The Proceedings of the

U.S. Army Aviation and Missile Command 1997 Advance Planning Briefing For Industry

October 20-22, 1997

The Sparkman Center Auditorium
Redstone Arsenal, Alabama

DTIC QUALITY INSPECTED 8

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Technical Report-RD-TI-97-01

19980115 201

1135 - **Air Defense Command and Control Systems (ADCCS)**
LTC James M. Althouse, Project Manager, ADCCS

1150 - **LUNCH at the Redstone Officers' Club**
Mr. Laurence H. Burger, Director, U.S. Army Space and Missile Defense Command's Space and Missile Battle Lab

1340 - **Acquisition Review**
Ms. L. Marlene Cruze, Director,
AMCOM Acquisition Center

1400 - **Legislative Initiatives**
AMCOM Legal Office

1420 - **BREAK**

1450- **Command Ombudsman**
Mr. John W. Finafrock, AMCOM Ombudsman

1510 - **Small Business Office**
Mr. John F. Nelson, Small Business Advocate,
Small and Disadvantaged Business Utilization Office

1530 - **Question and Answer Session**
Dr. William C. McCorkle, Technical Director for Missiles,
USAAMCOM, and Executive Director Missile RD&E Center

1997 APBI AGENDA

U.S. ARMY AVIATION & MISSILE COMMAND

ADVANCE PLANNING BRIEFING FOR INDUSTRY

MONDAY, OCTOBER 20, 1997

1300 - 1600 **EARLY REGISTRATION - SPARKMAN AUDITORIUM (Bldg. 5304)**

TUESDAY, OCTOBER 21, 1997

0730 - **Registration - Sparkman Center Auditorium (Bldg. 5304)**

0815 - **Administrative Announcements**
Ms. Tammy S. Williams, Acting Technical Industrial Liaison, Technology Integration Office, Missile Research, Development, and Engineering (MRD&E) Center, U.S. Army Aviation & Missile Command (USAAMCOM)

0820 - **Welcome**
MG Emmitt E. Gibson, Commanding General, USAAMCOM

0835 - **U.S. Army Aviation & Missile Command Overview**
Mr. John M. Moore, Resource Management Directorate

0905 - **BREAK**

0930 - **Deputy for Systems Acquisition**
Dr. Eugene E. Paro, Principal Deputy Deputy for Systems Acquisition

1015 - **Program Executive Office for Tactical Missiles (PEO-TM)**
Ms. Vicky L. Armbruster, Deputy Program Executive Officer, Tactical Missiles

1100 - **Program Executive Office for Air & Missile Defense (PEO-AMD)**
Mr. A. Q. Oldacre, Deputy Program Executive Officer, Air and Missile Defense

1145 - **LUNCH at the Redstone Officers' Club**
Dr. Michael Andrews, Director for Technology Office of the Assistant Secretary of the Army Research, Development, and Acquisition

1345 **Program Executive Office for Aviation**
Mr. Paul Bogosian, Deputy Program Executive Officer, Aviation

1415 - **TRADOC Keynote Address**
COL Mark P. Gay, Director, Future Battle Directorate, U.S. Army Training and Doctrine Command

1500 - **BREAK**

1530 - **Missile RD&E Center Vision and Strategic Plan**
Dr. William C. McCorkle, Technical Director for Missiles, USAAMCOM and Executive Director Missile RD&E Center

1615 - **Aviation RD&E Center Vision and Strategic Plan**
Mr. Tom L. House, Technical Director for Aviation, USAAMCOM and Executive Director Aviation RD&E Center

1700 - **Question and Answer Session**
Dr. William C. McCorkle, Technical Director for Missiles, USAAMCOM, and Executive Director Missile RD&E Center

1800 - **Reception - Redstone Arsenal Officers' Club**

WEDNESDAY, OCTOBER 22, 1997

0800 - **Announcements**
Ms. Tammy S. Williams, Acting Technical Industrial Liaison, Technology Integration Office, Missile RD&E Center

0805 **Missile RD&E Center Opportunities**
Dr. Paul L. Jacobs, Associate Director for Technology, Missile RD&E Center

0845 **Aviation RD&E Center Contract Opportunities**
Mr. Robert V. Kennedy, Associate Director for Technology, Aviation RD&E Center

0930 - **BREAK**

1000 - **Integrated Materiel Management Center (IMMC)**
Mr. John R. Chapman, Deputy Director, IMMC

1015 - **Redstone Technical Test Center (RTTC)**
Test and Evaluation Command
Ms. Sharon A. Mueller-Myers, Contracts Specialist, RTTC

1035 - **Instrumentation, Targets, and Threat Simulators (ITTS)**
Mr. Henry I. Jehan, Jr. ITTS, U.S. Army Simulation, Training, and Instrumentation Command

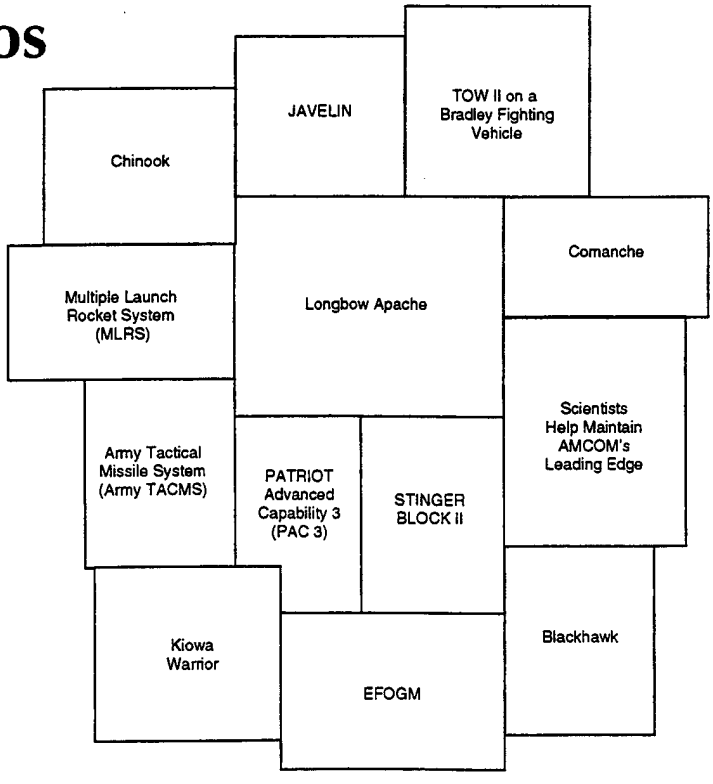
1100 - **Redstone Arsenal Support Activity (RASA)**
COL Duane E. Brandt, Commander, RASA

1115 - **Resource Management Directorate**
Mr. William G. Matthews, Deputy Director, AMCOM Resource Management Directorate

Table of Contents

U.S. Army Aviation & Missile Command Overview..... 1
Deputy for Systems Acquisition..... 35
Program Executive Office for Tactical Missiles (PEO-TM)..... 49
Program Executive Office for Air & Missile Defense (PEO-AMD)..... 65
Program Executive Office for Aviation..... 87
Missile RD&E Center - Vision and Strategic Plan..... 115
Aviation RD&E Center - Vision and Strategic Plan..... 133
Missile RD&E Center - Contract Opportunities..... 145
Aviation RD&E Center -Contract Opportunities..... 167
Integrated Materiel Management Center (IMMC)..... 187
Redstone Technical Test Center (RTTC)..... 199
Instrumentation, Targets, and Threat Simulators (ITTS)..... 211
Redstone Arsenal Support Activity (RASA)..... 225
Resource Management Directorate..... 233
Acquisition Center - Acquisition Review..... 245
Command Legal Office.- Legislative Initiatives 255
Command Ombudsman..... 267
Small and Disadvantaged Business.Utililization Office..... 275
Acronyms..... 282

Cover Photos



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of the

1997 U.S. Army Aviation and Missile Command (AMCOM) Advance Planning Briefing For Industry

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U.S. Army Aviation & Missile Command Overview

Mr. John M. Moore
Resource Management Directorate, USAAMCOM

U.S. ARMY
AVIATION & MISSILE COMMAND
TRADITION OF EXCELLENCE

U.S. ARMY
AVIATION & MISSILE COMMAND

U.S. ARMY
AVIATION & MISSILE COMMAND
TRADITION OF EXCELLENCE
DEVELOPMENT
ACQUISITION
SUSTAINMENT

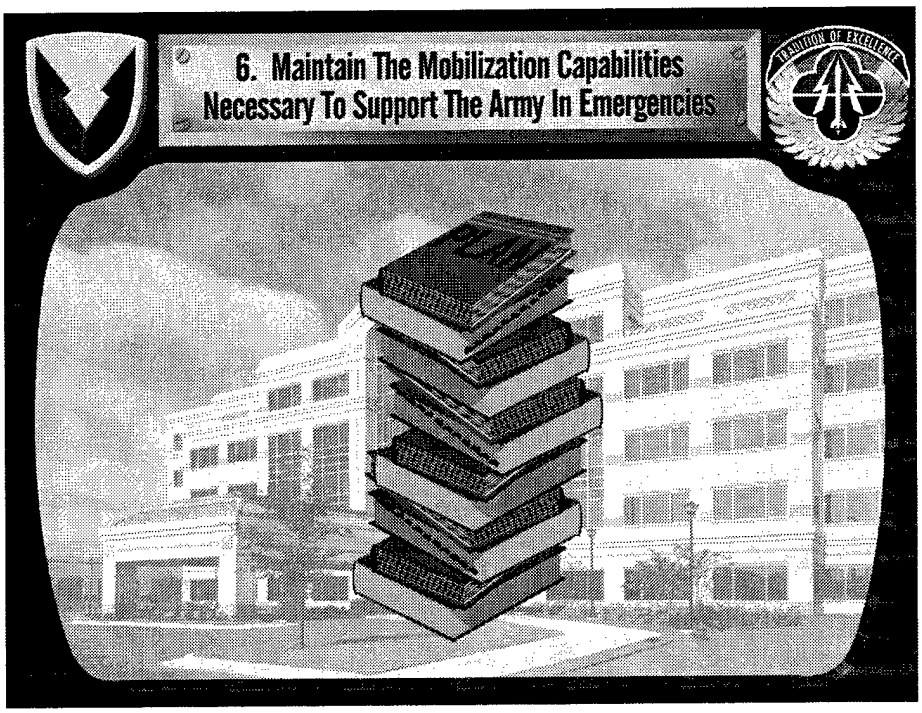
1. Equip & Sustain A Trained, Ready Army
TRADITION OF EXCELLENCE
SUPPLY
FIELD SUPPORT
MAINTENANCE
TRANSPORTATION
READINESS

2. Provide Equipment, Services & Supplies To Other Nations Through The Security Assistance Program

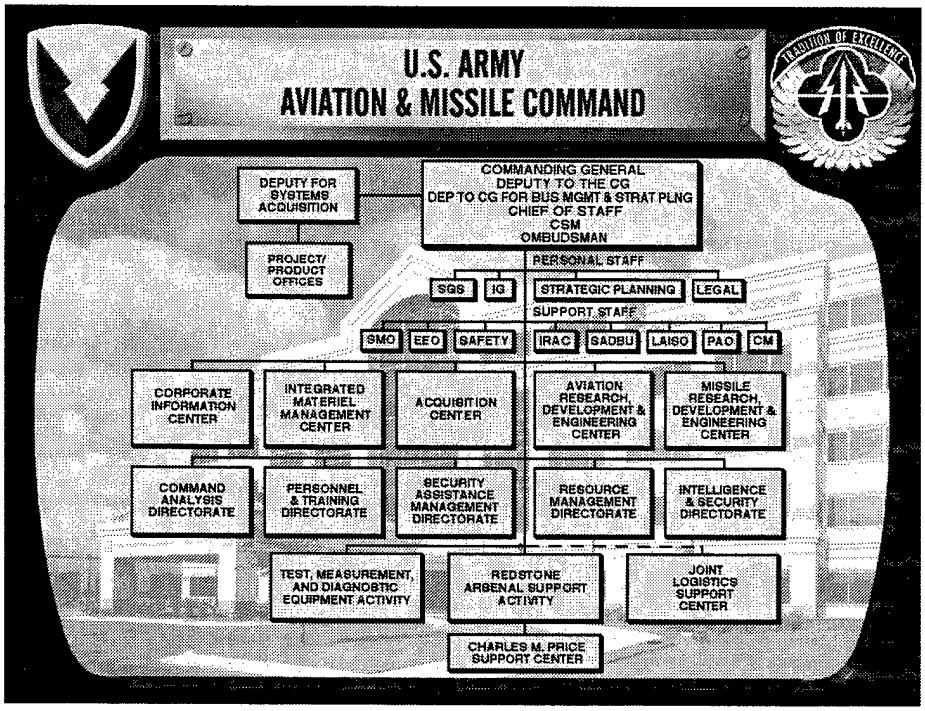
3. Develop & Acquire Systems & Equipment
DEPUTY FOR
SYSTEMS ACQUISITION
SYSTEMS
APPLICATIONS

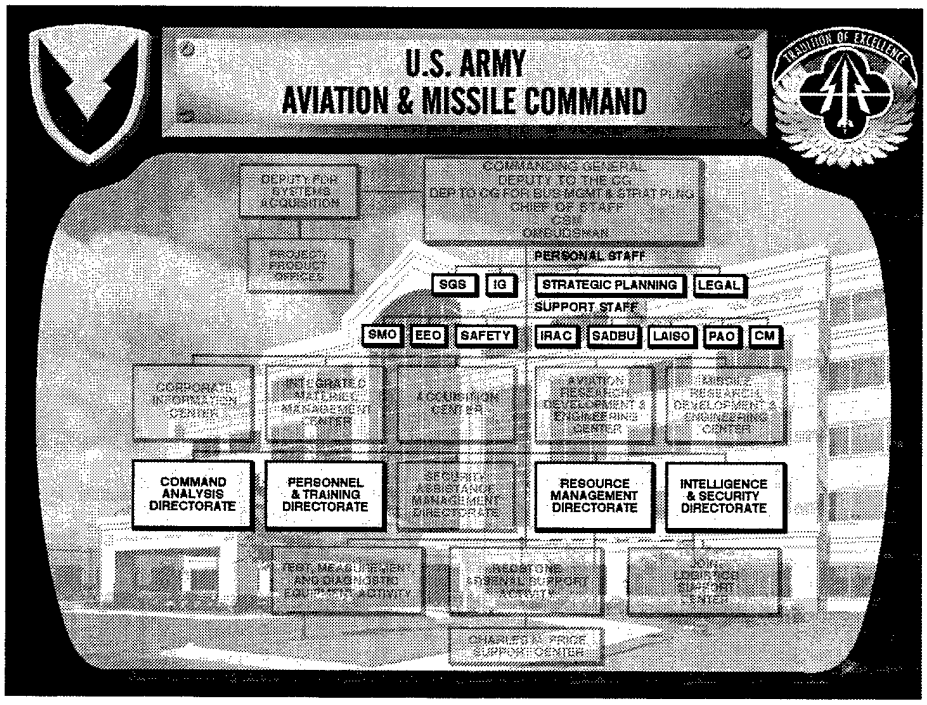
4. Provide Development & Acquisition Support To Program Managers
PEO
PEO TAC MSL
PEO AV
PM
TEST MANAGEMENT
CONFIGURATION MANAGEMENT
PRODUCT ASSURANCE
LOGISTICS SUPPORT

5. Define, Develop & Acquire Superior Technologies
EMERGING TECHNOLOGIES
OPTICS
SENSOR FUSION
STRUCTURAL COMPOSITES
TARGET CUEING
HYPERVELOCITY
ACTIVE FLIGHT CONTROLS
SMART STRUCTURES
COGNITIVE DESIGN AIDING
IHPTET
CORE CAPABILITIES
HIGH PERFORMANCE PROPULSION
TARGET ACQUISITION
LIFE CYCLE SOFTWARE ENGINEERING
OPTICAL GUIDANCE SYSTEMS
ADVANCED SIMULATION
AEROMECHANICS / STRUCTURES
CREW STATION / MEP INTEGRATION
PROPULSION / DRIVE SUBSYSTEMS
LETHAL • DEPLOYABLE • FLEXIBLE • SURVIVABLE • AFFORDABLE
AVIATION & MISSILE SYSTEMS


6. Maintain The Mobilization Capabilities
Necessary To Support The Army In Emergencies

7. Continue To Improve Productivity &
Quality Of Life
TRAINING
BASE
OPERATIONS
COMMAND
& CONTROL


U.S. ARMY
AVIATION & MISSILE COMMAND
TRADITION OF EXCELLENCE
DEPUTY FOR SYSTEMS ACQUISITION
COMMANDING GENERAL
DEPUTY TO THE CG
DEP TO CG FOR BUS MGMT & STRAT PLNG
CHIEF OF STAFF
CSM
OMBUDSMAN
PROJECT/ PRODUCT OFFICES
PERSONAL STAFF
SGS
IG
STRATEGIC PLANNING
LEGAL
SUPPORT STAFF
SMO
EEO
SAFETY
IRAC
SADBU
LAISO
PAO
CM
CORPORATE INFORMATION CENTER
INTEGRATED MATERIEL MANAGEMENT CENTER
ACQUISITION CENTER
AVIATION RESEARCH, DEVELOPMENT & ENGINEERING CENTER
MISSILE RESEARCH, DEVELOPMENT & ENGINEERING CENTER
COMMAND ANALYSIS DIRECTORATE
PERSONNEL & TRAINING DIRECTORATE
SECURITY ASSISTANCE MANAGEMENT DIRECTORATE
RESOURCE MANAGEMENT DIRECTORATE
INTELLIGENCE & SECURITY DIRECTORATE
TEST, MEASUREMENT, AND DIAGNOSTIC EQUIPMENT ACTIVITY
REDSTONE ARSENAL SUPPORT ACTIVITY
JOINT LOGISTICS SUPPORT CENTER
CHARLES M. PRICE SUPPORT CENTER


U.S. ARMY
AVIATION & MISSILE COMMAND
TRADITION OF EXCELLENCE
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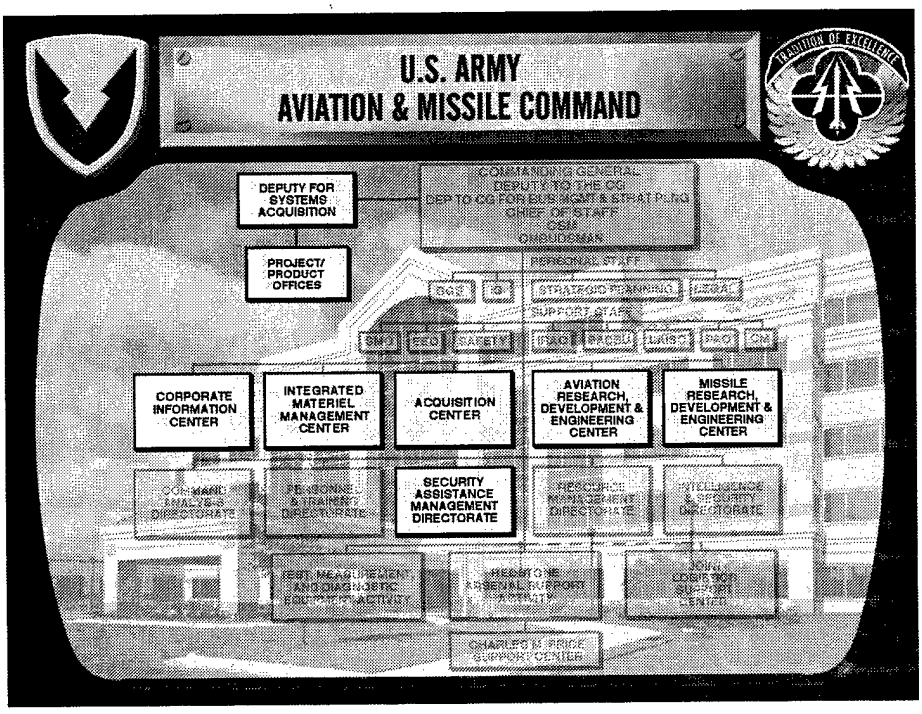
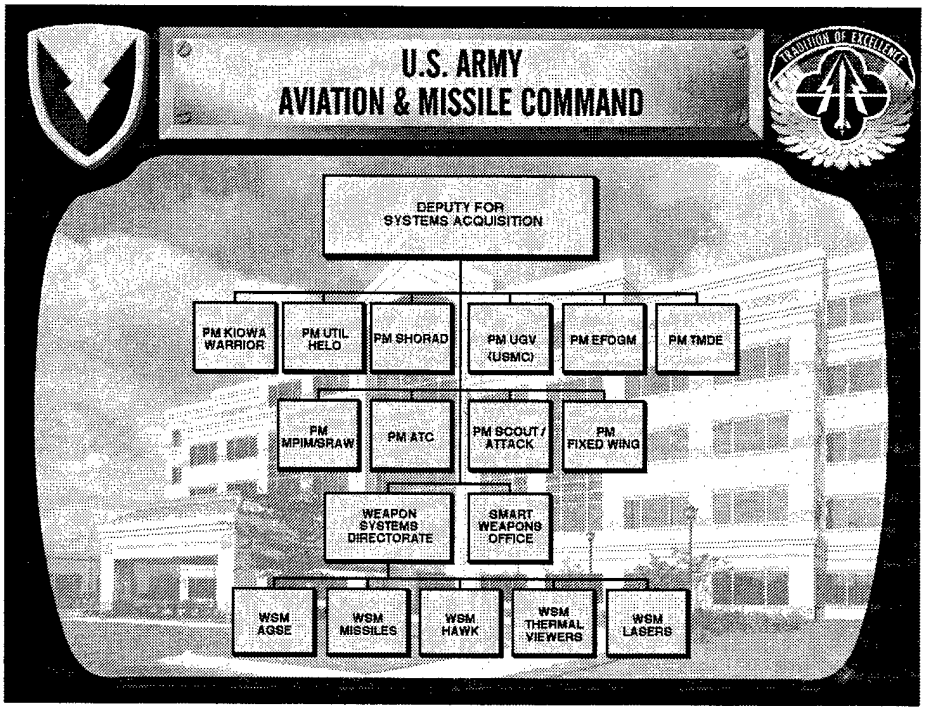
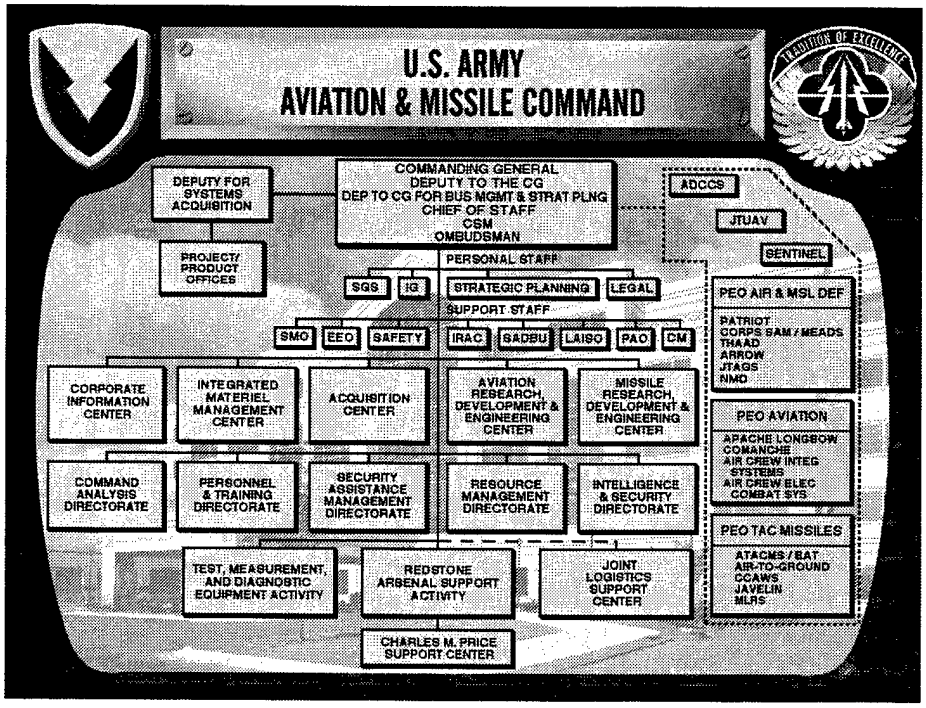
SADBU
LAISO
PAO
CM
COMMAND ANALYSIS DIRECTORATE
PERSONNEL & TRAINING DIRECTORATE
RESOURCE MANAGEMENT DIRECTORATE
INTELLIGENCE & SECURITY DIRECTORATE

