II/OT II.
- Sep 84 - Production contract award.
- Jan 85 - Changed from B22 to a B26 system.
- May 85 - First Unit Equipped; First Article Test began.
- Sep 86 - Follow-On Evaluation of First Article Test.
- Oct 86 - Full production approval by OSD Acquisition Information System Army Resource Council (MAISARC).
- Dec 86 - Maintenance Change Concept Study to be finalized; Incorporate remote ports and transit case ECPs.
- Aug 87 - RFP sent to Federal Prison for the manufacture of TACCS spare cables; VECP submitted by contractor was withdrawn because of no projected savings.
- Jun 88 - ECP to upgrade system processor/tape drive rejected by Government. ECP to produce TACCS printer as custom build item submitted.
- Jan 88-Oct 89 - Fielded System Review conducted at CONUS and OCONUS sites.
- Jul 90 - ECP approved by DA to upgrade the system processor and software (TACCS-E).
- Mar 91 - Full Materiel Release granted to TACCS Program.
- Apr 91 - Fielding of TACCS-E retrofit begins.
- Jan 92 - TACCS Transition Plan submitted to CECOM for review.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
TRANSITION FROM PM TACHIS TO CECOM																												
ADDITIONAL FIELDING																												

REQUIREMENTS DOCUMENT: ROC approved Nov 82, USA TRADOC ACH.

TYPE CLASSIFICATION: Standard, Nov 90. Limited production, with full production decision by MAISRC, Oct 86.

TACCS IS A TRANSPORTABLE COMPUTER AND SOFTWARE SYSTEM, PROVIDING SUPPORT TO PERSONNEL, SUPPLY, MAINTENANCE, MEDICAL, AMMUNITION AND TRANSPORTATION. TACCS-E IS A MODIFIED/UPDATED VERSION OF THE TACCS WHICH UTILIZES THE INTEL 80386 PROCESSOR AND BTOS 2 FOR AN OPERATING SYSTEM.

SHD

TACTICAL LOGISTICS APPLICATIONS OF AUTOMATED MARKING AND
READING SYMBOLS, LOGMARS (T)

PROJECT OFFICER: Mr. Nick Petouses, DSN 992-2969
COMN 908/532-2969

PE & LINE #: Z09000, Z09001, Z09002, Z27679, Z50144

DESCRIPTION: LOGMARS T is a project designed to integrate standard machine readable symbology (three of nine bar code) into the various Army echelons employing Combat Service Support Standard Army Multicommand Management Information Systems hardware and software for the preparation of source data automation of logistics functions. Present plans call for the acquisition of off-the-shelf hardware consisting of the following equipment; portable bar code reader/scanner, bar code printers and modems. Different users will receive different configurations of this equipment. This is a PM TACHIS, item managed by the CECOM Weapons Systems Manager (WSM) for AMC.

HISTORICAL BACKGROUND:

Nov 83 - FY86-90 OPA requirements submission to HQDA begun; Draft Market Survey completed; 3rd ROC staffing.
Dec 83 - EXQQPRI; Life Cycle Cost Estimate (unvalidated) submitted to USA LOGCEN.
Jan 84 - Economic Analysis completed.
Jun 84 - LCCE (Validated) to USA LOGCEN.
Oct 85 - Gain approval of ROC and all associated documents; Solicitation issued.
Sep 86 - Contract award to Syscon Corp.
Jun 87 - IKP and sustainment training.
Mar-Jun 87 - IKP and sustainment training.
Jan-Jul 87 - First Article Test.
Sep 87 - FUE.
Nov 88 - Validated LCCA update.
Mar 90 - ECP for thermal printer approved; Full Materiel Release granted to LOGMARS (T).
Apr 91 - Begin fielding Thermal Transfer Printer.
Jan 92 - LOGMARS III technical description issued to DoD branch services for review.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
LOGMARS III TECH DESCRIPTION (FINAL)				1																								
CONTRACT AWARD LOGMARS III							1																					
TRANSITION																												
				TBD																								

REQUIREMENTS DOCUMENT: Final ROC was approved by DA, Aug 85.

TYPE CLASSIFICATION: Generic Type Class of specification, Standard, Jun 86.

LOGMARS (T) IS AN AUTOMATED SYSTEM TO INTEGRATE STANDARD MACHINE READABLE SYMBOLOGY FOR MARKING AND READING SYMBOLS INTO THE STANDARD ARMY MULTICOMMAND MANAGEMENT INFORMATION SYSTEMS.

CCSLA

CCSLA

KIR-1C, IFF INTERROGATOR COMPUTER

KIT-1C, IFF TRANSPONDER COMPUTER

PRODUCT MANAGER: Ms. Melody Privette, DSN 879-8344
COMN 602/538-8344

PE & LINE #: KIR-1C X98250
KIT-1C X22266

DESCRIPTION: KIR-1C is used to encrypt and decrypt the Mode 4 IFF signal generated by ground, airborne, or shipborne IFF interrogator systems. KIT-1C is used to encrypt and decrypt the Mode 4 IFF signal received by ground, airborne, or shipborne, IFF transponder systems. They both provide facilities for electronic fill of the CONSEC key, versus the mechanical fill used in the KIR-1A and the KIT-1A.

HISTORICAL BACKGROUND:

- 1986 - Development contract let by NSA for the KIR-1B/1C and KIT-1B/1C.
- 1987 - Contract modified to delete requirement for KIR-1B and KIT-1B.
- 1988 - Production contract award to Allied Signal - Bendix Communications Div.
- 1989 - Joint service test conducted on KIR-1C and KIT-1C.
- 1991 - Air Worthiness Certification by AVSCOM; First unit delivered KIR-1C and KIT-1C; IOC KIR-1C and KIT-1C.

REQUIREMENTS DOCUMENT: ROC approved 5 Oct 88 for the KIR-1C and KIT-1C.

TYPE CLASSIFICATION: Separate type classifications were not required as KIR-1C is F³ modification of KIR-1A and KIT-1C is F³ modification of KIT-1A.

KIR-1C PROVIDES SECURE IFF MODE FACILITIES FOR IFF INTERROGATOR EQUIPMENT.
KIT-1C PROVIDES SECURE IFF MODE FACILITIES FOR IFF TRANSPONDER EQUIPMENT.

SECRET

KY-57. COMMUNICATIONS SECURITY EQUIPMENT

PRODUCT MANAGER: Mr. Byron Weinberg, DSN 879-8342
COM 602/638-8342

PE & LINE #: S01373

DESCRIPTION: KY-57, Communications Security Equipment is a light-weight, direct current (DC) powered Controlled Cryptographic Item (CCI) used to provide secured voice or data communications equipments, including the non-ICOM SINCGARS, the AN/VRC-112, and the AN/PRC-70. KY-57 can be operated in manpack, shelterized, and vehicular configurations using CECOM (B16) developed/managed installation kits.

HISTORICAL BACKGROUND:

KY-57 has been in the field as the Army's primary tactical ration encryption device since 1979.

REQUIREMENTS DOCUMENT: ROC approved 1972.

TYPE CLASSIFICATION: 1975.

KY-57 IS A LIGHT-WEIGHT, DIRECT CURRENT POWERED CONTROLLED CRYPTOGRAPHIC ITEM.

CCSLA

KG-84A, DEDICATED LOOP ENCRYPTION DEVICE
KG-84C, GENERAL PURPOSE TELETYPE ENCRYPTION DEVICE

PROJECT MANAGER: Mr. Art Chavira, DSN 879-8165
COMM 602/538-8165

PE & LINE #: KG-84A - E03028
KG-84C - E03028

DESCRIPTION: The KG-84A/84C are lightweight, low power equipment that provide encryption/decryption of teletype-writers of input/output devices, including PC-type computers and facsimiles. The KG-84A/84C are designed to be man-portable for use in tactical, mobile, and protected locations, at all levels of command including vehicles, ships, aircraft, and fixed plant environments. A distinguished feature of the KG-84C is the enhanced High Frequency (HF) capability designed for interoperability with the North Atlantic Treaty Organization Communications Equipment and with other services.

HISTORICAL BACKGROUND:

KG-84A KG-84C

Oct 83	Jun 86	- Final QOPRI.
Sep 82	Sep 85	- Production Contract Award.
Feb 84	Sep 87	- First Article Testing.
Feb 84	Apr 88	- Initial Deliveries.
Jun 84	Jul 88	- Material Release.
Jul 84	Aug 88	- First Unit Equipped.

REQUIREMENTS DOCUMENT: NSA developed.

TYPE CLASSIFICATION: KG-84A - Standard, Dec 83; KG-84C - Standard, Jun 86.