Staff Functions
RESOURCE MANAGEMENT
INTELLIGENCE & SECURITY
INSPECTOR GENERAL
SMALL BUSINESS
LEGAL
SAFETY
PERSONNEL
PUBLIC AFFAIRS
INTERNAL REVIEW
COMPETITION MANAGEMENT
SYSTEM & COST ANALYSIS
LOGISTICS / ACQUISITION BUSINESS PROCESS


U.S. ARMY
AVIATION & MISSILE COMMAND
DEPUTY FOR SYSTEMS ACQUISITION
PROJECT/ PRODUCT OFFICES
CORPORATE INFORMATION CENTER
INTEGRATED MATERIEL MANAGEMENT CENTER
ACQUISITION CENTER
AVIATION RESEARCH, DEVELOPMENT & ENGINEERING CENTER
MISSILE RESEARCH, DEVELOPMENT & ENGINEERING CENTER
SECURITY ASSISTANCE MANAGEMENT DIRECTORATE


U.S. ARMY
AVIATION & MISSILE COMMAND
TRADITION OF EXCELLENCE
DEPUTY FOR SYSTEMS ACQUISITION
PM KIOWA WARRIOR
PM UTIL HELO
PM SHORAD
PM UGV (USMC)
PM EFOGM
PM TMDE
PM MPIM/SRAW
PM ATC
PM SCOUT / ATTACK
PM FIXED WING
WEAPON SYSTEMS DIRECTORATE
SMART WEAPONS OFFICE
WSM AGSE
WSM MISSILES
WSM HAWK
WSM THERMAL VIEWERS
WSM LASERS


U.S. ARMY
AVIATION & MISSILE COMMAND
TRADITION OF EXCELLENCE
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DEPUTY TO THE CG
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CSM
OMBUDSMAN
ADCCS
JTUAV
SENTINEL
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PERSONAL STAFF
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STRATEGIC PLANNING
LEGAL
SUPPORT STAFF
SMO
EEO
SAFETY
IRAC
SADBU
LAISO
PAO
CM
PEO AIR & MSL DEF
PATRIOT
CORPS SAM / MEADS
THAAD
ARROW
JTAGS
NMD
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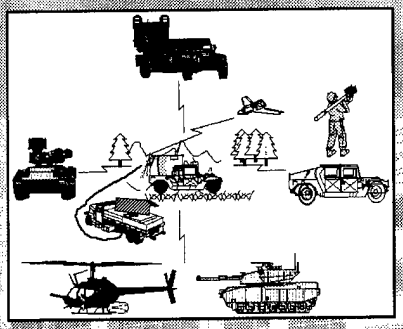
ACQUISITION CENTER
AVIATION RESEARCH, DEVELOPMENT & ENGINEERING CENTER
MISSILE RESEARCH, DEVELOPMENT & ENGINEERING CENTER
PEO AVIATION
APACHE LONGBOW
COMANCHE
AIR CREW INTEG SYSTEMS
AIR CREW ELEC COMBAT SYS
COMMAND ANALYSIS DIRECTORATE
PERSONNEL & TRAINING DIRECTORATE
SECURITY ASSISTANCE MANAGEMENT DIRECTORATE
RESOURCE MANAGEMENT DIRECTORATE
INTELLIGENCE & SECURITY DIRECTORATE
PEO TAC MISSILES
ATACMS / BAT
AIR-TO-GROUND
CCAWS
JAVELIN
MLRS
TEST, MEASUREMENT, AND DIAGNOSTIC EQUIPMENT ACTIVITY
REDSTONE ARSENAL SUPPORT ACTIVITY
JOINT LOGISTICS SUPPORT CENTER
CHARLES M. PRICE SUPPORT CENTER

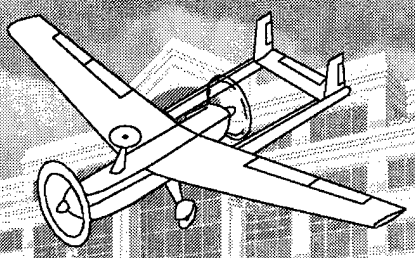
Air Defense Command & Control Systems (ADCCS)



FORCE INTEGRATION
ADA BATTLE MANAGEMENT
ENGAGEMENT OPERATIONS

REPORTS TO PEO -
COMMAND AND CONTROL SYSTEMS

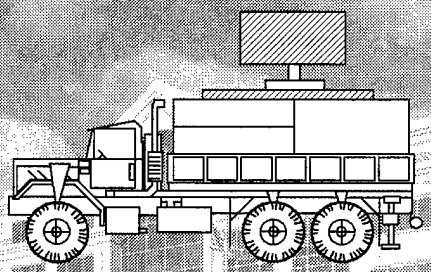
Joint Tactical Unmanned Aerial Vehicle



RECONNAISSANCE
TARGET ACQUISITION

REPORTS TO PEO - CRUISE MISSILE/UAV

Sentinel



MEDIUM RANGE AIR DEFENSE SENSOR

EARLY WARNING, ALERTING AND CUEING

CONTINUOUS VOLUME ACQUISITION AND TRACKING OF FRIENDLY AND HOSTILE AIRCRAFT

REPORTS TO PEO - INTELLIGENCE, ELECTRONIC WARFARE & SENSORS

PEO Aviation

PROGRAM EXECUTIVE OFFICE AVIATION

Apache Longbow

Comanche

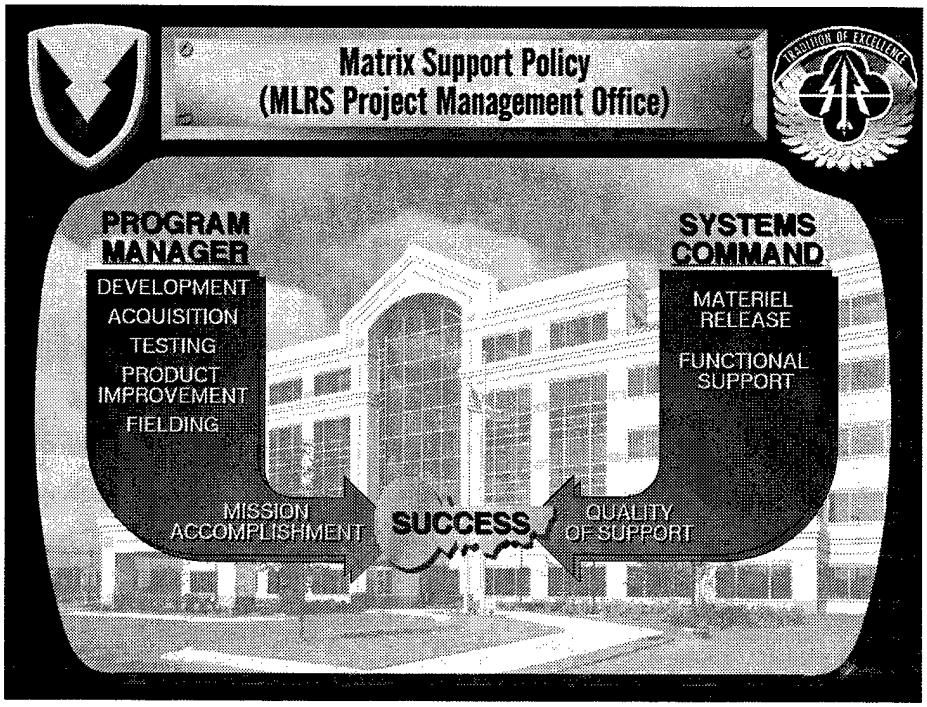
Air Crew Integrated Systems (ACIS)

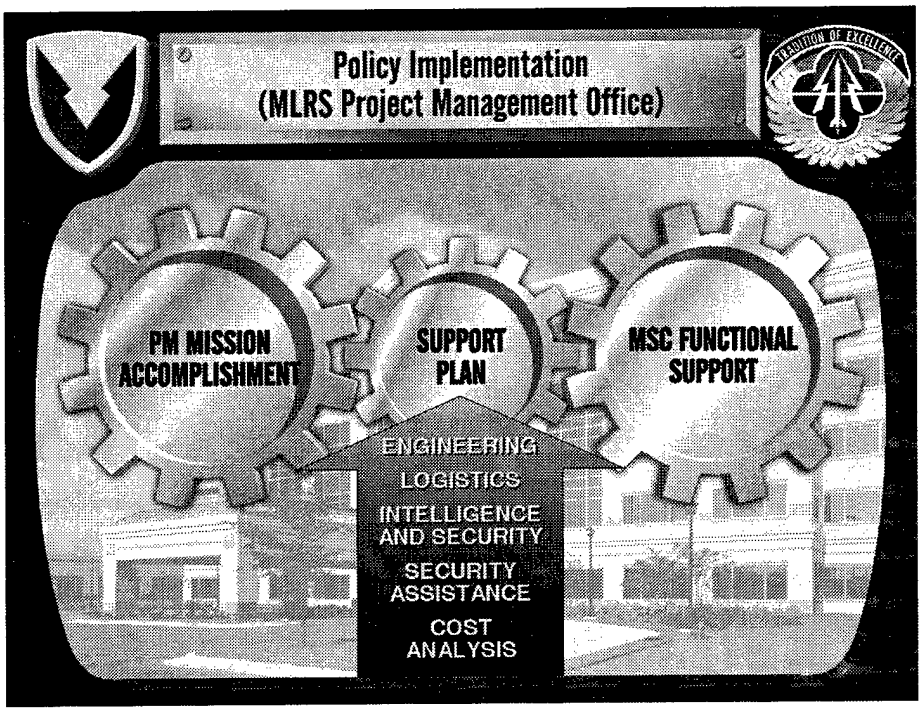
Air Crew Electronic Combat Systems (ACECS)

PEO Air & Missile Defense
AIR AND MISSILE DEFENSE
PROGRAM EXECUTIVE OFFICE
Patriot
Corps Surface to Air Missile / MEADS
Theater High Altitude Air Defense (THAAD)
Arrow
Joint Tactical Ground Station (JTAGS)
National Missile Defense

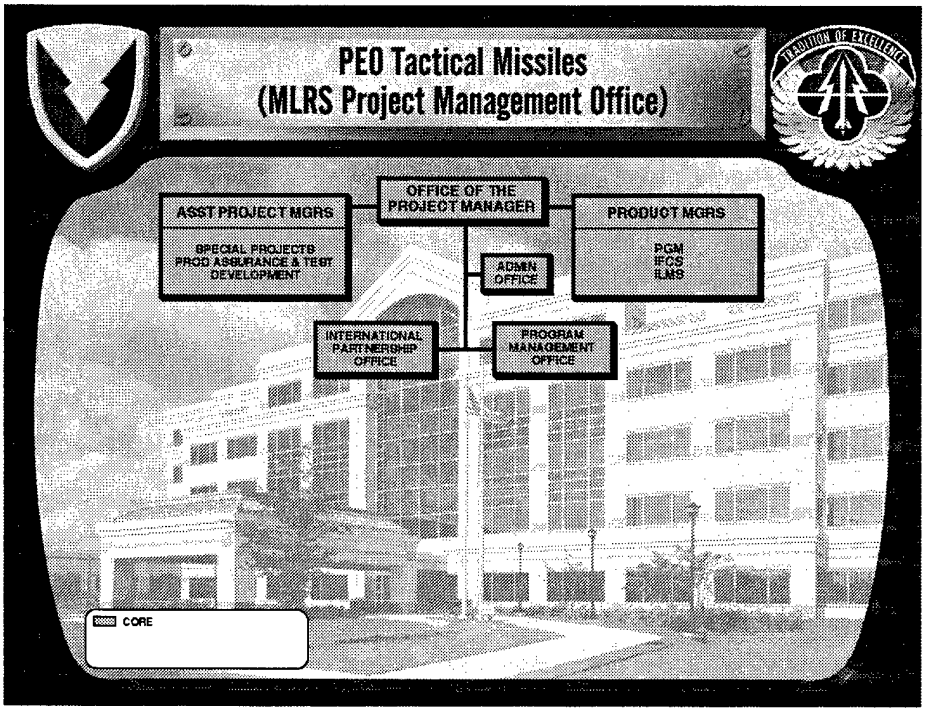
PEO Tactical Missiles
TACTICAL
MISSILES
Close Combat Anti-Armor Weapon System (CCAWS)
Javelin
Air-To-Ground
Army Tactical Missile Systems (ATACMS) / Bat
Multiple Launch Rocket System (MLRS)

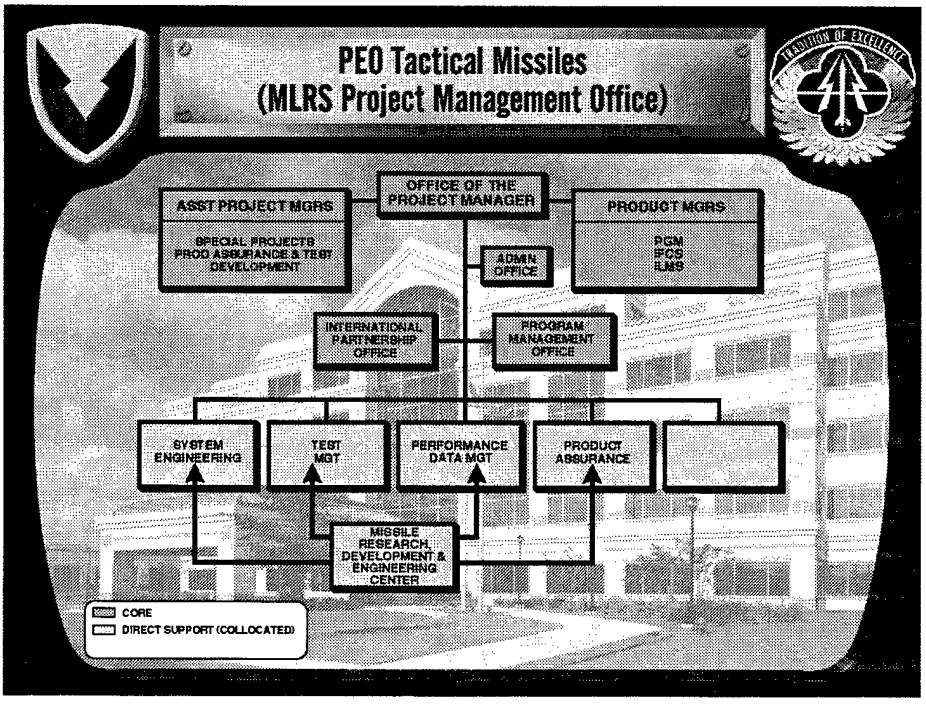
PEO Tactical Missiles
M
L
R
S
Multiple Launch Rocket System (MLRS)

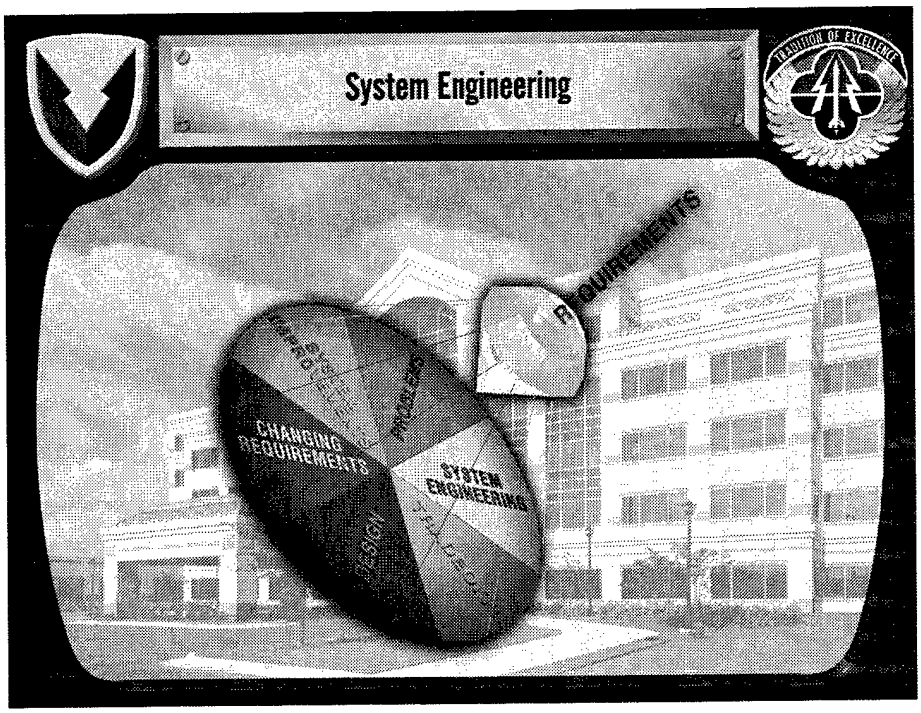

Matrix Support Policy
(MLRS Project Management Office)
PROGRAM MANAGER
DEVELOPMENT
ACQUISITION
TESTING
PRODUCT IMPROVEMENT
FIELDING
SYSTEMS COMMAND
MATERIEL RELEASE
FUNCTIONAL SUPPORT
MISSION ACCOMPLISHMENT
SUCCESS
QUALITY OF SUPPORT

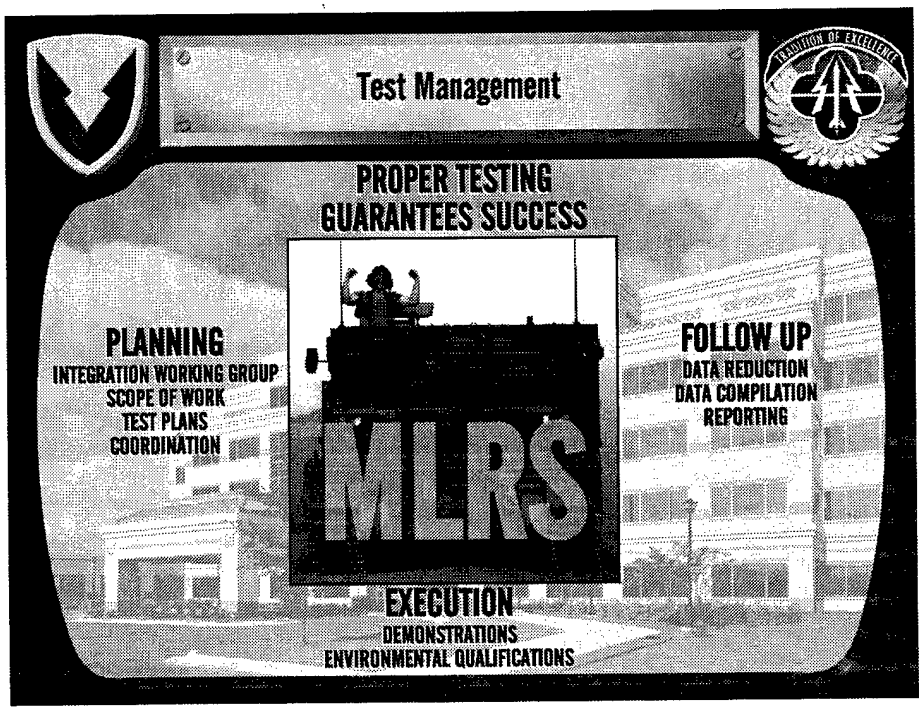

Policy Implementation
(MLRS Project Management Office)
PM MISSION ACCOMPLISHMENT
SUPPORT PLAN
MSC FUNCTIONAL SUPPORT
ENGINEERING
LOGISTICS
INTELLIGENCE AND SECURITY
SECURITY ASSISTANCE
COST ANALYSIS

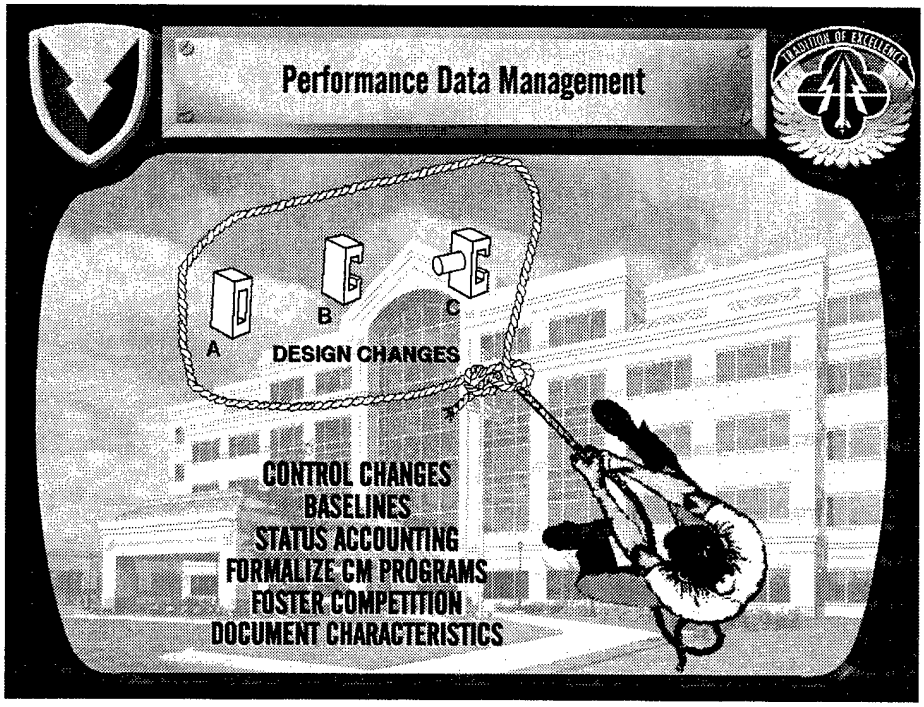
PEO Tactical Missiles
(MLRS Project Management Office)
OFFICE OF THE PROJECT MANAGER
CORE
DIRECT SUPPORT (COLLOCATED)
GENERAL SUPPORT


PEO Tactical Missiles
(MLRS Project Management Office)
TRADITION OF EXCELLENCE
OFFICE OF THE PROJECT MANAGER
ASST PROJECT MGRS
SPECIAL PROJECTS
PROD ASSURANCE & TEST
DEVELOPMENT
PRODUCT MGRS
PGM
IFCS
ILMS
ADMIN OFFICE
INTERNATIONAL PARTNERSHIP OFFICE
PROGRAM MANAGEMENT OFFICE
CORE

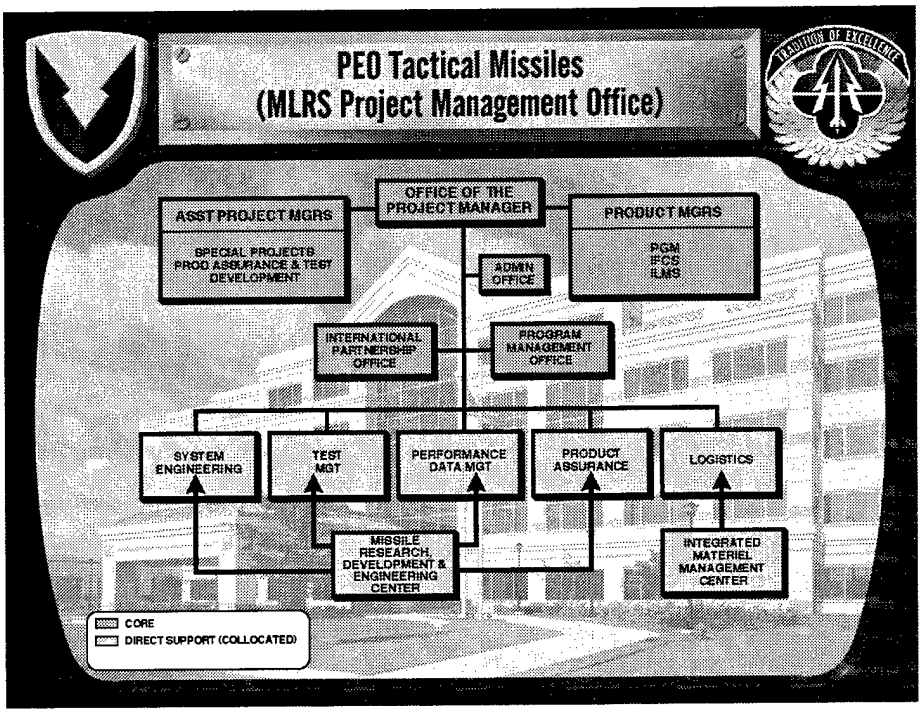

PEO Tactical Missiles
(MLRS Project Management Office)
TRADITION OF EXCELLENCE
OFFICE OF THE PROJECT MANAGER
ASST PROJECT MGRS
SPECIAL PROJECTS
PROD ASSURANCE & TEST
DEVELOPMENT
PRODUCT MGRS
PGM
IFCS
ILMS
ADMIN OFFICE
INTERNATIONAL PARTNERSHIP OFFICE
PROGRAM MANAGEMENT OFFICE
SYSTEM ENGINEERING
TEST MGT
PERFORMANCE DATA MGT
PRODUCT ASSURANCE
MISSILE RESEARCH, DEVELOPMENT & ENGINEERING CENTER
CORE
DIRECT SUPPORT (COLLOCATED)