KG-84A/84C IS A GENERAL PURPOSE ENCRYPTION/DECRYPTION DEVICE FOR PROTECTING RECORD AND LOW DATA RATE TRANSMISSION LINKS IN TACTICAL, STRATEGIC, SHIP/AIR AND FIXED PLANT ENVIRONMENTS.

KG-194

KG-194. TINK ENCRYPTION DEVICE

PRODUCT MANAGER: Mr. Herb Hensley, DSN 879-8253
COM 602/538-8253

PE & LINE #: T64771

DESCRIPTION: KG-194 is used for high speed digital encryption and strategic and sheltered environments. KG-194 is capable of digital voice and data encryption/decryption at rates from 9.6 Kps to 13 Mbps. The KG-194/194A is simply a KG-94/94A equipment with remote rekey capability (FIREFLY) added. The KG-194 is FIREFLY capability with the KG-194A or other KG-194 equipment. However, in the traditional mode of operation, the KG-194 is compatible with the KG-81/94/95 and 194A family of equipment.

DIFFERENCE: The KG-194 is designed for installation in the HMF-81 or HGF-94 rack adapters, and may be used in tactical, mobile, sheltered or fixed plant environments. The KG-194A is designed for use in throw-on-the-ground, tactical, mobile, sheltered or fixed plant environments. The KG-194A with the interface Adapter Unit will replace the KG-27.

HISTORICAL BACKGROUND:

1985 - Contract with Motorola (Scottsdale, AZ).
1987 - Contract with Group Tec (Tampa, FL).
1989 - Contract with Allied Signal Bendix (Baltimore, MD).
4QFY89 - First Unit Delivery.

REQUIREMENTS DOCUMENT:

TYPE CLASSIFICATION: Standard.

KG-194 IS USED FOR HIGH SPEED DIGITAL ENCRYPTION AND STRATEGIC AND SHELTERED ENVIRONMENTS.

CCSLA

KG-194A TRUNK ENCRYPTION DEVICES

PRODUCT MANAGER: Mr. Herb Hensley, DSM 879-8253
COMN 602/538-8253

PE & LINE #: KG-194A T08971

DESCRIPTION: KG-194A is simply a KG-94A equipment with remote rekey compatible (FIREFLY) added. KG-194A is FIREFLY compatible with only the KG-194 equipment. However, in the traditional mode of operation, it is compatible with the KG-81, 94, 94A, 95, and 194 only.

DIFFERENCES: The 194A is designed for use in throw-on-the-ground, tactical, mobile, sheltered or fixed plant environments. With the Interface Adapter Unit (IAU), the 194A will replace the KG-27. The KG-194 is designed for installation in the HMF-81-1/2 or HFK-94 rack adapters, and may be used in tactical, mobile, sheltered or fixed plant environments.

HISTORICAL BACKGROUND:

1985 - Contract awarded to Motorola (Scottsdale, AZ).
1987 - Contract awarded to Honeywell (Tampa, FL).
1990 - Contract awarded to Allied Signal Bendix (Baltimore, MD).
2QFY90 - First Unit Delivery.

REQUIREMENTS DOCUMENT:

TYPE CLASSIFICATION: Standard.

KG-194A IS USED FOR TACTICAL AND SHELTERED HIGH SPEED ENCRYPTION.

CSLA

KY-99, MINTERM TERMINAL

PRODUCT MANAGER: Mr. Roosevelt Watson, DSN 873-8234
COM 602/538-8234

PE & LINE #: Z38065

DESCRIPTION: KY-99 is a lightweight, low-power, self-contained manpack terminal with embedded COMSEC. It is designed to provide secure voice/data for Improved High Frequency Radio (IHFR), and is interoperable in selected modes with a variety of DOD secure tactical terminals including the ANDVT Tactical Terminal (TACTERN). KY-99 is an integral part of the Joint Services System, and provides half duplex, narrowband secure voice and data for a variety of military applications. It is also available in vehicular and airborne versions with proposed KY-57 and KG-84 capability.

HISTORICAL BACKGROUND:

1987 - Development contract let by KSA.
1991 - Production contract awarded; MINTERM Installation Kit contract awarded.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
FIRST UNIT DELIVERY	1																											
IOC					1																							

REQUIREMENTS DOCUMENT: BIOP/QOPRI final approval, Jun 91; JILSP published 31 Oct 91.

TYPE CLASSIFICATION: Pending TECOM approval of JITC test data, type classification anticipated Apr 92.