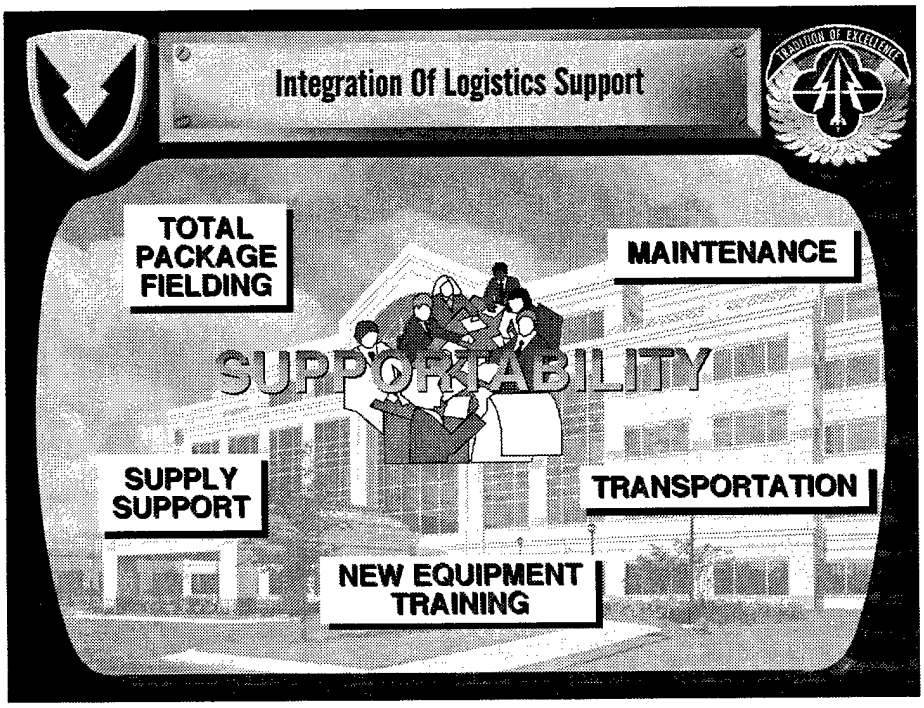

System Engineering
TRADITION OF EXCELLENCE
REQUIREMENTS
CHANGING REQUIREMENTS
SYSTEM ENGINEERING

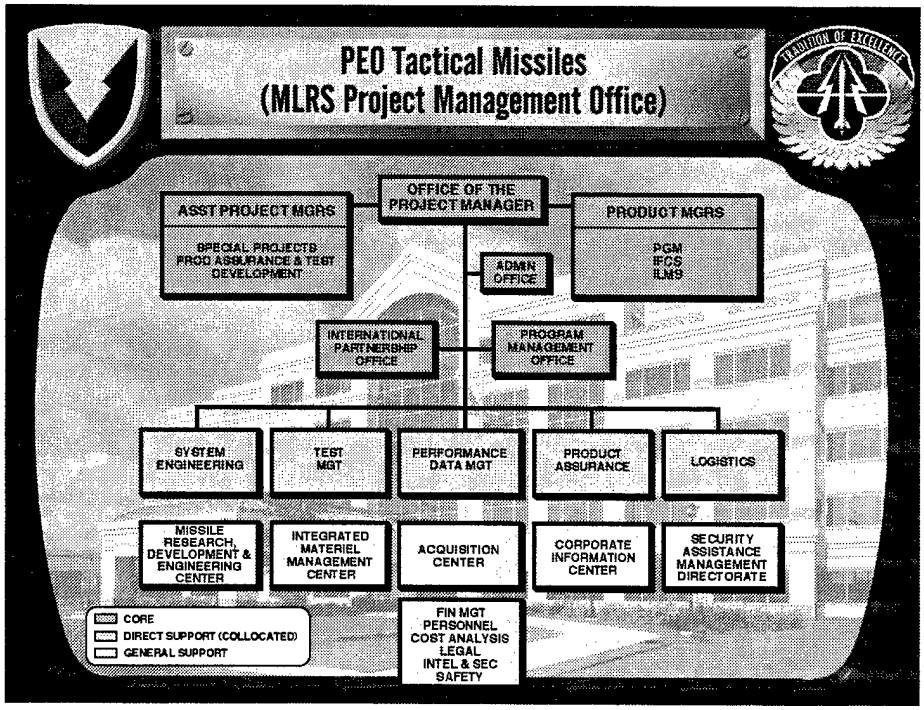

Test Management
TRADITION OF EXCELLENCE
PROPER TESTING GUARANTEES SUCCESS
PLANNING
INTEGRATION WORKING GROUP
SCOPE OF WORK
TEST PLANS
COORDINATION
MLRS
FOLLOW UP
DATA REDUCTION
DATA COMPILATION
REPORTING
EXECUTION
DEMONSTRATIONS
ENVIRONMENTAL QUALIFICATIONS

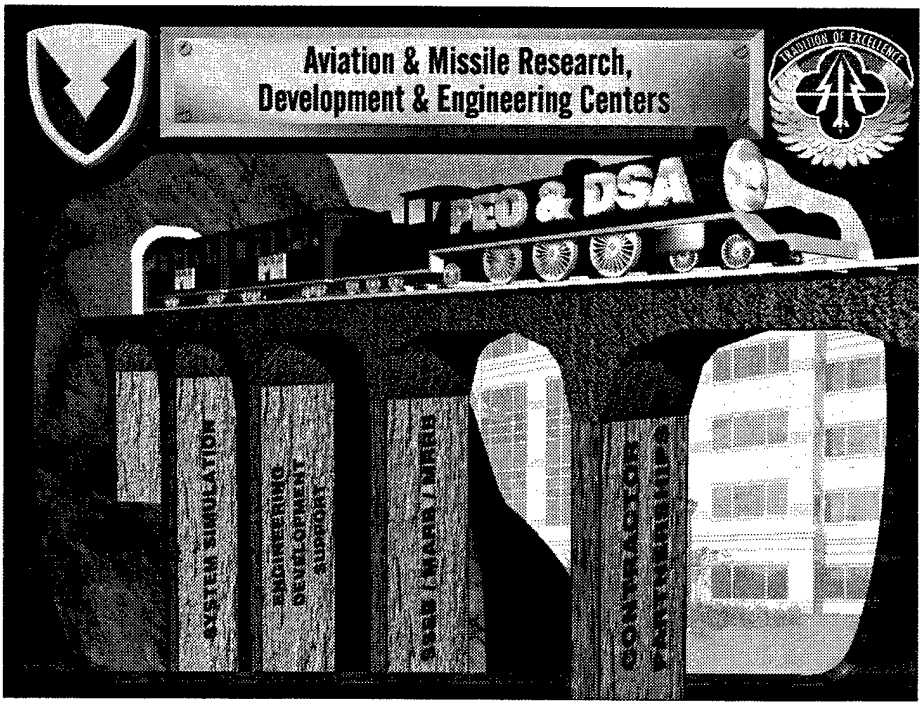

Performance Data Management
A
B
C
DESIGN CHANGES
CONTROL CHANGES
BASELINES
STATUS ACCOUNTING
FORMALIZE CM PROGRAMS
FOSTER COMPETITION
DOCUMENT CHARACTERISTICS

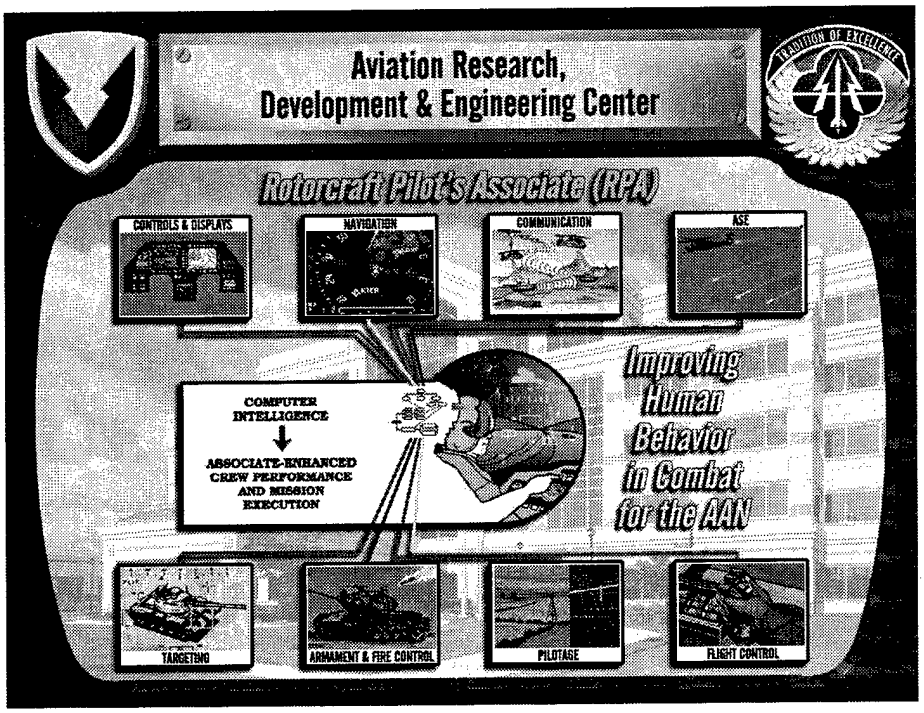
Product Assurance
User Requirements
Ineffective Systems
Poor Design
Failures
Casualties
System Success

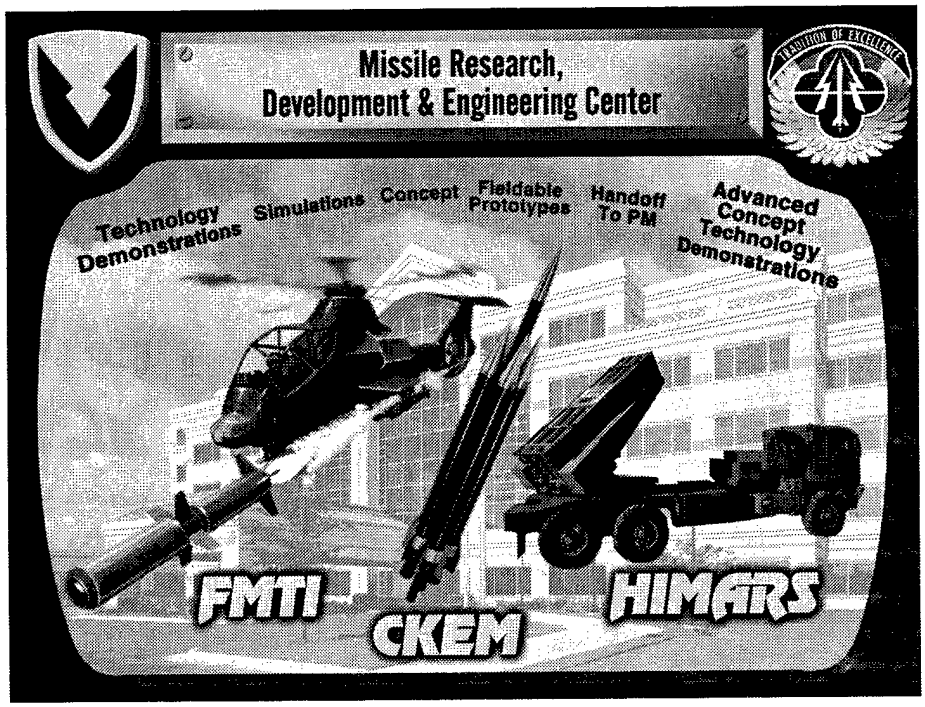

PEO Tactical Missiles
(MLRS Project Management Office)
TRADITION OF EXCELLENCE
ASST PROJECT MGRS
SPECIAL PROJECTS
PROD ASSURANCE & TEST
DEVELOPMENT
OFFICE OF THE
PROJECT MANAGER
ADMIN
OFFICE
PRODUCT MGRS
PGM
FCS
ILMS
INTERNATIONAL
PARTNERSHIP
OFFICE
PROGRAM
MANAGEMENT
OFFICE
SYSTEM
ENGINEERING
TEST
MGT
PERFORMANCE
DATA MGT
PRODUCT
ASSURANCE
LOGISTICS
MISSILE
RESEARCH,
DEVELOPMENT &
ENGINEERING
CENTER
INTEGRATED
MATERIEL
MANAGEMENT
CENTER
CORE
DIRECT SUPPORT (COLLOCATED)

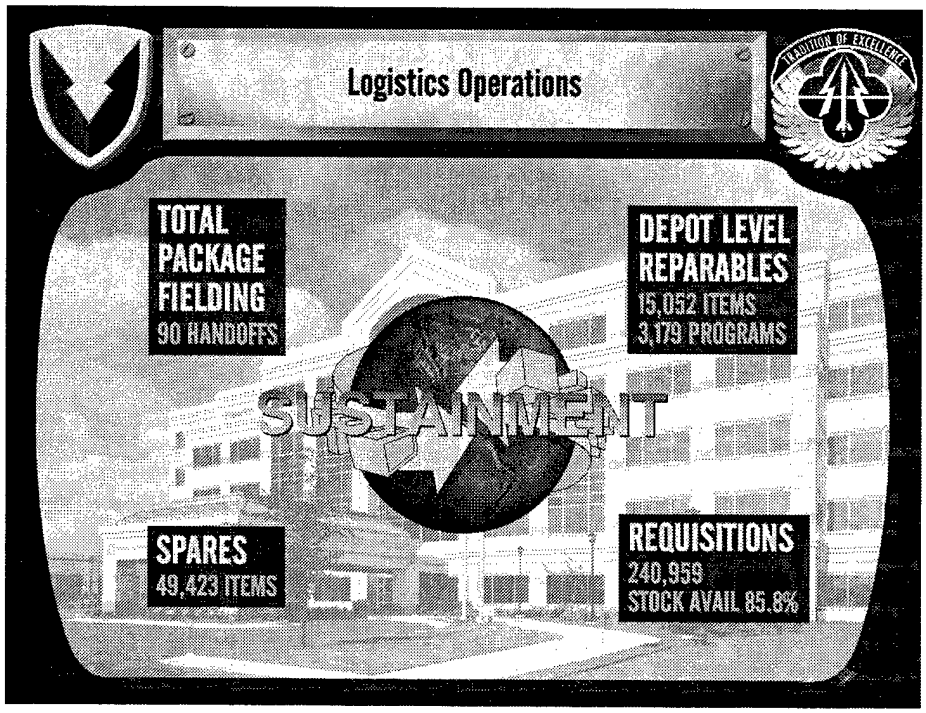

Integration Of Logistics Support
TRADITION OF EXCELLENCE
TOTAL
PACKAGE
FIELDING
MAINTENANCE
SUPPORTABILITY
SUPPLY
SUPPORT
TRANSPORTATION
NEW EQUIPMENT
TRAINING


PEO Tactical Missiles
(MLRS Project Management Office)
TRADITION OF EXCELLENCE
ASST PROJECT MGRS
SPECIAL PROJECTS
PROD ASSURANCE & TEST
DEVELOPMENT
OFFICE OF THE
PROJECT MANAGER
ADMIN
OFFICE
PRODUCT MGRS
PGM
IFCS
ILM9
INTERNATIONAL
PARTNERSHIP
OFFICE
PROGRAM
MANAGEMENT
OFFICE
SYSTEM
ENGINEERING
TEST
MGT
PERFORMANCE
DATA MGT
PRODUCT
ASSURANCE
LOGISTICS
MISSILE
RESEARCH,
DEVELOPMENT &
ENGINEERING
CENTER
INTEGRATED
MATERIEL
MANAGEMENT
CENTER
ACQUISITION
CENTER
CORPORATE
INFORMATION
CENTER
SECURITY
ASSISTANCE
MANAGEMENT
DIRECTORATE
CORE
DIRECT SUPPORT (COLLOCATED)
GENERAL SUPPORT
FIN MGT
PERSONNEL
COST ANALYSIS
LEGAL
INTEL & SEC
SAFETY

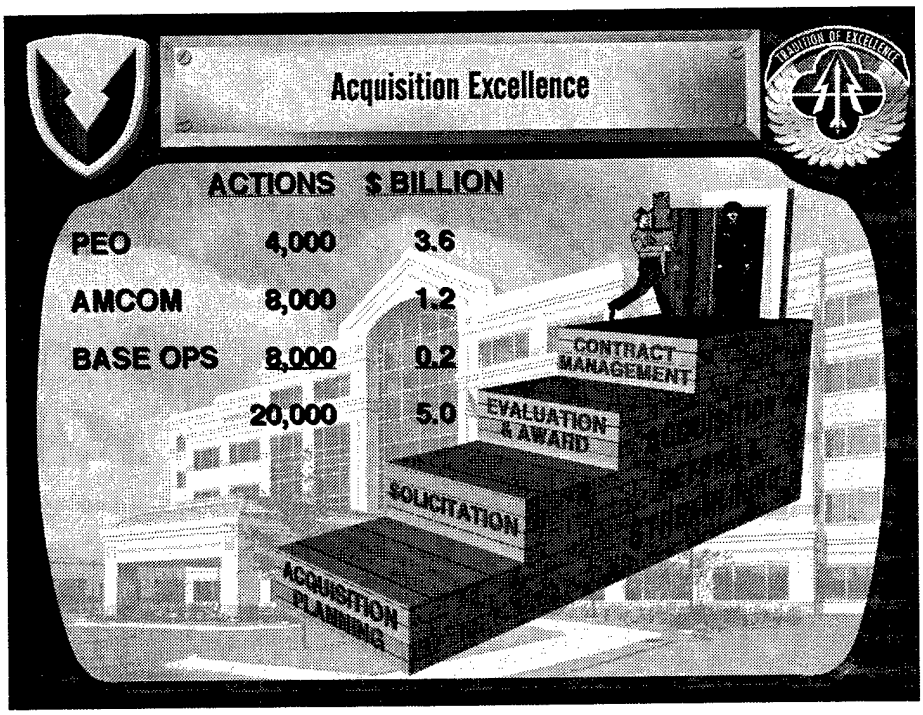

Aviation & Missile Research,
Development & Engineering Centers
TRADITION OF EXCELLENCE
PEO & DSA
SYSTEM SIMULATION
ENGINEERING
DEVELOPMENT
SUPPORT
SOSE / MAPA / MRBB
CONTRACTOR
PARTNERSHIP

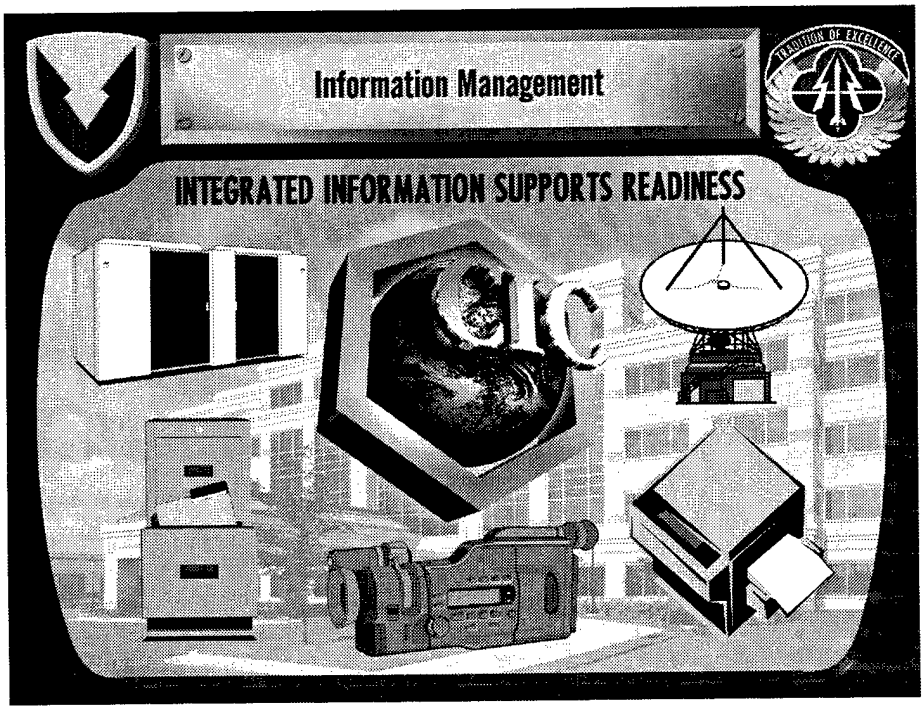

Aviation Research,
Development & Engineering Center
TRADITION OF EXCELLENCE
Rotorcraft Pilot's Associate (RPA)
CONTROLS & DISPLAYS
NAVIGATION
COMMUNICATION
ASE
COMPUTER INTELLIGENCE
ASSOCIATE-ENHANCED CREW PERFORMANCE AND MISSION EXECUTION
Improving Human Behavior in Combat for the AAN
TARGETING
ARMAMENT & FIRE CONTROL
PILOTAGE
FLIGHT CONTROL

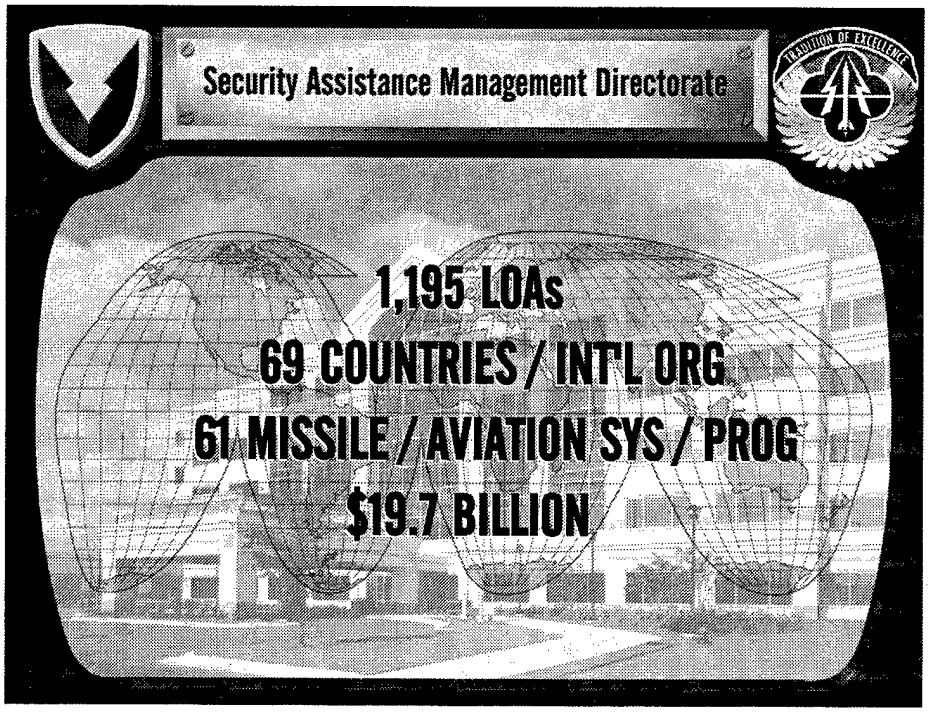

Missile Research,
Development & Engineering Center
TRADITION OF EXCELLENCE
Technology Demonstrations
Simulations
Concept
Fieldable Prototypes
Handoff To PM
Advanced Concept Technology Demonstrations
FMTI
CKEM
HIMARS

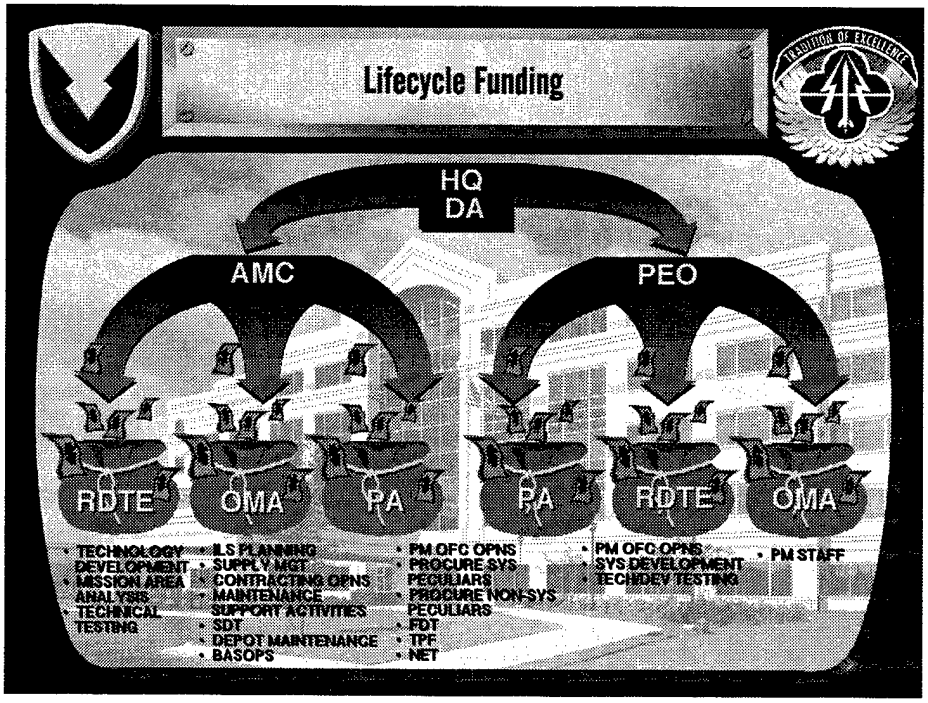

Logistics Operations
TRADITION OF EXCELLENCE
TOTAL PACKAGE FIELDING
90 HANDOFFS
DEPOT LEVEL REPARABLES
15,052 ITEMS
3,179 PROGRAMS
SUSTAINMENT
SPARES
49,423 ITEMS
REQUISITIONS
240,959
STOCK AVAIL 85.8%

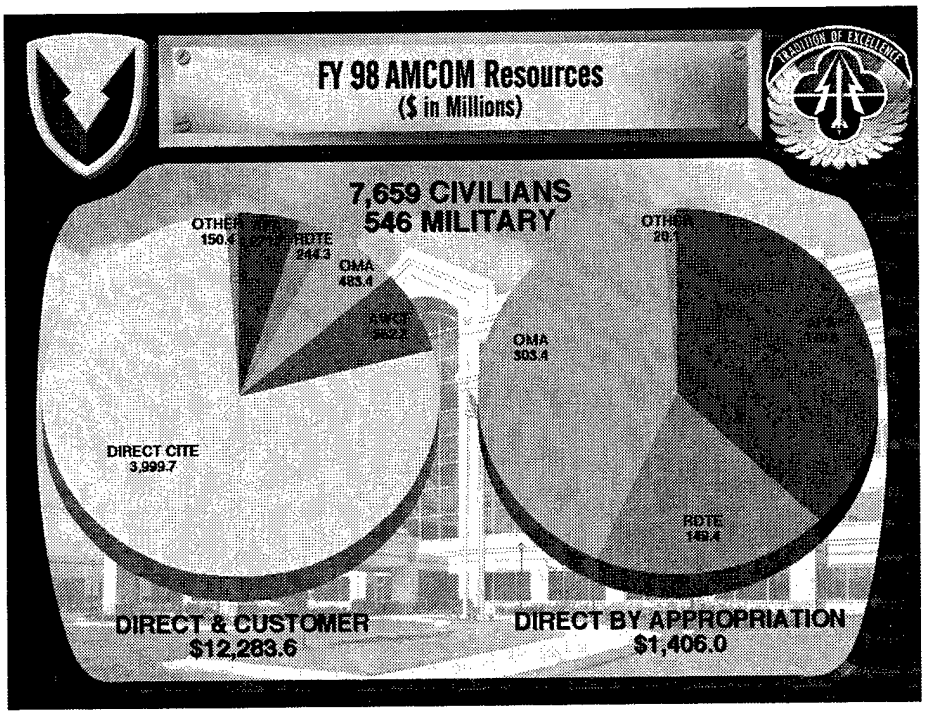
Customer Service
TRADITION OF EXCELLENCE
READINESS
LOGISTICS ASSISTANCE
• 201 LARS
• 50 LOCATIONS
TRAINING
• 4,650 PERSONNEL
TECHNICAL ASSISTANCE
• 4 READINESS ASST TEAMS
• 4 LOCATIONS

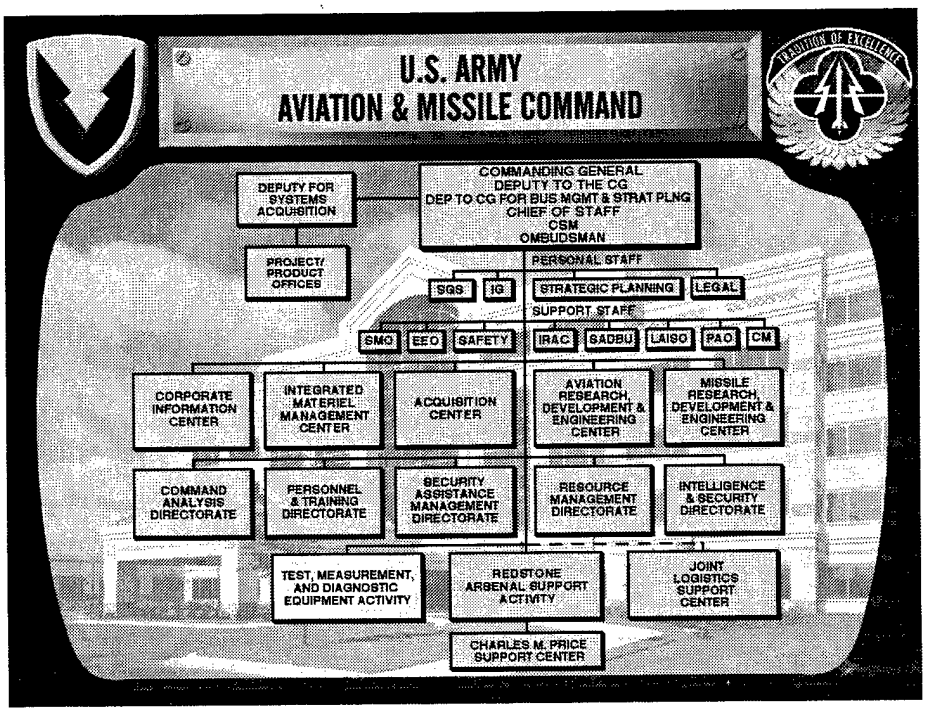

Acquisition Excellence
ACTIONS $ BILLION
PEO 4,000 3.6
AMCOM 8,000 1.2
BASE OPS 8,000 0.2
20,000 5.0
CONTRACT MANAGEMENT
EVALUATION & AWARD
SOLICITATION
ACQUISITION PLANNING

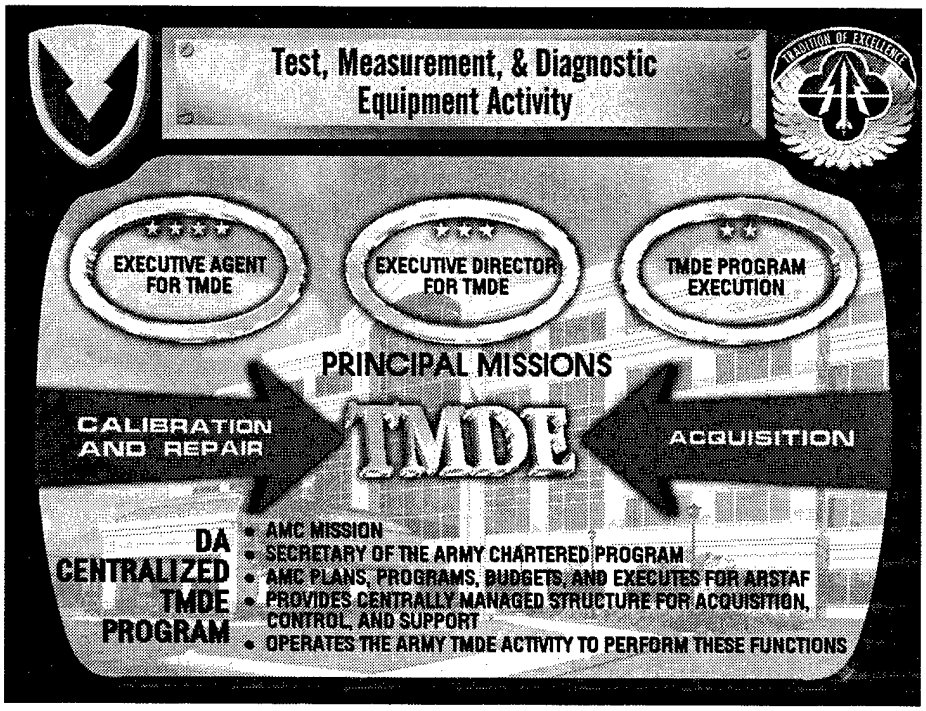

Information Management
INTEGRATED INFORMATION SUPPORTS READINESS

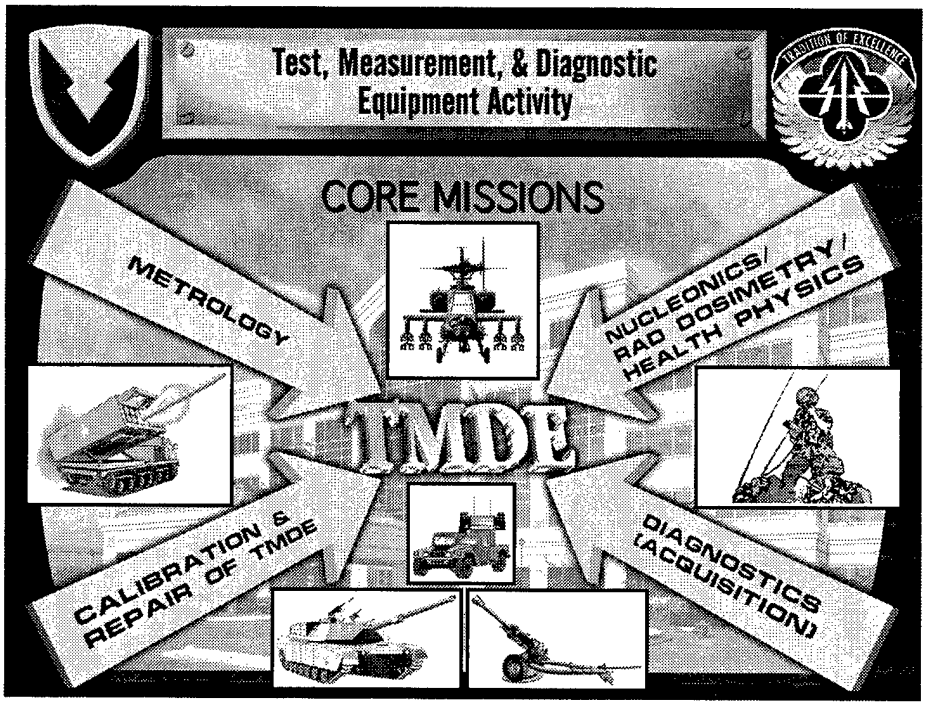

Security Assistance Management Directorate
TRADITION OF EXCELLENCE
1,195 LOAs
69 COUNTRIES / INT'L ORG
61 MISSILE / AVIATION SYS / PROG
$19.7 BILLION

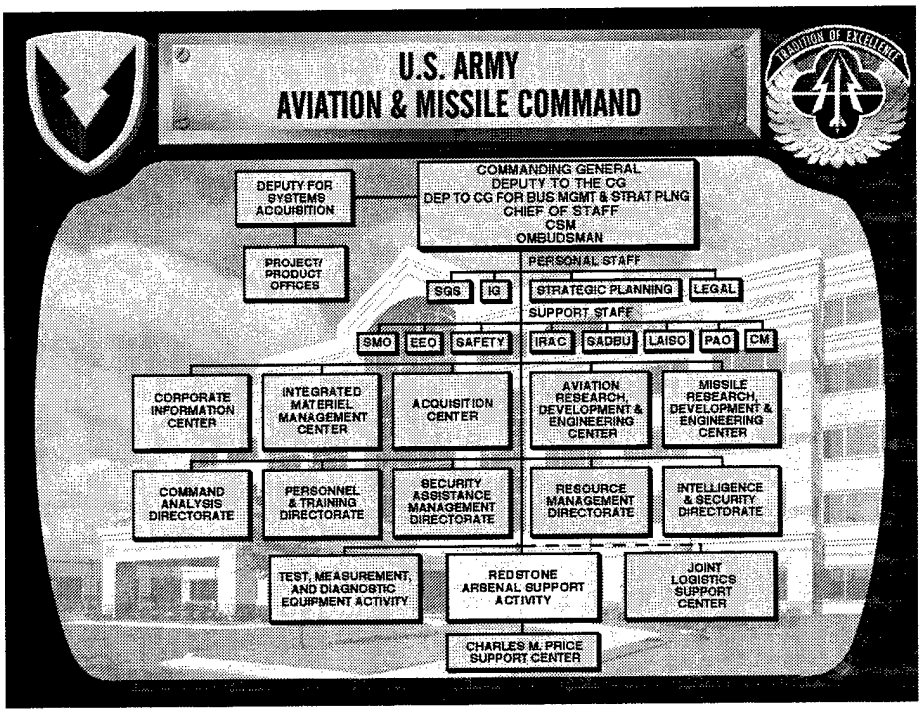

Lifecycle Funding
TRADITION OF EXCELLENCE
HQ
DA
AMC
PEO
RDTE
OMA
PA
PA
RDTE
OMA
• TECHNOLOGY DEVELOPMENT
• MISSION AREA ANALYSIS
• TECHNICAL TESTING
• ILS PLANNING
• SUPPLY MGT
• CONTRACTING OPNS
• MAINTENANCE SUPPORT ACTIVITIES
• SDT
• DEPOT MAINTENANCE
• BASOPS
• PM OFC OPNS
• PROCURE SYS PECULIARS
• PROCURE NON-SYS PECULIARS
• FDT
• TPF
• NET
• PM OFC OPNS
• SYS DEVELOPMENT
• TECHDEV TESTING
• PM STAFF

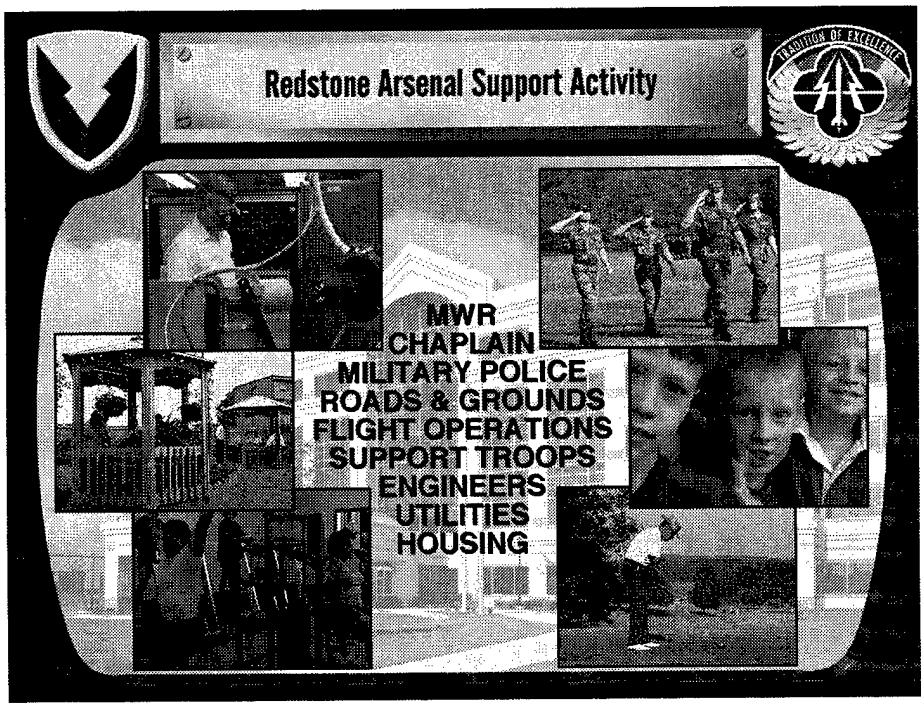

FY 98 AMCOM Resources
($ in Millions)
7,659 CIVILIANS
546 MILITARY
OTHER
150.4
RDTE
244.2
OMA
483.4
AWCF
962.2
DIRECT CITE
3,999.7
OTHER
20.1
OMA
903.4
RDTE
189.4
DIRECT & CUSTOMER
$12,283.6
DIRECT BY APPROPRIATION
$1,406.0

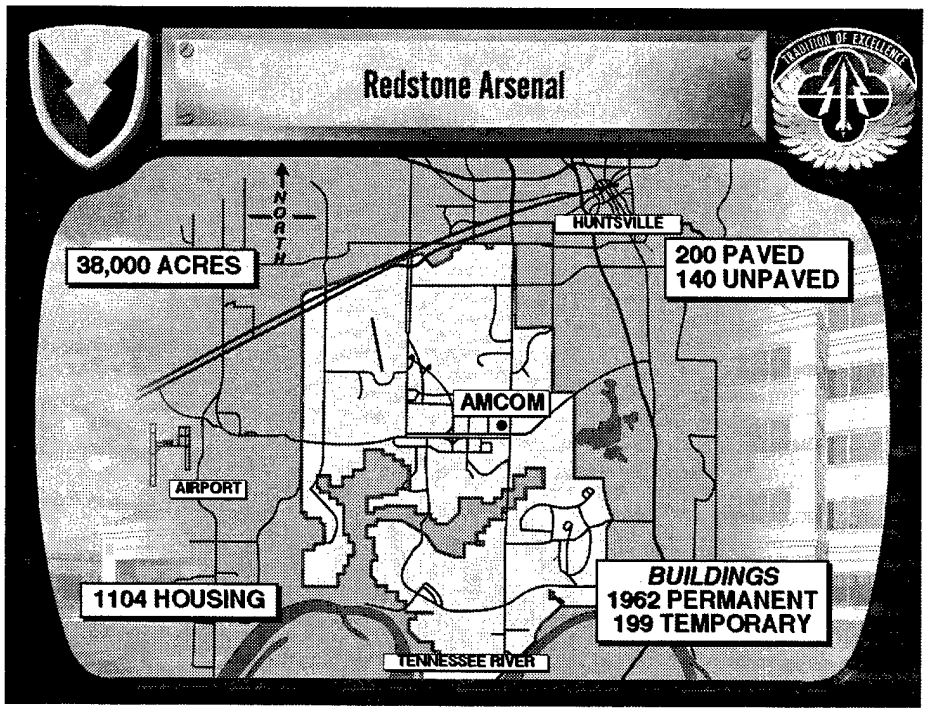

U.S. ARMY
AVIATION & MISSILE COMMAND
COMMANDING GENERAL
DEPUTY TO THE CG
DEP TO CG FOR BUS MGMT & STRAT PLNG
CHIEF OF STAFF
CSM
OMBUDSMAN
DEPUTY FOR SYSTEMS ACQUISITION
PROJECT/ PRODUCT OFFICES
PERSONAL STAFF
SQS
IG
STRATEGIC PLANNING
LEGAL
SUPPORT STAFF
SMO
EEO
SAFETY
IRAC
SADBU
LAISO
PAO
CM
CORPORATE INFORMATION CENTER
INTEGRATED MATERIEL MANAGEMENT CENTER
ACQUISITION CENTER
AVIATION RESEARCH, DEVELOPMENT & ENGINEERING CENTER
MISSILE RESEARCH, DEVELOPMENT & ENGINEERING CENTER
COMMAND ANALYSIS DIRECTORATE
PERSONNEL & TRAINING DIRECTORATE
SECURITY ASSISTANCE MANAGEMENT DIRECTORATE
RESOURCE MANAGEMENT DIRECTORATE
INTELLIGENCE & SECURITY DIRECTORATE
TEST, MEASUREMENT, AND DIAGNOSTIC EQUIPMENT ACTIVITY
REDSTONE ARSENAL SUPPORT ACTIVITY
JOINT LOGISTICS SUPPORT CENTER
CHARLES M. PRICE SUPPORT CENTER

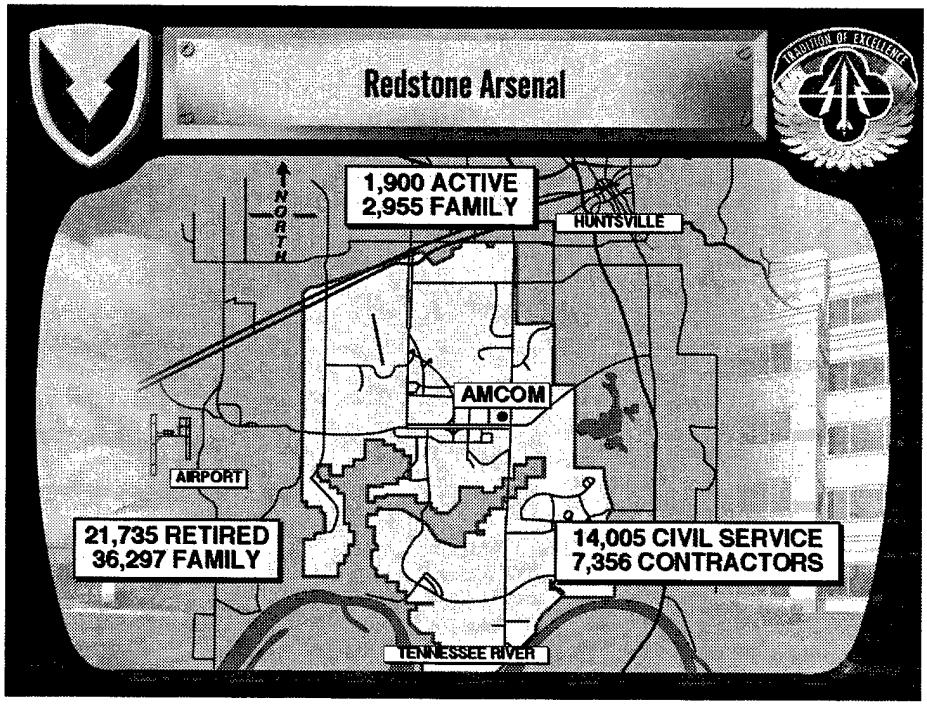

Test, Measurement, & Diagnostic Equipment Activity
TRADITION OF EXCELLENCE
EXECUTIVE AGENT FOR TMDE
EXECUTIVE DIRECTOR FOR TMDE
TMDE PROGRAM EXECUTION
PRINCIPAL MISSIONS
CALIBRATION AND REPAIR
TMDE
ACQUISITION
DA CENTRALIZED TMDE PROGRAM
• AMC MISSION
• SECRETARY OF THE ARMY CHARTERED PROGRAM
• AMC PLANS, PROGRAMS, BUDGETS, AND EXECUTES FOR ARSTAF
• PROVIDES CENTRALLY MANAGED STRUCTURE FOR ACQUISITION, CONTROL, AND SUPPORT
• OPERATES THE ARMY TMDE ACTIVITY TO PERFORM THESE FUNCTIONS