KY-99 PROVIDES SECURE NARROWBAND, HALF DUPLEX VOICE/DATA COMMUNICATIONS FOR A VARIETY OF DOD TACTICAL MILITARY APPLICATIONS.

CCSLA

INTERFACE ADAPTER UNIT (IAU)

PRODUCT MANAGER: Mr. Herb Hensley, DSN 879-8253
COMN 602/538-8253

PE & LINE #: IUA T64771

DESCRIPTION: The IAU, NSN 5810-01-280-4746 is designed to mechanically and electronically adapt a KG-194A to interface with a TD-660 Multiplexor in existing pulse code modulated applications. The IAU provides for mounting of the KG-194A in the same rack space originally occupied by the TSEC-KG-27 and interfaces the KG-194A with the existing power and signal connectors used for the TSEC/KG-27.

HISTORICAL BACKGROUND:

- 1984 - Development contract let by NSA.
- 1985 - Production schedule received from Honeywell, Tampa, FL.
- 1986 - First equipment received from Honeywell, Tampa, FL.
- 1987 - Production contract awarded to Allied Signal-Bendix Communication Division.
- 1988 - Joint Service test conducted on the IAU with the KG-94A installed.
- 1989 - Initial equipment fielded to 32d Adcom-Europe (ADA Unit).

REQUIREMENTS DOCUMENT:

TYPE CLASSIFICATION: Separate type classification was not required for the IAU.

IAU PROVIDES INTERFACE WITH THE TD-660 MULTIPLEXOR IN EXISTING PULSE CODE MODULATED APPLICATIONS.

CSLA

SECURE TELEPHONE UNIT-III LOW COST TERMINAL (STU-III LCT)

PROJECT OFFICER: Ms. Lynn West, DSN 879-8338
COM 602/538-8338

PE & LINE #: S40645

DESCRIPTION: The STU-III LCT is a self-contained modern business telephone which incorporated many modern telephone conveniences. The STU-III LCT provides secure voice, nonsecure (clear) voice, and secure data communications in one easy to use telephone. Features include repertory dialing, automatic redial of last number dialed, one-key dialing of memory-stored numbers. STU-III LCT is a wideband, 2-wire, secure telephone; its physical and security design include temper resistance, TEMPEST compliance, and optional HEMP protection. The STU-III operates full or half duplex over a single telephone line using echo cancelling modem technology. Baseline operation (voice and data) is 2,400 bits per second (bps), with enhanced models capable of 4,800-bps and 9,600-bps operation. It uses FIREFLY public cryptology and is interoperable with a variety of other secure communications requirements. STU-III LCT operates on any worldwide telephone system, replacing the secure telephone unit-II (STU-II). The STU-II was deemed too costly, too bulky, too complicated to use, and had poor voice quality.

HISTORICAL BACKGROUND:

- 1985 - The Secretary of Defense (memorandum NSDD-45) replaced the STU-II with the STU-III; a significant feature of the STU-III program was parallel development and production by three companies with direct marketing and delivery to the user community; the three vendors (AT&T, Motorola, and GE (formerly RCA)) were selected for full scale development.
- 1986 - Production contracts awarded.
- 1988 - Risk analysis study; requirements for installation in Army facilities of the STU-III were based on risk analysis.
- 1992 - Approximately 60,000 STU-IIIs have been fielded based on risk analysis at a cost of just over \$210 million.

REQUIREMENTS DOCUMENT: NSA development.

TYPE CLASSIFICATION: 28 Oct 85.

THE SECURE TELEPHONE UNIT-III LOW COST TERMINAL (STU-III LCT) PROVIDES SECURE AND NONSECURE (CLEAR) VOICE/DATA TELEPHONE COMMUNICATIONS.

DMM

AN/APR-39(V)1. RADAR DETECTOR

PROJECT LEADER: Ms. Corrina Panduri, DSN 992-1628
COM 908/532-1628

PE & LINE #: 003091

DESCRIPTION: AN/APR-39(V)1 is an omnidirectional radar warning set installed in rotary and fixed wing aircraft. The equipment receives and displays to the pilot, information concerning the radar environment about the aircraft. The equipment responds to those radars usually associated with hostile missile and fire control radars in a multitude of frequency bands and provides visual and aural warning including direction of the threat. Non-threat radars are generally excluded. When a signal is time-coincident (correlated) with a tracking radar signal, the equipment identifies the combination as an activated SAM radar complex. In this case, the visual and aural displays are uniquely identified to warn the observer an emitter has become a potential threat.