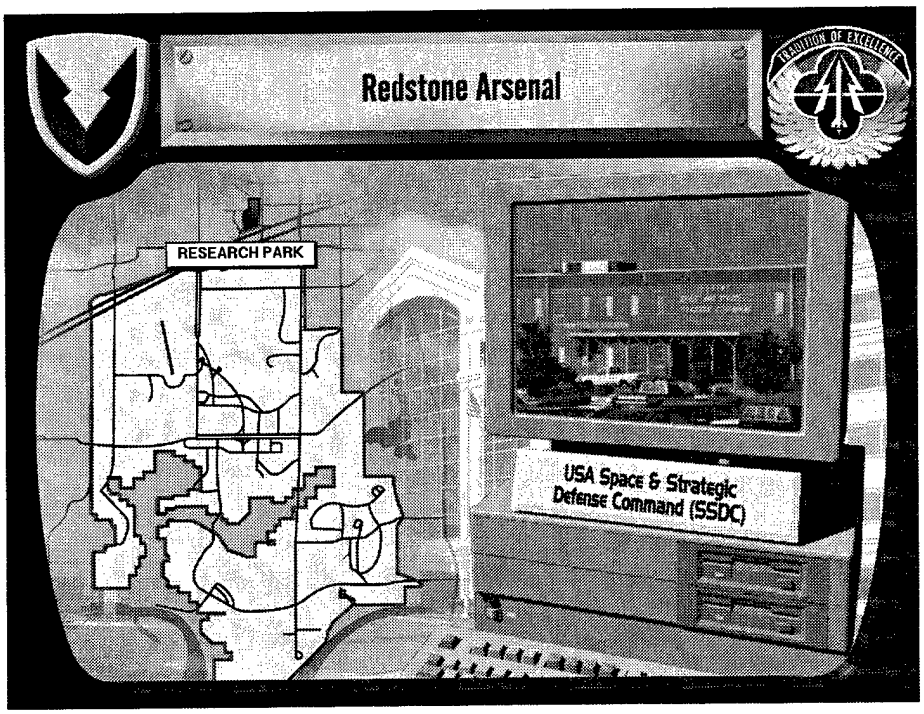

Test, Measurement, & Diagnostic Equipment Activity
TRADITION OF EXCELLENCE
CORE MISSIONS
METROLOGY
NUCLEONICS/ RAD DOSIMETRY/ HEALTH PHYSICS
TMDE
CALIBRATION & REPAIR OF TMDE
DIAGNOSTICS (ACQUISITION)

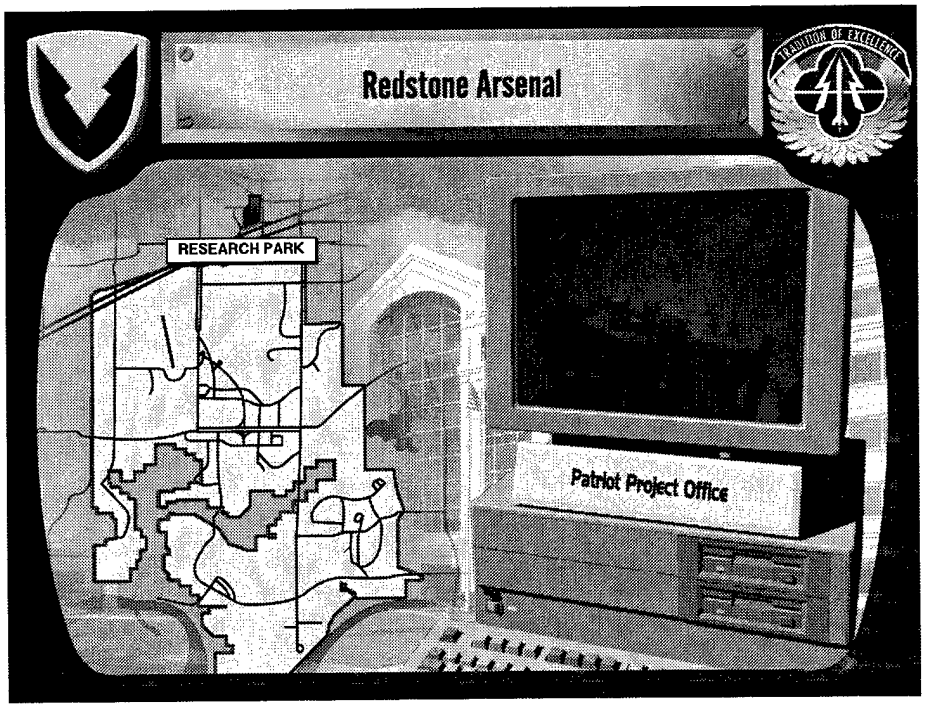

U.S. ARMY
AVIATION & MISSILE COMMAND
TRADITION OF EXCELLENCE
COMMANDING GENERAL
DEPUTY TO THE CG
DEP TO CG FOR BUS MGMT & STRAT PLNG
CHIEF OF STAFF
CSM
OMBUDSMAN
DEPUTY FOR SYSTEMS ACQUISITION
PROJECT/ PRODUCT OFFICES
PERSONAL STAFF
SGS
IG
STRATEGIC PLANNING
LEGAL
SUPPORT STAFF
SMO
EEO
SAFETY
IRAC
SADBU
LAISO
PAO
CM
CORPORATE INFORMATION CENTER
INTEGRATED MATERIEL MANAGEMENT CENTER
ACQUISITION CENTER
AVIATION RESEARCH, DEVELOPMENT & ENGINEERING CENTER
MISSILE RESEARCH, DEVELOPMENT & ENGINEERING CENTER
COMMAND ANALYSIS DIRECTORATE
PERSONNEL & TRAINING DIRECTORATE
SECURITY ASSISTANCE MANAGEMENT DIRECTORATE
RESOURCE MANAGEMENT DIRECTORATE
INTELLIGENCE & SECURITY DIRECTORATE
TEST, MEASUREMENT, AND DIAGNOSTIC EQUIPMENT ACTIVITY
REDSTONE ARSENAL SUPPORT ACTIVITY
JOINT LOGISTICS SUPPORT CENTER
CHARLES M. PRICE SUPPORT CENTER

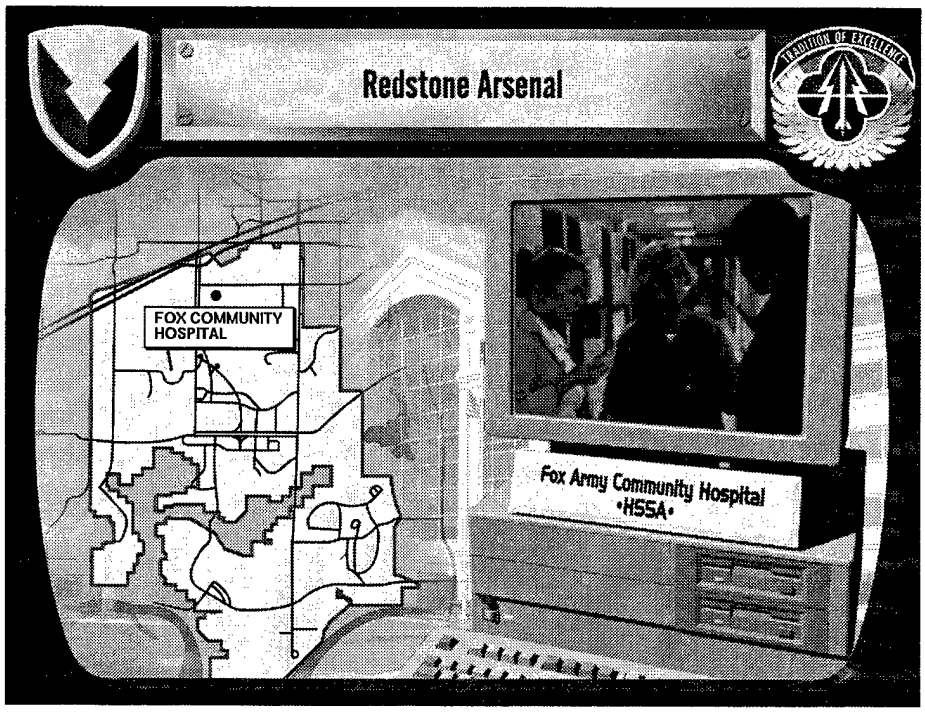

Redstone Arsenal Support Activity
TRADITION OF EXCELLENCE
MWR
CHAPLAIN
MILITARY POLICE
ROADS & GROUNDS
FLIGHT OPERATIONS
SUPPORT TROOPS
ENGINEERS
UTILITIES
HOUSING

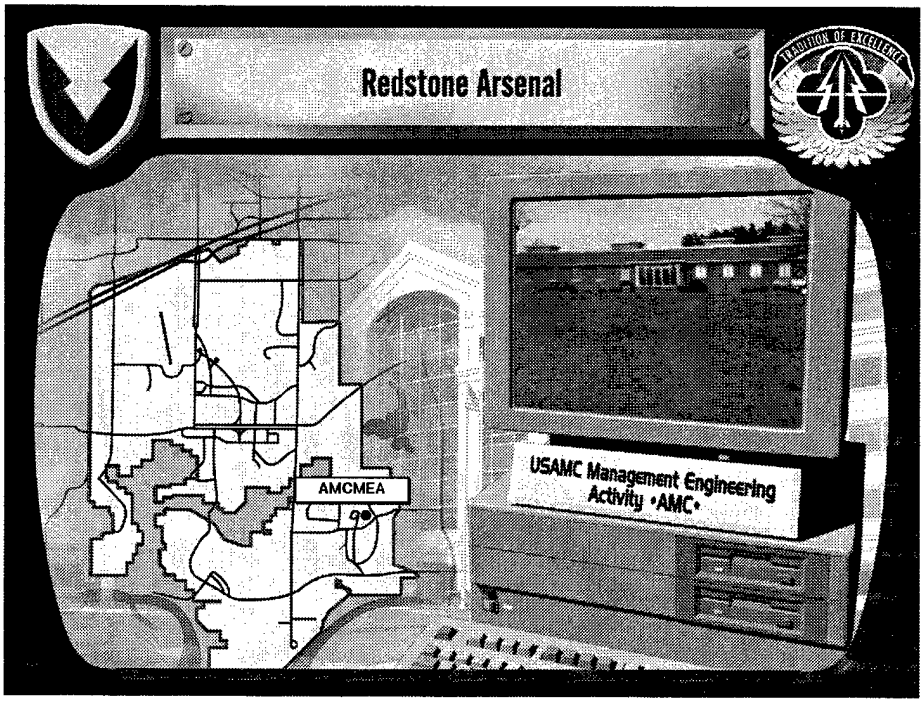

Redstone Arsenal
TRADITION OF EXCELLENCE
NORTH
HUNTSVILLE
38,000 ACRES
200 PAVED
140 UNPAVED
AMCOM
AIRPORT
1104 HOUSING
BUILDINGS
1962 PERMANENT
199 TEMPORARY
TENNESSEE RIVER

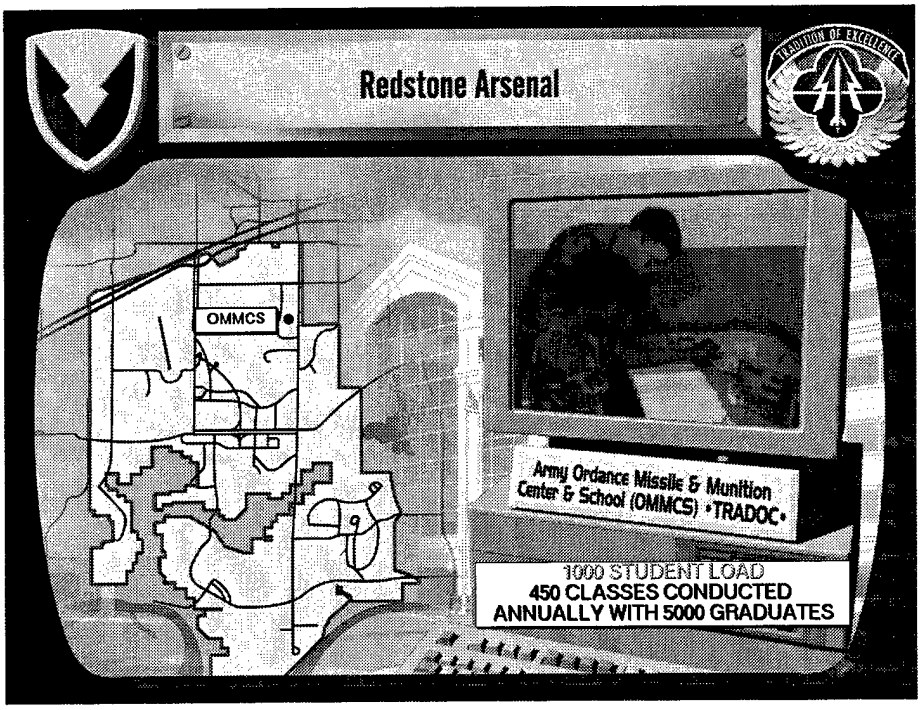

Redstone Arsenal
TRADITION OF EXCELLENCE
NORTH
1,900 ACTIVE
2,955 FAMILY
HUNTSVILLE
AMCOM
AIRPORT
21,735 RETIRED
36,297 FAMILY
14,005 CIVIL SERVICE
7,356 CONTRACTORS
TENNESSEE RIVER

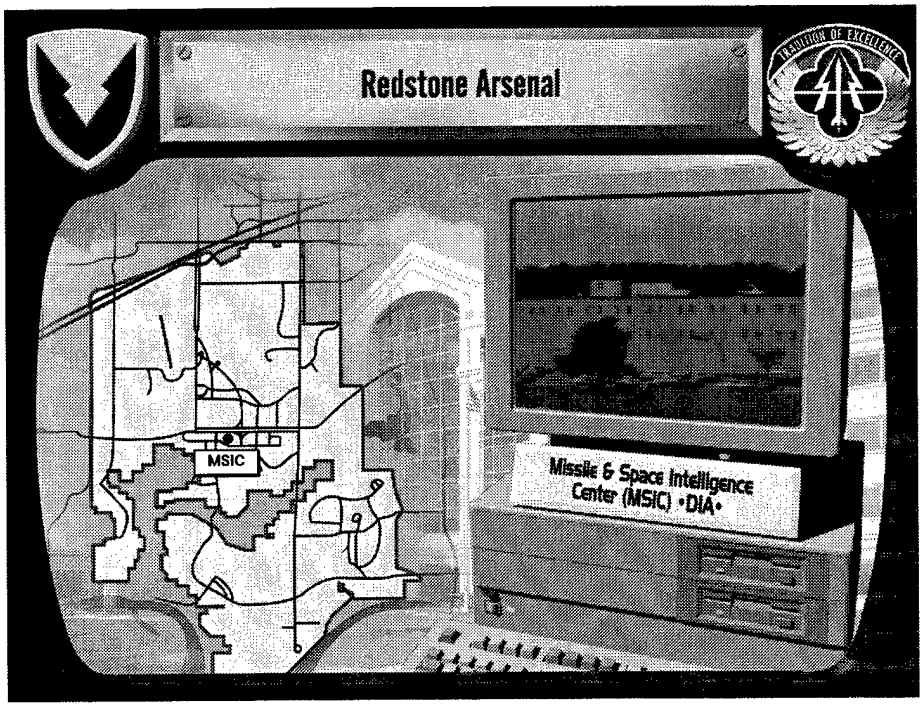

Redstone Arsenal
TRADITION OF EXCELLENCE
RESEARCH PARK
USA Space & Strategic
Defense Command (SSDC)

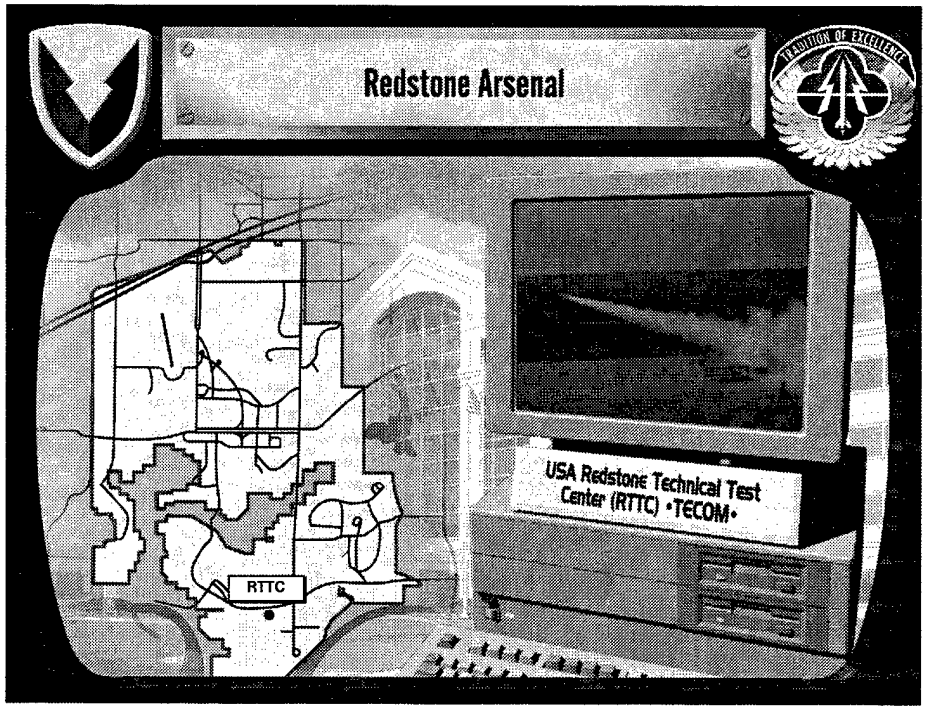

Redstone Arsenal
TRADITION OF EXCELLENCE
RESEARCH PARK
Patriot Project Office

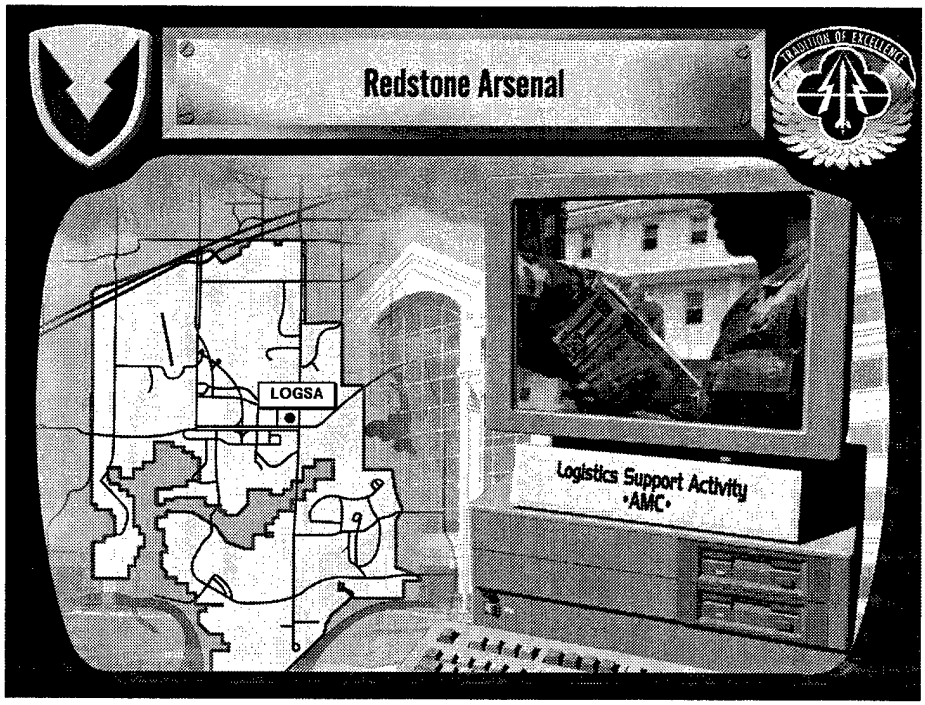

Redstone Arsenal
TRADITION OF EXCELLENCE
FOX COMMUNITY HOSPITAL
Fox Army Community Hospital
•HSSA•

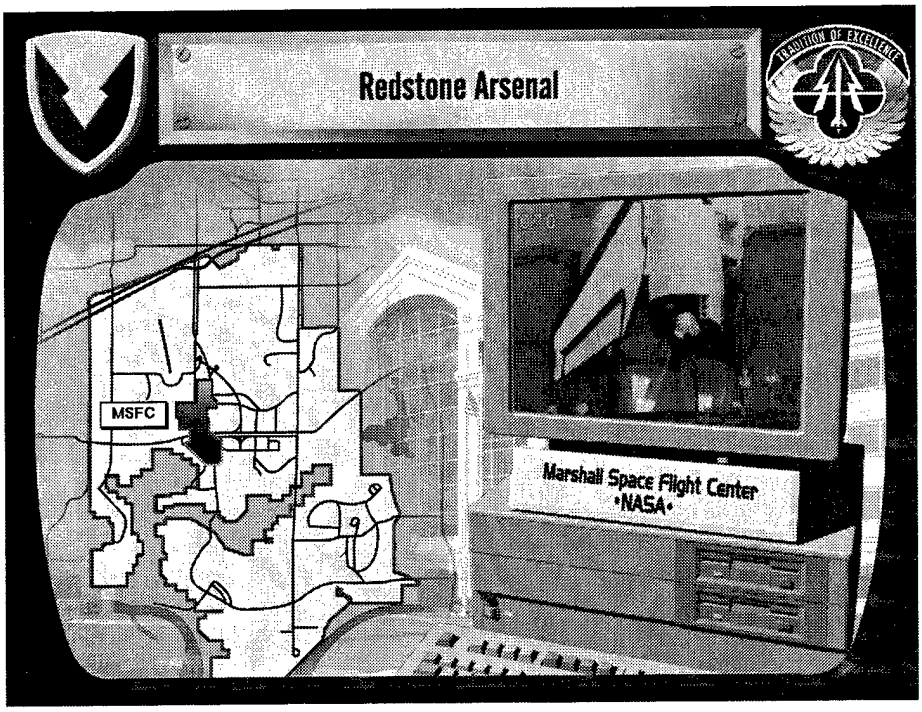

Redstone Arsenal
TRADITION OF EXCELLENCE
AMCMEA
USAMC Management Engineering
Activity •AMC•

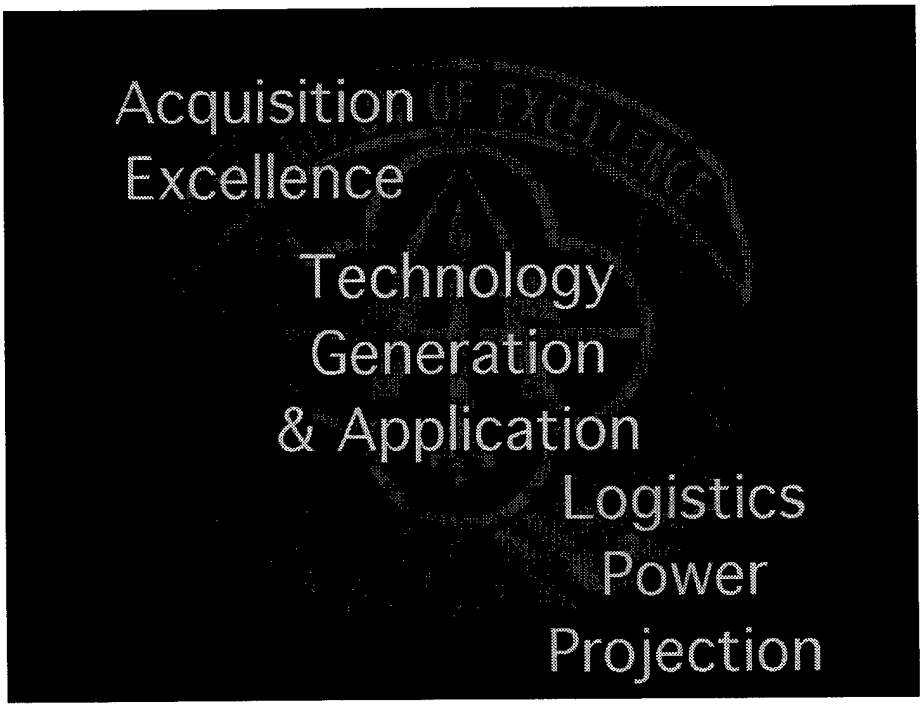

Redstone Arsenal
TRADITION OF EXCELLENCE
OMMCS
Army Ordance Missile & Munition Center & School (OMMCS) •TRADOC•
1000 STUDENT LOAD
450 CLASSES CONDUCTED
ANNUALLY WITH 5000 GRADUATES

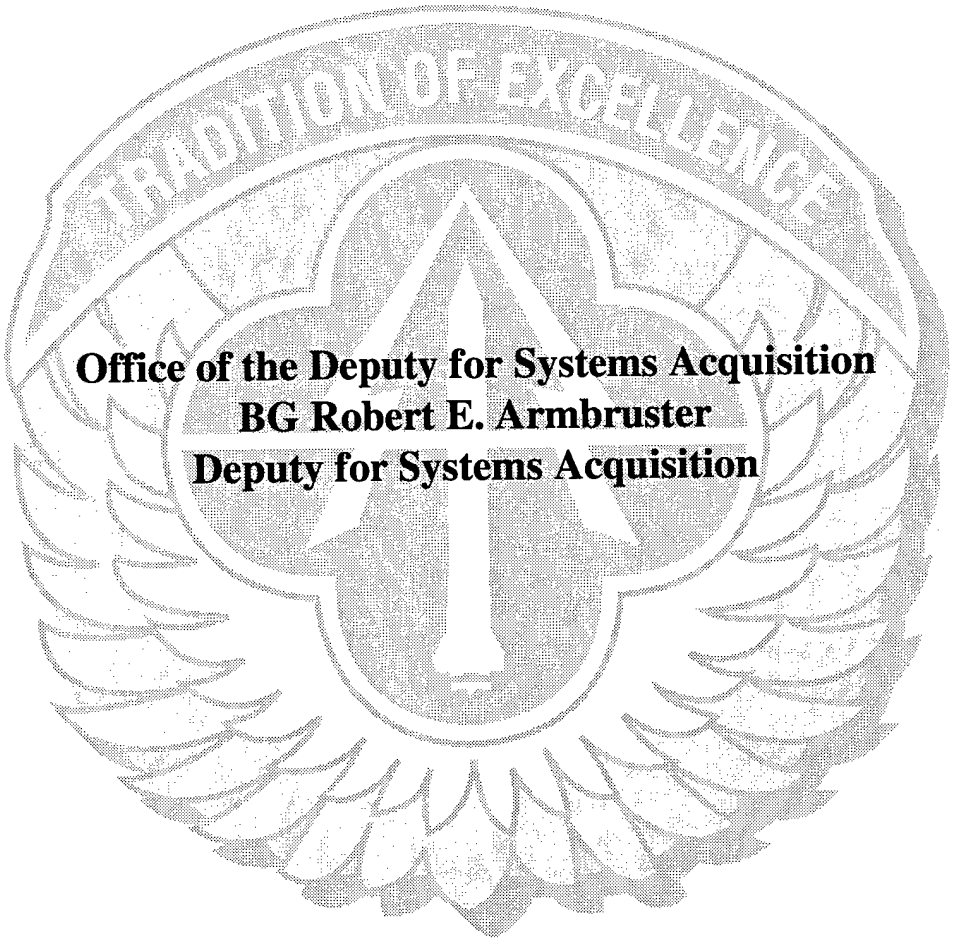

Redstone Arsenal
TRADITION OF EXCELLENCE
MSIC
Missile & Space Intelligence Center (MSIC) •DIA•


Redstone Arsenal
TRADITION OF EXCELLENCE
USA Redstone Technical Test Center (RTTC) •TECOM•
RTTC


Redstone Arsenal
TRADITION OF EXCELLENCE
LOGSA
Logistics Support Activity •AMC•


Redstone Arsenal
TRADITION OF EXCELLENCE
MSFC
Marshall Space Flight Center
•NASA•


Acquisition
Excellence
Technology
Generation
& Application
Logistics
Power
Projection

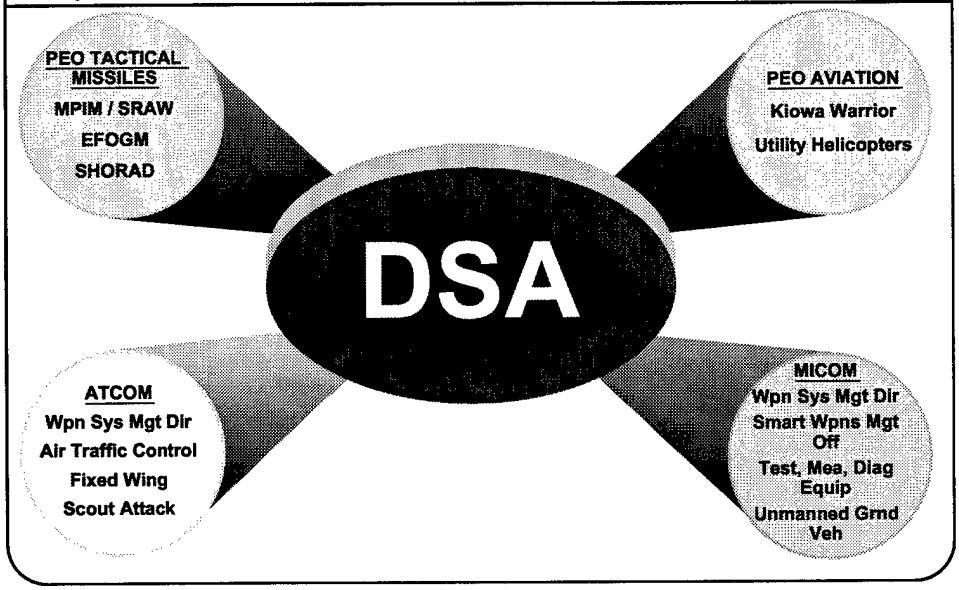


Office of the Deputy for Systems Acquisition
BG Robert E. Armbruster
Deputy for Systems Acquisition

1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

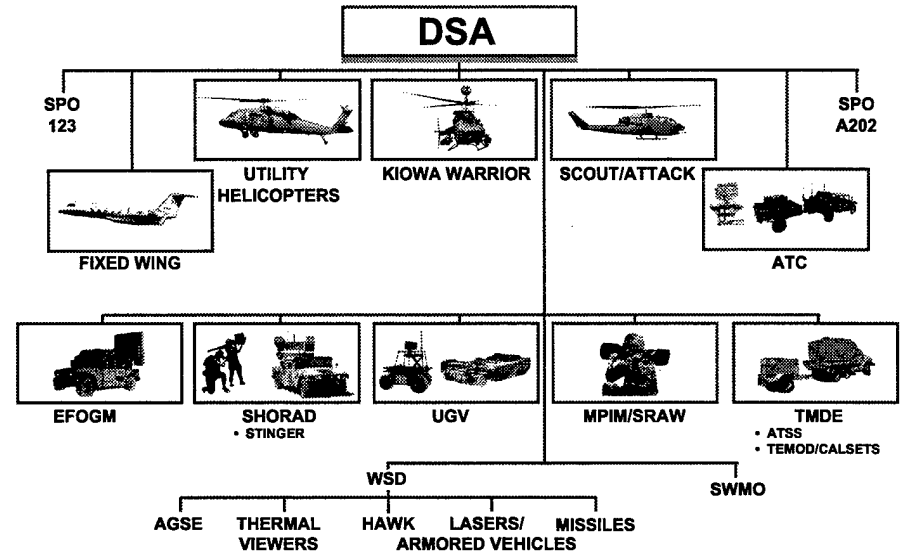
OCTOBER 1997

BG ROBERT E. ARMBRUSTER



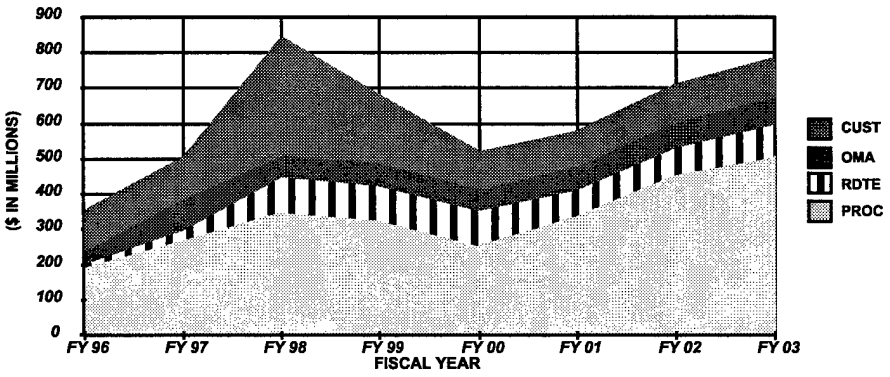
DSA ORGANIZATION

1997 Advance Planning Briefing for Industry



PROJECTED DSA BUSINESS BASE

1997 Advance Planning Briefing for Industry



	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02	FY 03
PROC	195	272	354	333	261	343	459	510
RDTE	14	33	101	98	98	77	83	96
OMA	39	91	68	69	67	70	76	79
CUST	111	113	328	187	98	94	99	106
TOTAL	359	509	851	687	524	584	717	791

CHALLENGES

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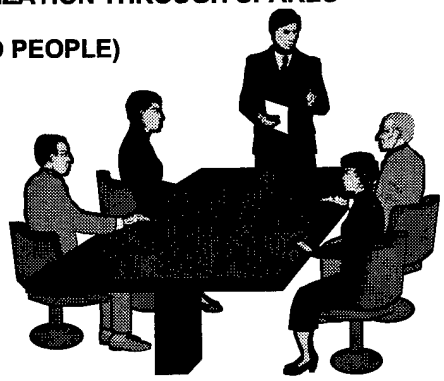
- MERGING OF AVIATION AND MISSILE PMs IN DSA ORGANIZATION
- INSTITUTIONALIZING THE SPIRIT OF ACQUISITION REFORM
- OBSOLESCENCE AND MODERNIZATION THROUGH SPARES
- DOING MORE WITH LESS ($ AND PEOPLE)
- LIFE CYCLE MANAGEMENT
- MANAGING CHANGE



FIXED WING

1997 Advance Planning Briefing for Industry

PROGRAM PHASES

- SUSTAINMENT:
  - C-12, RC-12, C-20, C-23, C-21, C-26, UC-35A
- PRODUCTION:
  - UC-35A, C-23B+

PROGRAM FOCUS

- CONTROL/REDUCE COST
- FLEET STATUS VISIBILITY
- AUTOMATED MANAGEMENT CONTROLS
- AVIONICS UPGRADE REQUIREMENTS

POTENTIAL CONTRACT OPPORTUNITIES

GOVT TPOC: LTC WILLIAM LAKE - (205) 955-0081

ITEM	AWARD DATE	CONTRACT TYPE	COMMENTS
C-12/RC-12/U-21	AWARDED 1996	FFP	SOLE SOURCE (OPTIONS)
C-23B+	AWARDED 1994	FFP	SOLE SOURCE (OPTIONS)
C-26	AWARDED 1996	FFP	SOLE SOURCE (OPTIONS)
C-21	AWARDED 1995	FFP	SOLE SOURCE (OPTIONS)
C-20	AWARDED 1996	FFP	SOLE SOURCE (OPTIONS)
UC-35A	AWARDED 1996	FFP	SOLE SOURCE (OPTIONS)

UTILITY HELICOPTERS
(UH-60L BLACK HAWK & UH-1 H/V)

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PROGRAM PHASES	PROGRAM FOCUS
• PRODUCTION • SUSTAINMENT	• CONTINUE FIELDING UH-60Ls • IDENTIFY OUT-YEAR FUNDING FOR UH-60Q CONVERSION • FLEETWIDE SLEP
• SUSTAINMENT • RETIREMENT	• FLIGHT SAFETY PARTS • FLEET MGT (FLEET STRATEGY) • ESTABLISH REFURB CAPABILITY (A/F & COMPONENT)

POTENTIAL CONTRACT OPPORTUNITIES

GOVT TPOC: COL TOM HARRISON - (205) 876-6821

ITEM	AWARD DATE	CONTRACT TYPE	COMMENTS
UH-60 PRODUCTION	18 JUL 97	FFP - 5 Yr Multiyear	SOLE SOURCE
PRODUCTION GFE:			
T700 ENGINE PRODUCTION	30 SEP 97 (e)	FFP - 5 Yr	SOLE SOURCE
AUXILLARY POWER UNITS	30 SEP 97 (e)	FFP - 5 Yr	SOLE SOURCE
L to Q ECP (PRODUCTION INCORPORATION)	15 NOV 97 (e)	FFP	SOLE SOURCE
UH-1 REFURBISHMENT	18 JUL 97	FFP - 5 Yr	COMPETITIVE
T53 ENGINE M&O	2Q98	FFP	COMPETITIVE
EXTERNAL FUEL SYS	4Q97	FFP	SOLE SOURCE

KIOWA WARRIOR

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PROGRAM PHASES	PROGRAM FOCUS
• PRODUCTION • RETROFIT • SYSTEM SAFETY ENHANCEMENT PROGRAM (SSEP) • FOREIGN MILITARY SALES	• FLEET READINESS • SYSTEM SAFETY ENHANCEMENT • PRODUCTION/RETROFIT • NEW UNIT FIELDINGS

POTENTIAL CONTRACT OPPORTUNITIES

GOVT TPOC: LTC LAWRENCE GINDER - (205) 842-8892

LOT 15 ITEM	AWARD DATE	CONTRACT TYPE	COMMENTS
AIRFRAME	FY 98	FFP	SOLE SOURCE
MAST MOUNTED SIGHT (MMS)	FY 98	FFP	SOLE SOURCE
ENGINES	FY 98	FFP	SOLE SOURCE
CONTROL DISPLAY SYSTEM (CDS)	FY 98	FFP	SOLE SOURCE
SYS SAFETY ENHANCEMENT PROGRAM (SSEP)			
ENGINES	FY 98	FFP	SOLE SOURCE
CREW SEATS	FY 98	FFP	SOLE SOURCE
AIRBAGS	FY 00	FFP	SOLE SOURCE
IMPROVED DATA MODEM (DM)	FY 98	FFP	SOLE SOURCE

SCOUT ATTACK
(OH-58 A/C & AH-1 COBRA)

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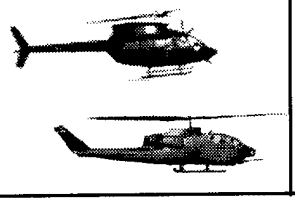

PROGRAM PHASES

- SUSTAINMENT
- RETIREMENT

- SUSTAINMENT
- RETIREMENT

PROGRAM FOCUS

- APPLICATION OF MODIFICATION KITS (SINCGARS, GPS, OIL FILTER)
- RETIREMENT
  - FMS
  - 1208 PROGRAM

- RETIRE AIRCRAFT
- NG DIRECTED PROCUREMENT
  - TOW 2B UPGRADE
  - BORESIGHT EQUIPMENT
- FMS SALES AND REFURBISHMENTS

POTENTIAL CONTRACT OPPORTUNITIES

GOVT TPOC: LTC JAMES E. WEGER - (205) 955-0989

ITEM	AWARD DATE	CONTRACT TYPE	COMMENTS
OH-58 A/C	*TBD BASED UPON NG PRIORITIES/FUNDING*		
AH-1 COBRA	*TBD BASED UPON NG PRIORITIES/FUNDING*		
ENGINEERING SERVICES	OCT 98	CPFF	SOLE SOURCE

AIR TRAFFIC CONTROL SYSTEMS

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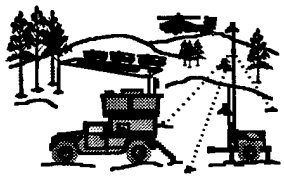

PROGRAM PHASES

MOBILE TOWER SYSTEM (MOTS)

- MS O/I - FY 98
- MS III - FY 99
- ORD CURRENTLY BEING STAFFED FOR FINAL APPROVAL

PROGRAM FOCUS

- MOBILE, DEPLOYABLE, RELIABLE, TACTICAL AIR TRAFFIC CONTROL TOWER SYSTEM WITH FULL VOICE / DATA COMMUNICATIONS CAPABILITY
- COTS, NDI WITH GFE

POTENTIAL CONTRACT OPPORTUNITIES

GOVT TPOC: LTC JOSEPH DURSO - (205) 876-8701

ITEM	AWARD DATE	CONTRACT TYPE	COMMENTS
MOBILE TOWER SYSTEM (MOTS)	FY 00	FFP	COMPETITIVE

ENHANCED FIBER OPTIC GUIDED MISSILE ADVANCED TECHNOLOGY DEMONSTRATION

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PROGRAM PHASES

- PHASE I - VPE
- PHASE IIA - ACTD
- PHASE IIB - EUE

PROGRAM FOCUS

- EARLY USER INVOLVEMENT
- UNIT CERTIFICATION TESTING
- PARTICIPATE IN RFPI ACTD
- CONTINUE 82ND ABN DIV EVALUATION OF TECHNOLOGIES
- PROVIDE RESIDUAL WARFIGHTING CAPABILITY

POTENTIAL CONTRACT OPPORTUNITIES

GOVT TPOC: MR. ROBERT BERGMAN - (205) 876-8456

ITEM	AWARD DATE	CONTRACT TYPE	COMMENTS
EXTENDED USER EVALUATION SUPPORT (EUES)	FY 99	CPIF	SOLE SOURCE

SHORAD STINGER

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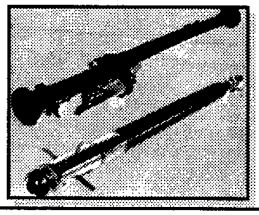

PROGRAM PHASES

- SUSTAINMENT
- FMS PRODUCTION
- PRODUCTION MOD
- PROGRAM DEFINITION AND RISK REDUCTION
- CONCEPT DEFINITION

PROGRAM FOCUS

- MAINTAIN INVENTORY
- UPGRADE CAPABILITIES
  - BLOCK I
  - BLOCK II
- PLATFORM IMPROVEMENTS

POTENTIAL CONTRACT OPPORTUNITIES

GOVT TPOC: MR DOUG HART - (205) 876-6193

ITEM	AWARD DATE	CONTRACT TYPE	COMMENTS
BLOCK I (OPTION)	JAN 98	FFP	SOLE SOURCE
BLOCK II	FEB 98	CPFF	SOLE SOURCE
PLATFORM (OPTION)	JAN 98	FFP	SOLE SOURCE
MISSILE E/S (OPTION)	NOV 97	CPFF	SOLE SOURCE
LAUNCHER E/S (OPTION)	NOV 97	CPFF	SOLE SOURCE
FMS			
MISSILES	DEC 97	FFP	SOLE SOURCE
SPARES	FEB 98	FFP	SOLE SOURCE
LAUNCHER	DEC 97	FFP	SOLE SOURCE
ETA	APR 98	CPFF	SOLE SOURCE
CFT	SEP 97	FFP	SOLE SOURCE
CONTAINERS	JUL 98	FFP	COMPETITIVE

SHORAD
AVENGER

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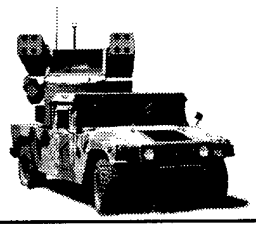

PROGRAM PHASES
- SUSTAINMENT
- PRODUCTION
- FMS PRODUCTION
- PRODUCTION MOD

PROGRAM FOCUS
- MAINTAIN FLEET
- CONTINUE PRODUCTION
- PRODUCT IMPROVEMENTS
  - ECU / PPU
  - ACE REDESIGN
  - SLEW-TO-CUE

POTENTIAL CONTRACT OPPORTUNITIES

GOVT TPOC: MR DOUG HART - (205) 876-6193

ITEM	AWARD DATE	CONTRACT TYPE	COMMENTS
SLEW-TO-CUE	FY 98	FFP	COMPETITIVE
ECU / PPU	FY 99	FFP	SOLE SOURCE

UNMANNED GROUND VEHICLE
(UGV)

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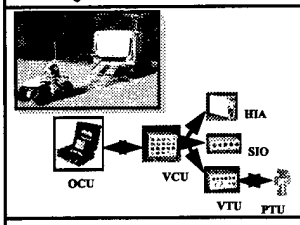

PROGRAM PHASES
- TACTICAL UNMANNED VEHICLE (TUV)
  - PDRR
- VEHICLE TELEOPERATION CAPABILITY (VTC)
  - PDRR
  - EMD

PROGRAM FOCUS
- PROGRAM DEFINITION
- RISK REDUCTION
- IMPROVED STS KIT
- CONTINUED DEVELOPMENT

POTENTIAL CONTRACT OPPORTUNITIES

GOVT TPOC: GLENN CRUZE - (205) 955-7103

ITEM	AWARD DATE	CONTRACT TYPE	COMMENTS
ENGINEERING SERVICES	DEC 98	CPFF	SOLE SOURCE
STS KIT	OCT 97	CPFF	SOLE SOURCE
STS KIT	FEB 98	CPFF	SOLE SOURCE
SYSTEM ENGINEERING & TECHNICAL SERVICES	MAR 98	CPFF	8A SET ASIDE

MPIM/SRAW
MULTI-PURPOSE INDIVIDUAL MUNITION/ SHORT RANGE ASSAULT WEAPON

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PROGRAM PHASES

- EMD
  - 18 MONTH, EMD PHASE 1 (RISK MITIGATION) INITIATED OCT 96
  - 47 MONTH, EMD PHASE 2, (MATURATION) BEGINS APR 98
- PRODUCTION: LRIP TO BEGIN 1QTR FY 02
- FUE: 4QTR FY 02
- FIELDING: FORCE PACKAGE 1 & 2, INFANTRY & COMBAT ENGINEER UNITS

PROGRAM FOCUS

- PROVIDING A LIGHTWEIGHT, SHOULDER FIRED, GUIDED MISSILE CAPABLE OF DEFEATING:
  - EARTH AND TIMBER BUNKERS
  - LIGHT ARMORED VEHICLES
  - MASONRY STRUCTURES
- COMMON FLIGHT MODULE WITH USMC PREDATOR PROGRAM

POTENTIAL CONTRACT OPPORTUNITIES

GOVT TPOC: COL CHUCK JONES - (205) 876-7186

ITEM	AWARD DATE	CONTRACT TYPE	COMMENTS
LRIP	2QTR FY 01	FFP	SOLE SOURCE
PRODUCTION (OPTION)	2QTR FY 01	FFP	SOLE SOURCE

TMDE

ATSS
INTEGRATED FAMILY OF TEST EQUIPMENT
BASE SHOP TEST FACILITY (BSTF) ELECTRO -OPTICAL TEST FACILITY (EOTF)
SOLDIER PORTABLE ON-SYSTEM REPAIR TOOL (SPORT)
ELECTRONIC REPAIR SHELTER (ERS)

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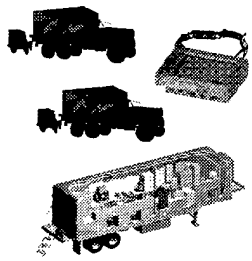

PROGRAM PHASES

- BSTF - PHASE III (PRODUCTION, FIELDING/DEPLOYMENT & OPERATIONAL SUPPORT (PFD&OS))
- EOTF - PHASE II (ENGINEERING AND MANUFACTURING DEVELOPMENT)
- SPORT - PHASE III PFD&OS
- ERS - PHASE III PFD&OS

PROGRAM FOCUS

- STANDARD AUTOMATIC TEST SUPPORT SYSTEMS (ATSS)
- FAULT ISOLATE AND REPAIR CAPABILITY FOR ALL LEVELS OF ARMY MAINTENANCE
- MOBILE ELECTRONIC REPAIR FACILITY TO SCREEN, REPAIR AND TEST PRINTED CIRCUIT BOARDS
- REDUCE ARMY O&S COSTS WITH MULTI-COMMODITY ATSS SOLUTIONS

POTENTIAL CONTRACT OPPORTUNITIES

GOVT TPOC LTC JAMES D. WARGO - (205) 955-6359

ITEM	AWARD DATE	CONTRACT TYPE	COMMENTS
S-280 C/G SHELTER	DEC 97	FFP	COMPETITIVE
ERS - PRODUCTION	NOV 97	FFP	8A SET ASIDE
SPORT- PRODUCTION	JAN 98	FFP	SOLE SOURCE (OPTION)
SOS TEST PROGRAM SET	MAR 98	FFP	8A SET ASIDE
ERS - PRODUCTION	DEC 98	FFP	SOLE SOURCE (OPTION)
EOTF - PRODUCTION	DEC 99	FFP	SOLE SOURCE (OPTION)

TEST EQUIPMENT MODERNIZATION (TEMOD)

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Typical of a LAN/ WAN Analyzer

PROGRAM PHASES

- PRE-CONTRACT AWARD
- USER AND MARKET SURVEY
- DRAFT SPECIFICATION

PROGRAM FOCUS

- PROVIDE TMDE TO SUPPORT MAINTENANCE OF ARMY MATERIAL
- MINIMIZE PROLIFERATION OF TMDE
- REDUCE ACQUISITION AND O&S COSTS

POTENTIAL CONTRACT OPPORTUNITIES

GOVT TPOC: WES MCELVEEN - (205) 955-6352

ITEM	AWARD DATE	CONTRACT TYPE	COMMENTS
LAN/WAN ANALYZER	FEB 99	FFP	COMPETITIVE
IDENTIFICATION FRIEND OR FOE TEST SET	FEB 99	FFP	SOLE SOURCE
SIGNAL GENERATOR	DEC 97	FFP	SOLE SOURCE
PITOT STATIC TEST SET	DEC 97	FFP	SOLE SOURCE

CALIBRATION SETS EQUIPMENT (CALSETS)