HISTORICAL BACKGROUND:

FY73 - Operational evaluation.
FY77 - Release of AN/APR-39(V)1.
FY85 - Research and Development for AN/APR-39A(V)1 which will replace AN/APR-39(V)1.

EVENT SCHEDULE:

FISCAL YEAR	92				93				94				95				96				97				98			
	QTR																											
SYSTEM DELIVERY FOR FOREIGN MILITARY SALES ONLY		1				1																						

REQUIREMENTS DOCUMENT:

TYPE CLASSIFICATION: Standard A.

AN/APR-39(V)1 DETECTS VARIOUS RADAR SIGNALS SUCH AS THOSE FROM ENEMY MISSILES AND WARNS THE PILOT SO IMMEDIATE EVASIVE ACTION CAN BE TAKEN.

DDM

AN/PRC-126. RADIO SET

ITEM LEADER: Ms. Carmen Norman, DSN 992-3572
COMN 908/532-3572

PE & LINE #: R55336

DESCRIPTION: AN/PRC-126 is a short range, handheld tactical radio for use primarily at the squad/platoon level. AN/PRC-126 is a lightweight, militarized transceiver providing two-way, voice-communications. The radio covers the frequency range of 30-87.975 MHz. The nominal range for reliable communications over rolling, slightly wooded terrain, is 3,000 meters. Weighing 52 ozs and 57 cubic inches in size, the radio is capable of interoperating with the AN/VRC-12, AN/VRC-77 and SINCGARS families of radios in the fixed frequency mode. AN/PRC-126 enables small unit leaders to adequately control the activities of subordinate elements in carrying out the unit's mission. AN/PRC-126 is required for the Infantry, Rangers and Special Forces.

HISTORICAL BACKGROUND:

May 85 - VCSA decides on NDI approach to replace AN/PRC-68.
Oct 85 - ROC approved.
Mar 86 - AP approved.
Jul 86 - Initial buy contract awarded to Magnavox Corp., Ft. Wayne, IN for 4,464 radios..
Jun 88 - Final BOIP approved by TRADOC/DA.
Jan 89 - Option awarded for 2,885 radios.
Sep 89 - Phase I fielding completed.
Oct 89 - Option awarded for 280 radios.
Mar 90 - Option awarded for 1147 radios.
Dec 90 - Phase II fielding begins.
Sep 91 - Contract awarded for 2574 radios.

REQUIREMENTS DOCUMENT: ROC, approved 3 Oct 85, Card Reference No. 0851.

TYPE CLASSIFICATION: Standard A, 30 Jul 86.

AN/PRC-126 RADIO SET IS A HAND-HELD RECEIVER TRANSMITTER THAT PROVIDES SHORT-RANGE, GROUND-TO-GROUND VOICE COMMUNICATION IN THE 30 MHz to 80 MHz BAND.

AN/UGC-74A(V)3; AN/UGC-74B(V)3; AN/UGC-74C(V)3;
COMMUNICATIONS TERMINAL

PROJECT LEADER: Ms. Lee Werbin, DSN 982-2588
COMN 908/532-2588

PE & LINE #: A14050841G01

DESCRIPTION: AN/UGC-74A(V)3 Communications Terminal consists of a keyboard with printer. It provides extensive composing and editing capability with a battery stand-by available to preclude loss of memory when primary power fails. Memory capability on the A version is limited to 10 pages of message text. It replaces TT-4 and TT-98 equipment. AN/UGC-74B(V)3 incorporates two product improvements including expanded memory from 10 pages to 35 pages and a dot matrix printer to enhance the print quality and reliability. Present contract includes retrofit kits to upgrade all AN/UGC-74A(V)3 models with these improvements to AN/UGC-74B(V)3s. AN/UGC-74C(V)3 version is being procured for the Navy and the Marine Corps. This model incorporates a removable bubble memory package, which provides electrical record of the message traffic handled by the terminal. Message can be retrieved and transmitted from the bubble package with a relay capability from one AN/UGC-74C to another. With bubble memory, this device also replaces the TT-76.