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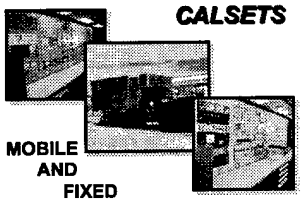

PROGRAM PHASES

- SUSTAINMENT
- TECHNOLOGY INSERTION
- FMS

PROGRAM FOCUS

- CALIBRATION AND REPAIR FOR ARMY TMDE
- DEPLOY IN MOBILE AND FIXED CONFIGURATIONS
- USE OF OFF-THE-SHELF HIGH PRECISION INSTRUMENTS
- DEFINE QUALITY FOR THE ARMY

POTENTIAL CONTRACT OPPORTUNITIES

GOVT TPOC: WES MCELVEEN - (205) 955-6352

ITEM	AWARD DATE	CONTRACT TYPE	COMMENTS
HYDRAULIC PRESSURE STDS	NOV 97	FFP	COMPETITIVE
INSTRUMENT CONTROLLERS	MAR 98	FFP	COMPETITIVE
ATTENUATOR CALIBRATORS	FEB 98	FFP	COMPETITIVE
VXI REPAIR WORKSTATIONS	MAR 98	FFP	COMPETITIVE
FREQUENCY COUNTERS	MAR 99	FFP	COMPETITIVE
PHOTONICS CALIBRATION STDS	MAR 99	FFP	COMPETITIVE
FUNCTION GENERATORS	MAY 99	FFP	COMPETITIVE
ELECTO OPTIC WORKSTATIONS	MAR 99	FFP	COMPETITIVE

AVIATION GROUND SUPPORT EQUIPMENT (AGSE)

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PROGRAM PHASES

- EXPLORATION
- DEVELOPMENTAL
- PRODUCTION
- FIELDING
- SUSTAINMENT

PROGRAM FOCUS

- REPLACE OBSOLETE UNSUPPORTABLE AVIATION GROUND SUPPORT EQUIPMENT
- ALL NEW EQUIPMENT WILL BE STANDARDIZED AND COMPATIBLE WITH ALL ARMY AIRCRAFT
- NEW EQUIPMENT WILL ENHANCE BATTLE DAMAGE REPAIR PROCEDURES

POTENTIAL CONTRACT OPPORTUNITIES

GOVT TPOC: MIKE TESI - (205) 842-8881

ITEM	AWARD DATE	CONTRACT TYPE	COMMENTS
AIRCRAFT CLEANING AND DEICING SYSTEM (ACDS)	JAN 99	FFP	COMPETITIVE
UNIT MAINTENANCE AERIAL RECOVERY KIT (UMARK)	MAR 99	FFP	COMPETITIVE

HAWK

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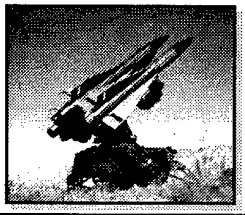

PROGRAM PHASES

- SUSTAINMENT
- FMS

PROGRAM FOCUS

- ENGINEERING SERVICES
- OBSOLESCENCE
- FMS
- PRIVATE VENTURE SUPPORT

POTENTIAL CONTRACT OPPORTUNITIES

GOVT TPOC: MAJ MARC SISK - (205) 842-9061

ITEM	AWARD DATE	CONTRACT TYPE	COMMENTS
PHASE III CONVERSION - SAUDI ARABIA	OCT 97 (EST)	FFP/CPFF	SOLE SOURCE
PHASE III CONVERSION - GREECE	MAR 98 (EST)	FFP/CPFF	SOLE SOURCE
SPECIAL REPAIR & RETURN - ISRAEL	JAN 98 (EST)	CPFF	SOLE SOURCE
SPECIAL REPAIR & RETURN - SAUDI ARABIA	MAR 98 (EST)	CPFF	SOLE SOURCE
MOD KITS - BAHRAIN	FEB 98 (EST)	FFP	SOLE SOURCE

DRAGON

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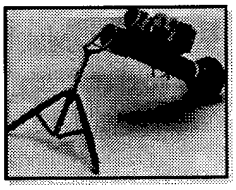

PROGRAM PHASES

PHASE III
- OPERATIONAL SUPPORT

PROGRAM FOCUS
- SUSTAIN OPERATIONAL CAPABILITY UNTIL JAVELIN REPLACEMENT
- APPLICATION OF SAFETY CIRCUIT TO EXISTING ROUNDS

POTENTIAL CONTRACT OPPORTUNITIES

GOVT TPOC: DANNY SNODGRASS - (205) 876-4179

ITEM	AWARD DATE	CONTRACT TYPE	COMMENTS
APPLICATION OF SAFETY CIRCUIT TO 3500 GEN II ROUNDS	2QTR / FY 98	FFP	SOLE SOURCE

GROUND TOW

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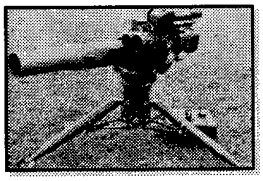

PROGRAM PHASES

PHASE III
- PRODUCTION
- OPERATIONAL SUPPORT

PROGRAM FOCUS
- MAINTAIN SYSTEM READINESS
- SUPPORT FMS CASES

POTENTIAL CONTRACT OPPORTUNITIES

GOVT TPOC: DANNY SNODGRASS - (205) 876-4179

ITEM	AWARD DATE	CONTRACT TYPE	COMMENTS
LAUNCHER/NIGHT SIGHT PRODUCTION (TAIWAN FMS)	3QTR / FY 98	FFP	COMPETITIVE
AT2 FTS AND SUPPORT EQUIPMENT (TAIWAN FMS)	1QTR / FY 98	FFP	SOLE SOURCE
AT2 FTS AND SUPPORT EQUIPMENT (TURKEY FMS)	1QTR / FY 98	FFP	SOLE SOURCE

SUMMARY

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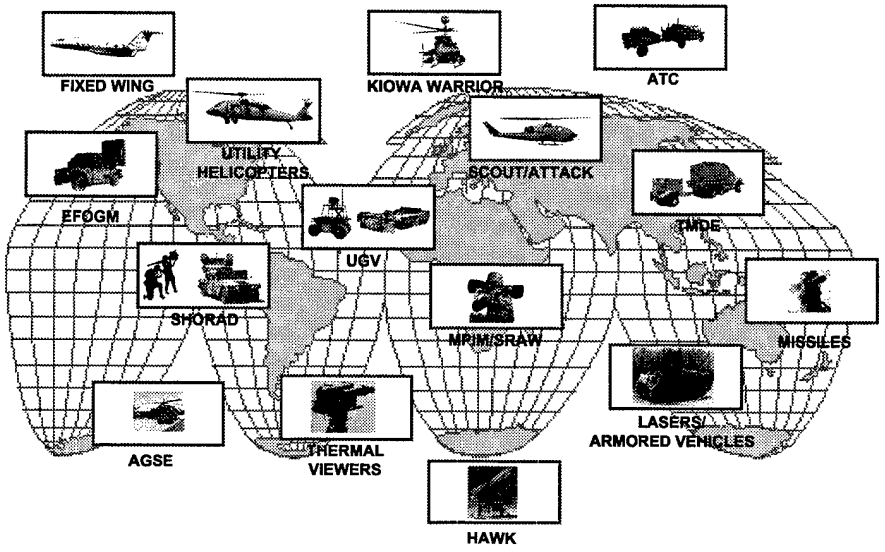
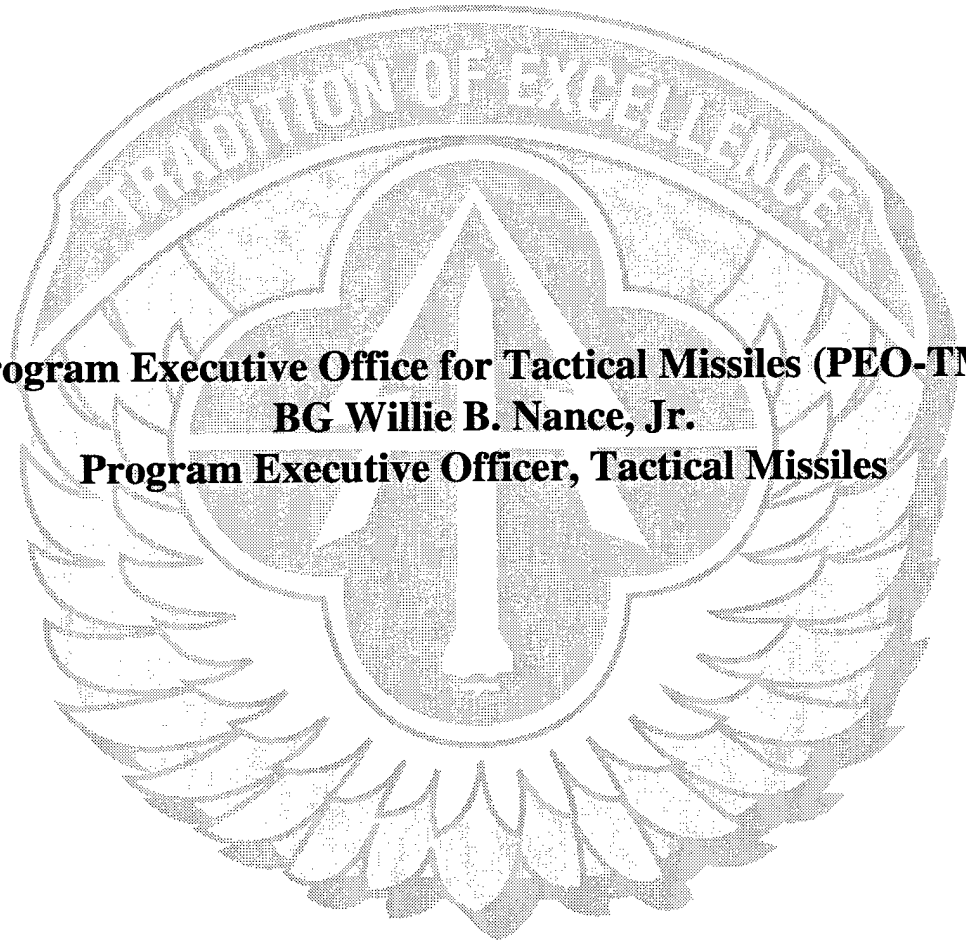
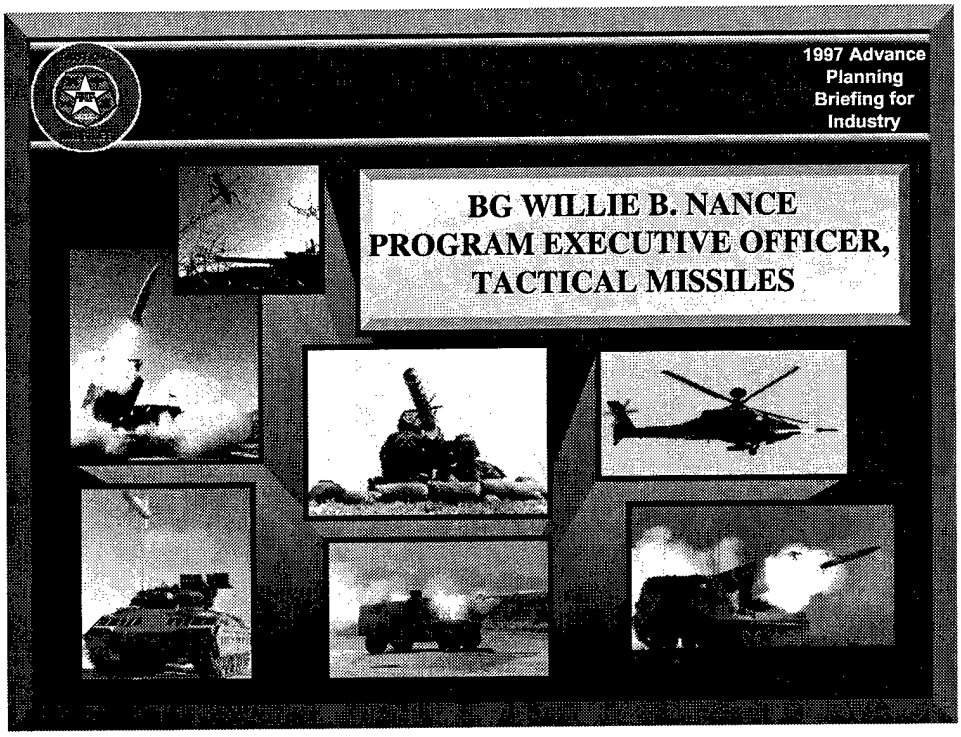
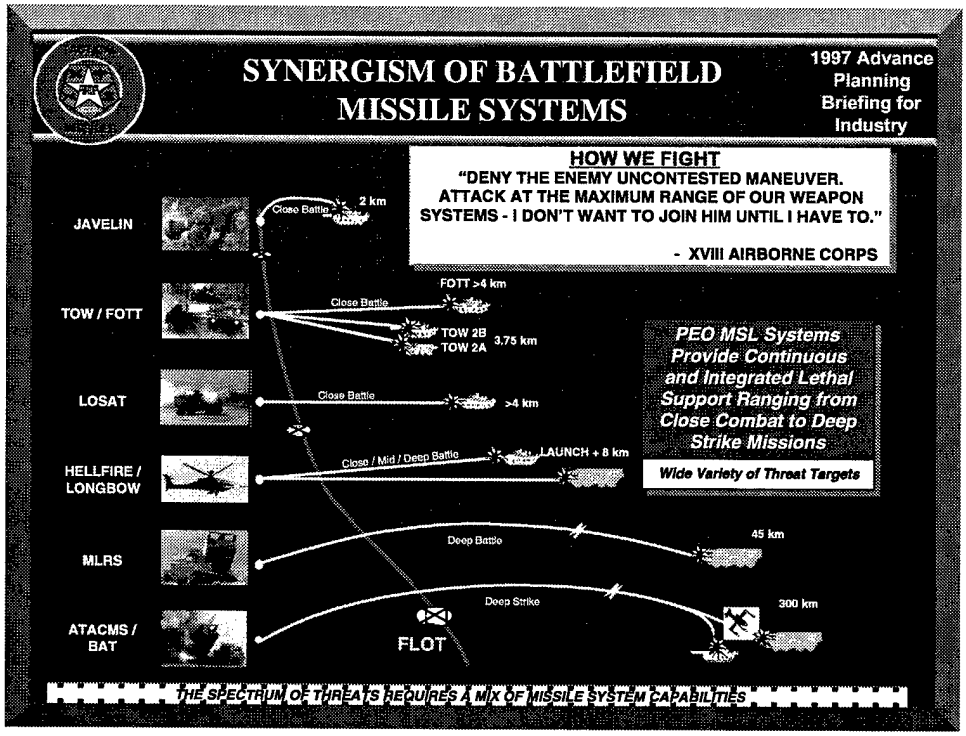


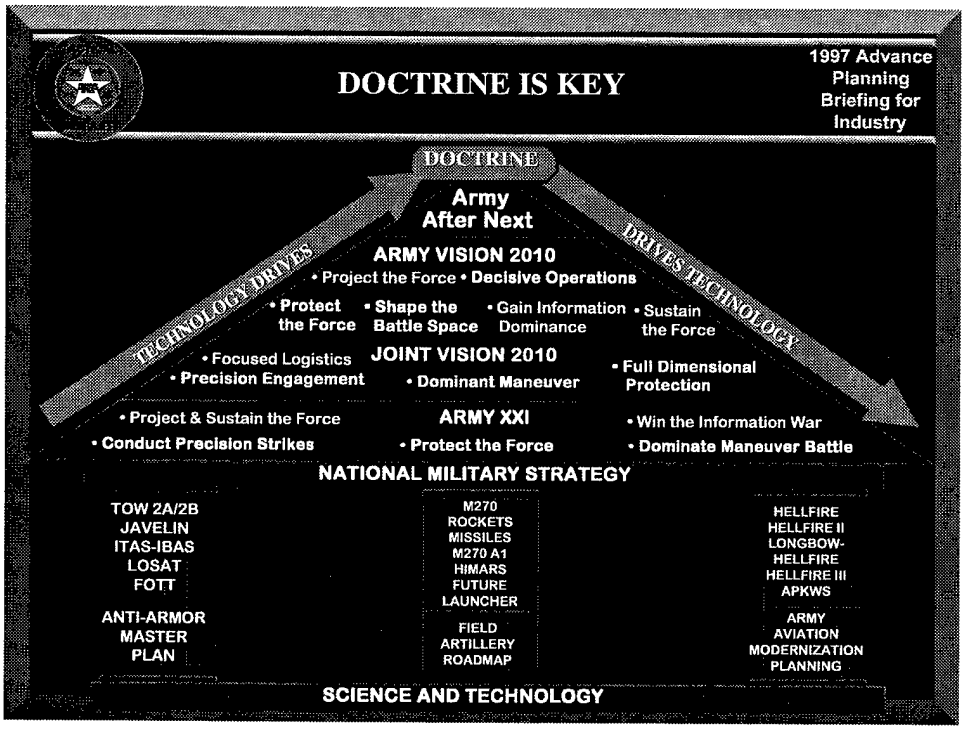


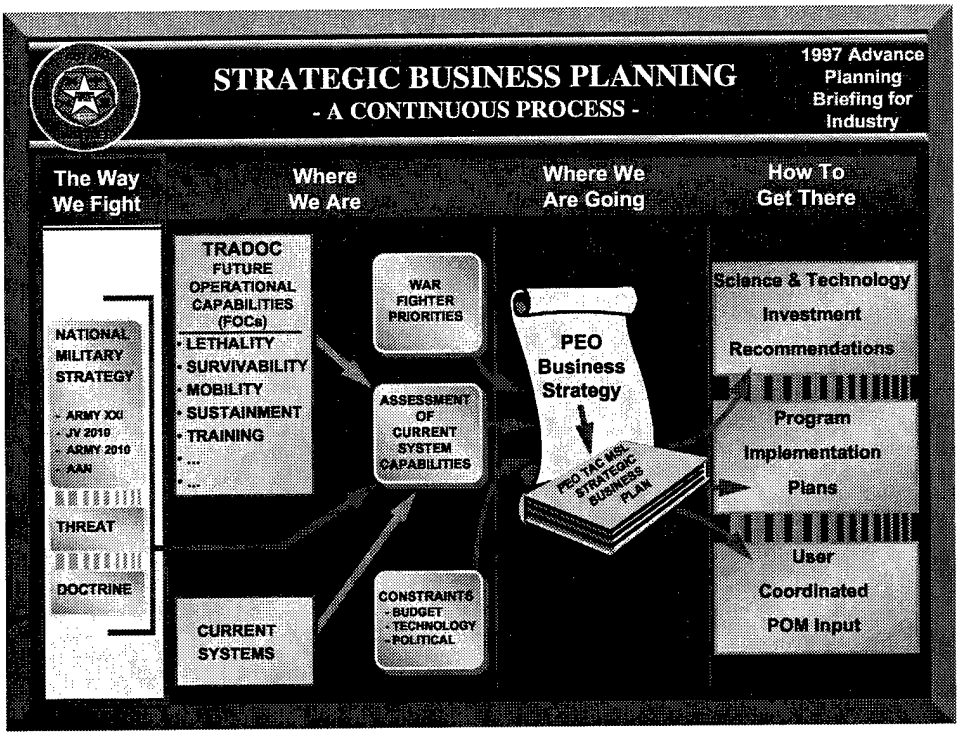
Program Executive Office for Tactical Missiles (PEO-TM)
BG Willie B. Nance, Jr.
Program Executive Officer, Tactical Missiles

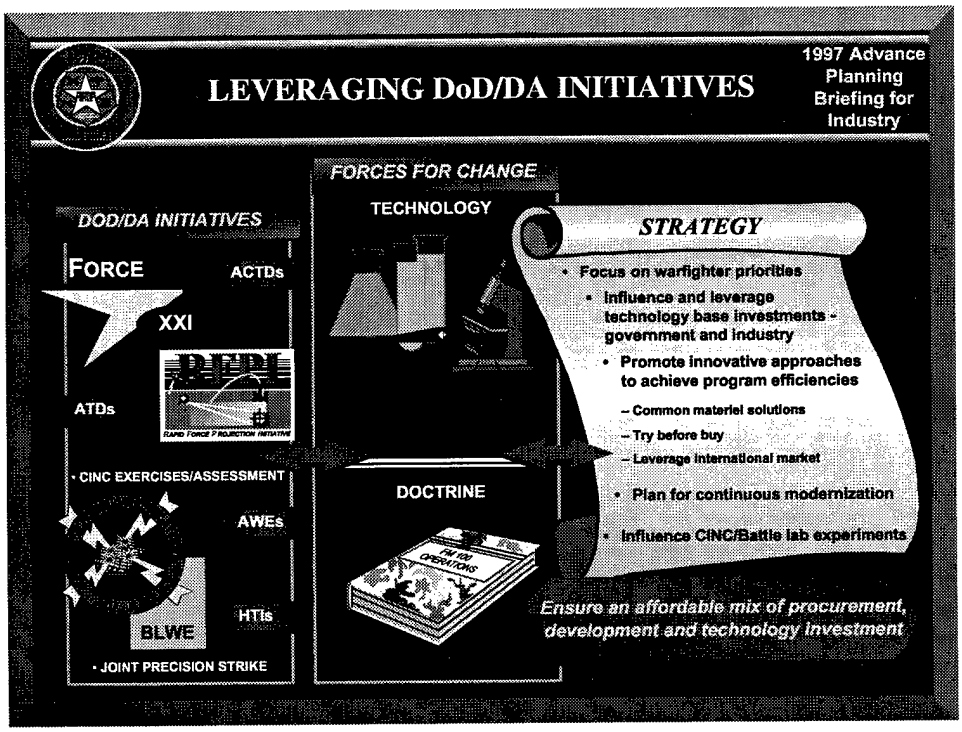

1997 Advance Planning Briefing for Industry
BG WILLIE B. NANCE
PROGRAM EXECUTIVE OFFICER,
TACTICAL MISSILES

PEO TACTICAL MISSILES
MISSION
1997 Advance Planning Briefing for Industry
Execute the duties of the Army Centralized Acquisition Manager for:
CLOSE COMBAT
JAVELIN
TOW
BRADLEY T2SS
ITAS
IBAS
FOTT
LOSAT
FIRE SUPPORT
LAUNCHER
MLRS ROCKETS
ARMY TACMS-BAT
AVIATION
HELLFIRE II
LONGBOW
MISSION ACCOMPLISHMENT INVOLVES CLOSE TEAM WORK WITH THE WARFIGHTERS, COMBAT DEVELOPERS, AND THE SCIENCE / TECHNOLOGY AND SUSTAINMENT CENTERS.