HISTORICAL BACKGROUND:

Nov 73 - Type Classification Standard LCC-A by DEVA IPR.
Aug 76 - Multi-year production contract awarded for 8557 each "A" version.
Nov 80 - Initial Operational Capability.
Sep 84 - Final delivery of 8557 "A" versions; single year contract for 2566 each "B" version plus mod kits.
Jan 86 - "B" version Type Class LCC-A, "A" version reclassified LCC-B.
Jun 86 - First Article Test complete.
Feb 87 - First production delivery of AN/UGC-74B(V)3.
Jun 87 - Award competitive contract of final 1455 Dot Matrix Printer (DMP) retrofit kits.
Aug 87 - First production delivery of the AN/UGC-74C(V)3.
Mar 88 - AN/UGC-74B(V)3 fielded with MSE.

REQUIREMENTS DOCUMENT: Qualitative Materials/Requirements (QMR) dated 21 Jun 65 with update Aug 75.

TYPE CLASSIFICATION: Standard LCC-A by Materiel Status Record submission dated 31 Jan 86.

AN/UGC-74 COMMUNICATIONS TERMINAL PROVIDES EXTENSIVE COMPOSING AND EDITING CAPABILITY.

DNM

AN/VRC-12, RADIO SET

PROJECT LEADER: Ms. Emma Church, DSN 992-1865
COM 908/532-1865

PE & LINE #: Q45779

DESCRIPTION: AN/VRC-12 is the principal vehicular combat radio of the Army. It is a short range, two way radio telephone communication set using frequency modulated (FM) transmission and reception. The radio has a frequency range of 30 to 75.95 MHz with 920 channels spaced every 50 KHz, and a range of 42-50 km. AN/VRC-12 has three major components, R-442A/VRC, RT-524A/VRC and RT-246A/VRC. It is used primarily in vehicles such as jeeps, trucks, armored personnel carriers and tanks. It is also used in marine-craft and in some communications shelters and vans. TDP is fully competitive.

HISTORICAL BACKGROUND:

FY61 - First Unit Equipped.
Jan 85 - Contract DAAB07-85-C-8042 for VRC-12 Radio Set components awarded to Keystone.
Jan 87 - Contractor ceases operation as a result of financial difficulties.
Dec 88 - Contractor granted extraordinary relief under PL 85-804 and additional funding provided to resource production.
Jan 89 - Production resumes.
Aug 89 - Keystone contract terminated for financial instability.
Sep 89 - Ltr Contract awarded to Tadiran Limited to meet urgent N.G. and A.F. requirements.
Mar 90 - Tadiran contract definitized.
Dec 90 - Tadiran production delivery begins.

REQUIREMENTS DOCUMENT:

TYPE CLASSIFICATION: Standard A, Jun 60.

AN/VRC-12 IS THE PRINCIPLE VEHICULAR COMBAT RADIO OF THE ARMY.

MK-2488/G INSTALLATION KIT

ITEM LEADER: Ms. Carol Magee, DSN 992-4406
COM 908/532-4406

PE & LINE #: A1-6E50621G04; A1-7E50671G02

DESCRIPTION: MK-2488/G Installation Kit is used to maintain electrical capability between older high level segal TTY/modems and newer low level signal security equipment. The Installation Kit consists of an interconnecting box, cables and mounts installed in various Army TTY-Radio Communication Assemblies. Kit permits replacement of TSEC/KW-7 by the TSEC/KG-84 in assemblies with high level signal TTY and modems (TH-5/22, MD-522, TT-4/76/98).

HISTORICAL BACKGROUND:

- 1983 - Program initiation under PIP 1-83-07-0201; contract award for 110 each Engineering production models to Medley Tool & Model Co. (8A set aside).
- 1986 - Contract awarded for 2412 production units to Sechan Electronics, (competitive); contract option exercised for 1001 additional production units from Sechan Electronics.
- 1987 - 110 Medley kits installed at Signal Center Ft. Gordon, GA
- 1988 - Sechan production deliveries begin; 82nd and 101st AB issued kits; Korea issued kits.
- 1989 - Kit installation begins in USAREUR, FORSCOM, Korea.
- 1990 - All kits were delivered on Sechan Contract.

REQUIREMENTS DOCUMENT:

TYPE CLASSIFICATION: Not applicable as units become part of assemblage after kit installation.

MK-2488/G INSTALLATION KIT IS USED TO MAINTAIN ELECTRICAL COMPATIBILITY BETWEEN OLDER HIGH LEVEL SEGAL TTY/MODEMS AND NEWER LOW LEVEL SIGNAL SECURITY EQUIPMENT.

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