SYNERGISM OF BATTLEFIELD MISSILE SYSTEMS
1997 Advance Planning Briefing for Industry
HOW WE FIGHT
"DENY THE ENEMY UNCONTESTED MANEUVER. ATTACK AT THE MAXIMUM RANGE OF OUR WEAPON SYSTEMS - I DON'T WANT TO JOIN HIM UNTIL I HAVE TO."
- XVIII AIRBORNE CORPS
JAVELIN
Close Battle
2 km
TOW / FOTT
FOTT >4 km
Close Battle
TOW 2B
TOW 2A
3.75 km
LOSAT
Close Battle
>4 km
HELLFIRE / LONGBOW
Close / Mid / Deep Battle
LAUNCH + 8 km
PEO MSL Systems Provide Continuous and Integrated Lethal Support Ranging from Close Combat to Deep Strike Missions
Wide Variety of Threat Targets
MLRS
Deep Battle
45 km
ATACMS / BAT
Deep Strike
300 km
FLOT
THE SPECTRUM OF THREATS REQUIRES A MIX OF MISSILE SYSTEM CAPABILITIES


DOCTRINE IS KEY
1997 Advance Planning Briefing for Industry
DOCTRINE
Army After Next
ARMY VISION 2010
• Project the Force • Decisive Operations
• Protect the Force
• Shape the Battle Space
• Gain Information Dominance
• Sustain the Force
TECHNOLOGY DRIVES
DRIVES TECHNOLOGY
• Focused Logistics
• Precision Engagement
JOINT VISION 2010
• Dominant Maneuver
• Full Dimensional Protection
• Project & Sustain the Force
• Conduct Precision Strikes
ARMY XXI
• Protect the Force
• Win the Information War
• Dominate Maneuver Battle
NATIONAL MILITARY STRATEGY
TOW 2A/2B
JAVELIN
ITAS-IBAS
LOSAT
FOTT
ANTI-ARMOR MASTER PLAN
M270
ROCKETS
MISSILES
M270 A1
HIMARS
FUTURE LAUNCHER
FIELD ARTILLERY ROADMAP
HELLFIRE
HELLFIRE II
LONGBOW-HELLFIRE
HELLFIRE III
APKWS
ARMY AVIATION MODERNIZATION PLANNING
SCIENCE AND TECHNOLOGY


STRATEGIC BUSINESS PLANNING
- A CONTINUOUS PROCESS -
1997 Advance Planning Briefing for Industry
The Way We Fight
Where We Are
Where We Are Going
How To Get There
NATIONAL MILITARY STRATEGY
- ARMY XXI
- JV 2010
- ARMY 2010
- AAN
THREAT
DOCTRINE
TRADOC FUTURE OPERATIONAL CAPABILITIES (FOCs)
• LETHALITY
• SURVIVABILITY
• MOBILITY
• SUSTAINMENT
• TRAINING
• ...
• ...
CURRENT SYSTEMS
WAR FIGHTER PRIORITIES
ASSESSMENT OF CURRENT SYSTEM CAPABILITIES
CONSTRAINTS
- BUDGET
- TECHNOLOGY
- POLITICAL
PEO Business Strategy
PEO TAC MSL STRATEGIC BUSINESS PLAN
Science & Technology Investment Recommendations
Program Implementation Plans
User Coordinated POM Input


LEVERAGING DoD/DA INITIATIVES
1997 Advance Planning Briefing for Industry
FORCES FOR CHANGE
DOD/DA INITIATIVES
FORCE XXI
ACTDs
ATDs
• CINC EXERCISES/ASSESSMENT
AWEs
HTIs
BLWE
• JOINT PRECISION STRIKE
TECHNOLOGY
DOCTRINE
FM 100 OPERATIONS
STRATEGY
• Focus on warfighter priorities
• Influence and leverage technology base investments - government and industry
• Promote innovative approaches to achieve program efficiencies
– Common materiel solutions
– Try before buy
– Leverage international market
• Plan for continuous modernization
• Influence CINC/Battle lab experiments
Ensure an affordable mix of procurement, development and technology investment

PEO TACTICAL MISSILES MODERNIZATION PLAN

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CHALLENGES

- DEFENSE INDUSTRY MERGER / RESTRUCTURE
- DEVELOPING, PRODUCING, AND SUSTAINING 30 YEAR SYSTEMS
- CONTINUE THE EFFICIENCIES OF ACQUISITION REFORM
- MAINTAINING ACQUISITION WORKFORCE COMPETENCIES

PEO TACTICAL MISSILES VENDOR BASE

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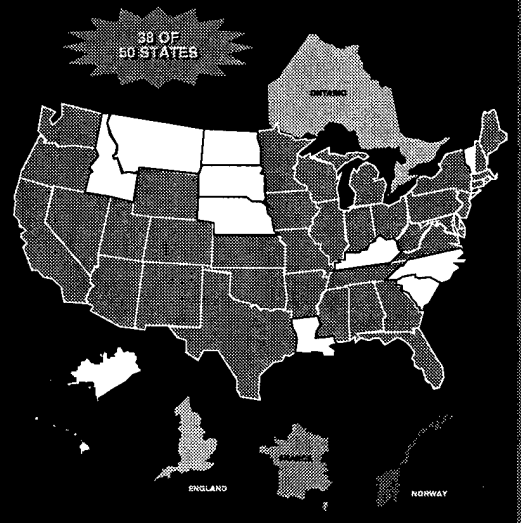
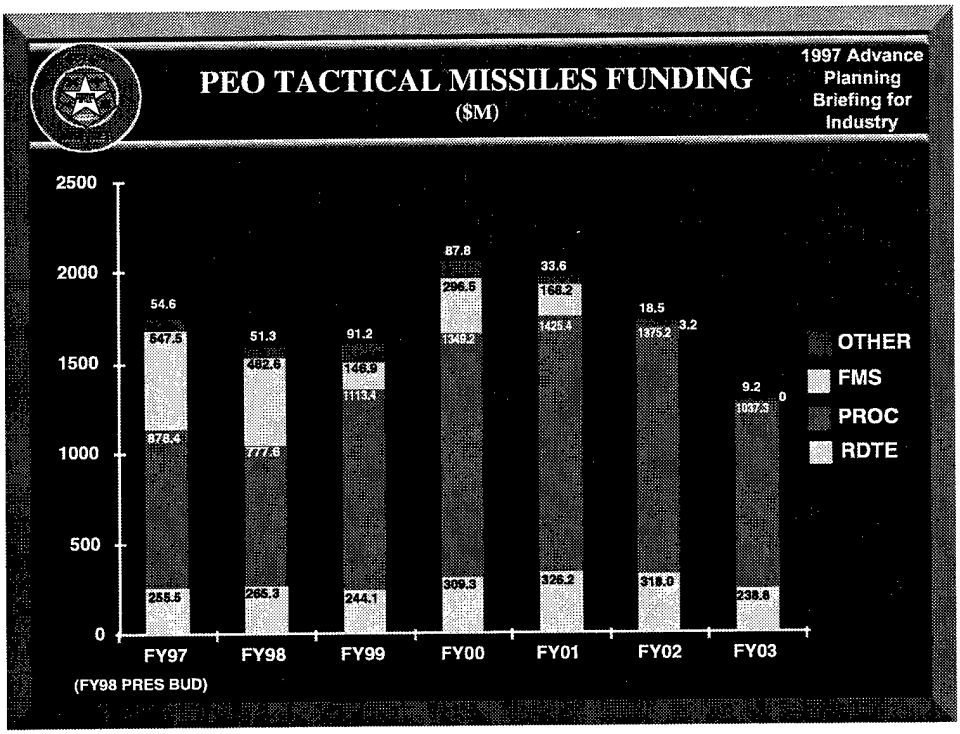
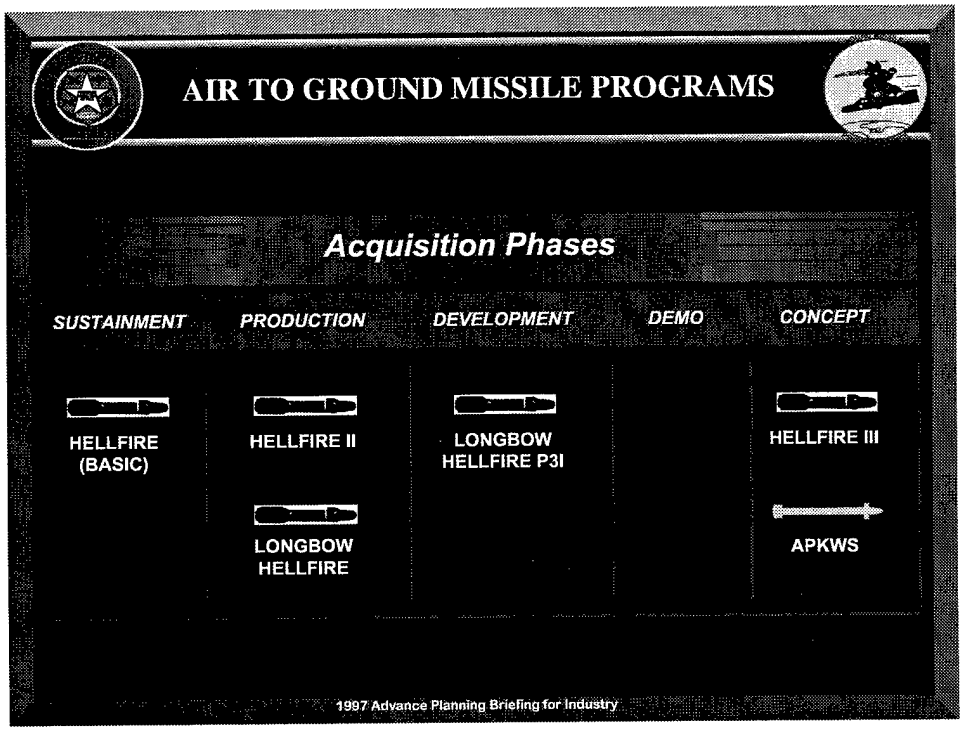
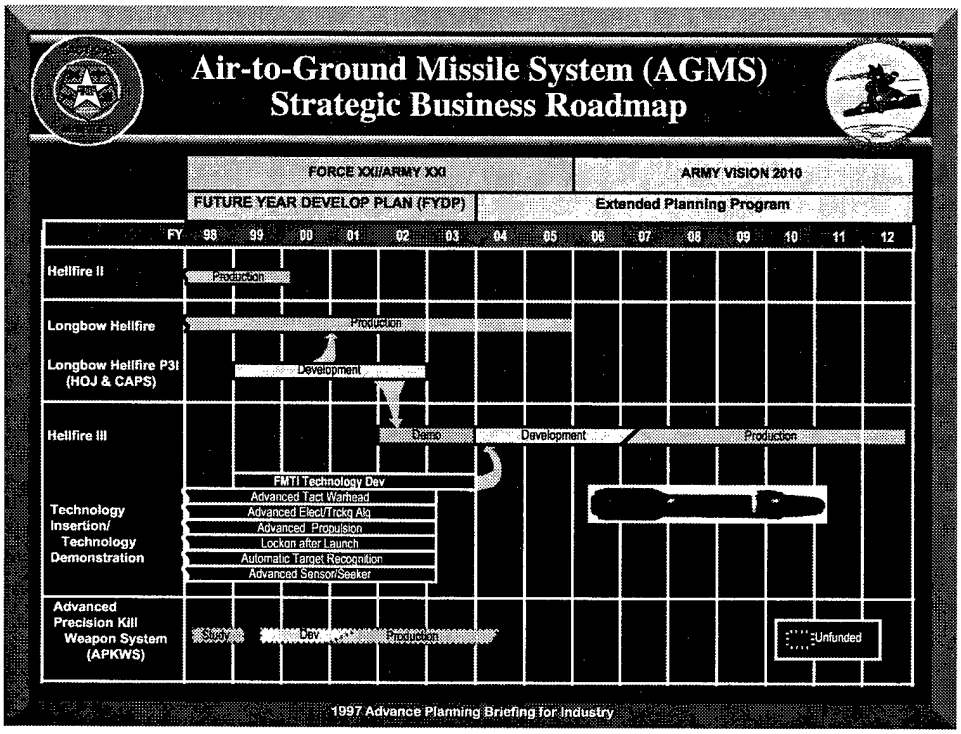
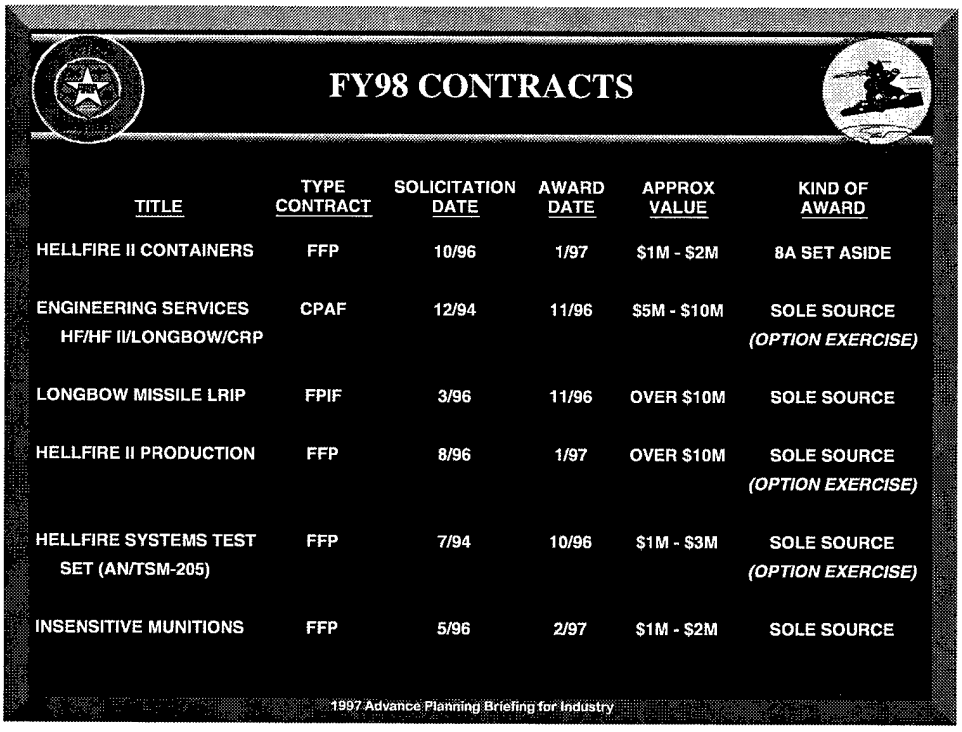
PRIME	SYSTEM	FY 98 WORK SHARE $(M)	%
HUGHES	TOW	1.0	< 1
RAYTHEON TI SYSTEMS	ITAS	62.3	7
JOINT VENTURE RAYTHEON TI SYSTEMS LOCKHEED MARTIN	JAVELIN	118.7	14
LOCKHEED MARTIN VOUGHT SYSTEMS	MLRS ARMY TACMS LOSAT	252.7	30
JOINT VENTURE LOCKHEED MARTIN BOEING	LASER HELLFIRE	3.0	< 1
JOINT VENTURE LOCKHEED MARTIN NORTHROP GRUMMAN	LONGBOW HELLFIRE	246.8	30
NORTHROP GRUMMAN	BAT P3I BAT	153.2	18
	TOTAL	837.7	100

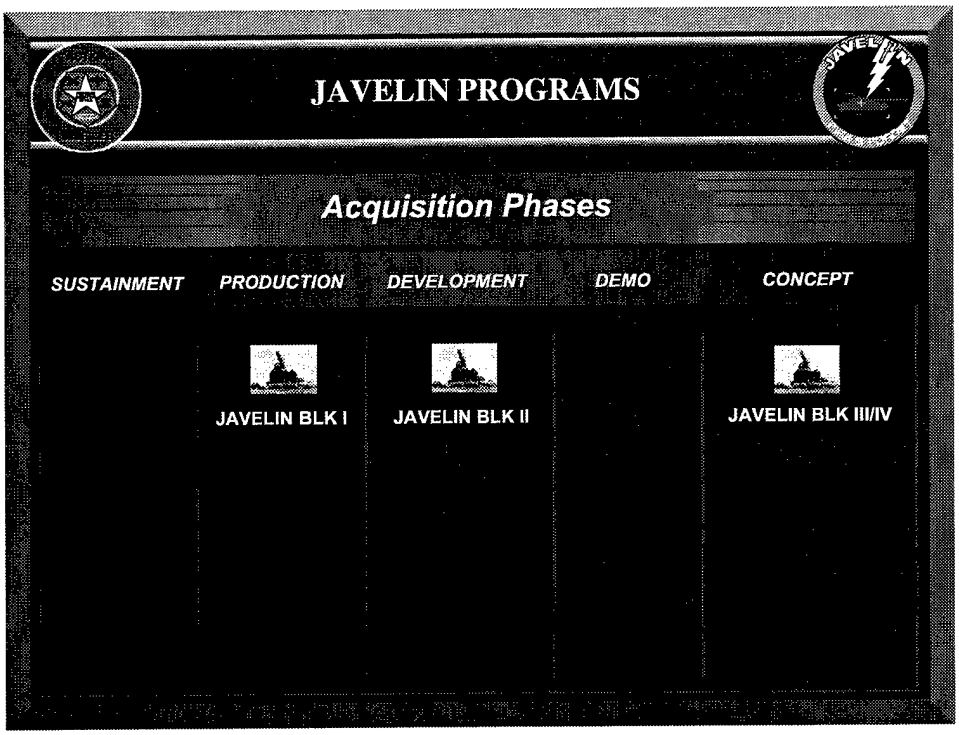


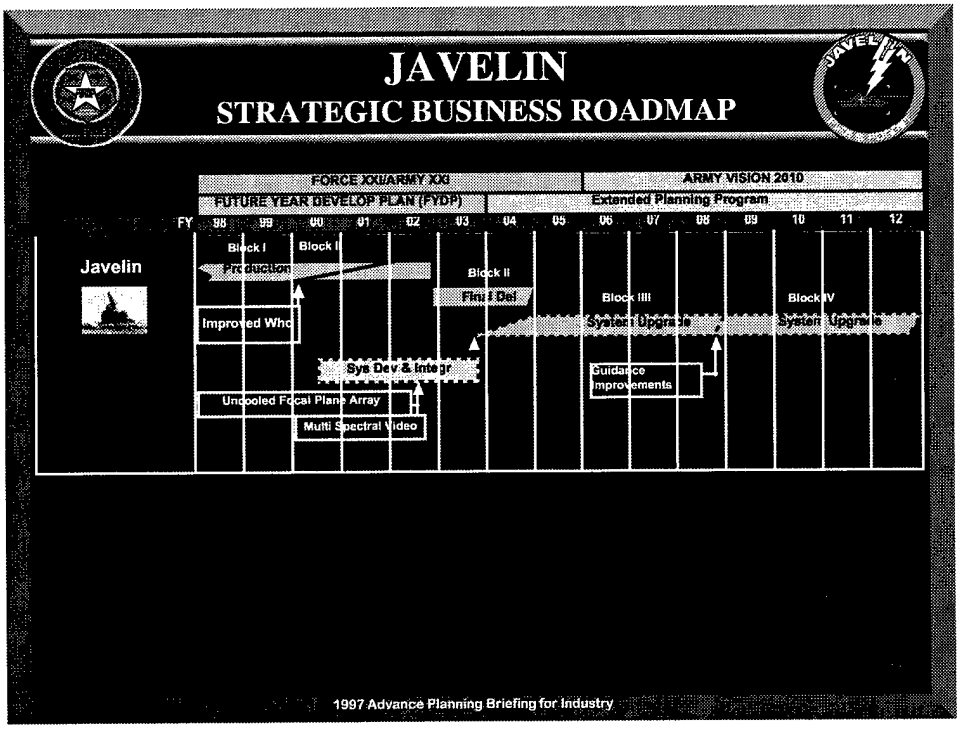

PEO TACTICAL MISSILES FUNDING
($M)
1997 Advance Planning Briefing for Industry
2500
2000
1500
1000
500
0
54.6
51.3
91.2
87.8
33.6
18.5
9.2
OTHER
FMS
PROC
RDTE
FY97
FY98
FY99
FY00
FY01
FY02
FY03
(FY98 PRES BUD)


AIR TO GROUND MISSILE PROGRAMS
Acquisition Phases
SUSTAINMENT
PRODUCTION
DEVELOPMENT
DEMO
CONCEPT
HELLFIRE (BASIC)
HELLFIRE II
LONGBOW HELLFIRE
LONGBOW HELLFIRE P3I
HELLFIRE III
APKWS
1997 Advance Planning Briefing for Industry


Air-to-Ground Missile System (AGMS)
Strategic Business Roadmap
FORCE XXI/ARMY XXI
ARMY VISION 2010
FUTURE YEAR DEVELOP PLAN (FYDP)
Extended Planning Program
FY 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12
Hellfire II
Production
Longbow Hellfire
Production
Longbow Hellfire P3I (HOJ & CAPS)
Development
Hellfire III
Demo
Development
Production
Technology Insertion/ Technology Demonstration
FMTI Technology Dev
Advanced Tact Warhead
Advanced Elect/Trckg Alg
Advanced Propulsion
Lockon after Launch
Automatic Target Recognition
Advanced Sensor/Seeker
Advanced Precision Kill Weapon System (APKWS)
Study
Dev
Production
Unfunded
1997 Advance Planning Briefing for Industry


FY98 CONTRACTS
TITLE
TYPE CONTRACT
SOLICITATION DATE
AWARD DATE
APPROX VALUE
KIND OF AWARD
HELLFIRE II CONTAINERS
FFP
10/96
1/97
$1M - $2M
8A SET ASIDE
ENGINEERING SERVICES HF/HF II/LONGBOW/CRP
CPAF
12/94
11/96
$5M - $10M
SOLE SOURCE (OPTION EXERCISE)
LONGBOW MISSILE LRIP
FPIF
3/96
11/96
OVER $10M
SOLE SOURCE
HELLFIRE II PRODUCTION
FFP
8/96
1/97
OVER $10M
SOLE SOURCE (OPTION EXERCISE)
HELLFIRE SYSTEMS TEST SET (AN/TSM-205)
FFP
7/94
10/96
$1M - $3M
SOLE SOURCE (OPTION EXERCISE)
INSENSITIVE MUNITIONS
FFP
5/96
2/97
$1M - $2M
SOLE SOURCE
1997 Advance Planning Briefing for Industry


JAVELIN PROGRAMS
Acquisition Phases
SUSTAINMENT
PRODUCTION
DEVELOPMENT
DEMO
CONCEPT
JAVELIN BLK I
JAVELIN BLK II
JAVELIN BLK III/IV


JAVELIN
STRATEGIC BUSINESS ROADMAP
FORCE XXI/ARMY XXI
ARMY VISION 2010
FUTURE YEAR DEVELOP PLAN (FYDP)
Extended Planning Program
FY 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12
Javelin
Block I
Block I
Production
Block II
Block III
Block IV
Improved Whd
Sys Dev & Integr
Guidance Improvements
Uncooled Focal Plane Array
Multi Spectral Video
1997 Advance Planning Briefing for Industry

FY98 CONTRACTS

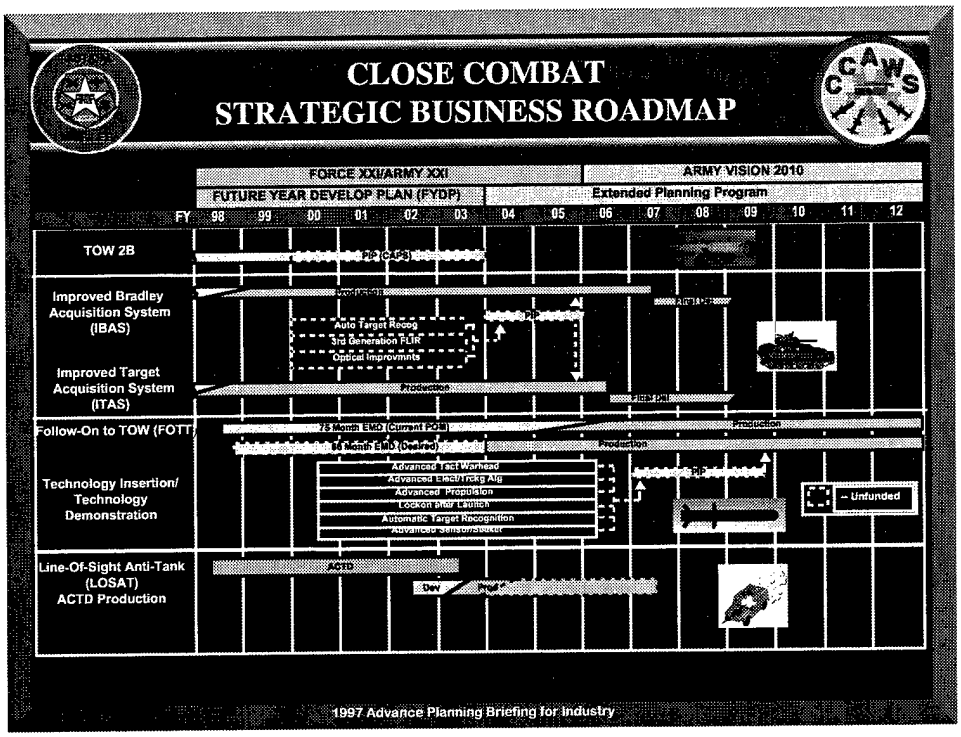
TITLE	CONTRACT TYPE	RFP RELEASE DATE	AWARD DATE	APPROX VALUE	KIND OF AWARD
ENGINEERING SERVICES	CPAF	19 JUN 97	15 NOV 97	$5.1M	SOLE SOURCE
INTERIM CONTRACTOR SUPPORT/CONTRACTOR SUPPORT	CPIF	17 MAR 97	01 OCT 97	$6.6M	SOLE SOURCE
SYSTEM ENGINEERING AND TECHNICAL SUPPORT	CPFF	01 AUG 97	30 NOV 97	$0.7M	8A
MULTIYEAR CONTRACT	FFP	N/A	31 DEC 97	$157.8M	SOLE SOURCE
ALTERNATE WARHEAD CONTRACT	CPIF	N/A	31 DEC 97	$4.7M	SOLE SOURCE

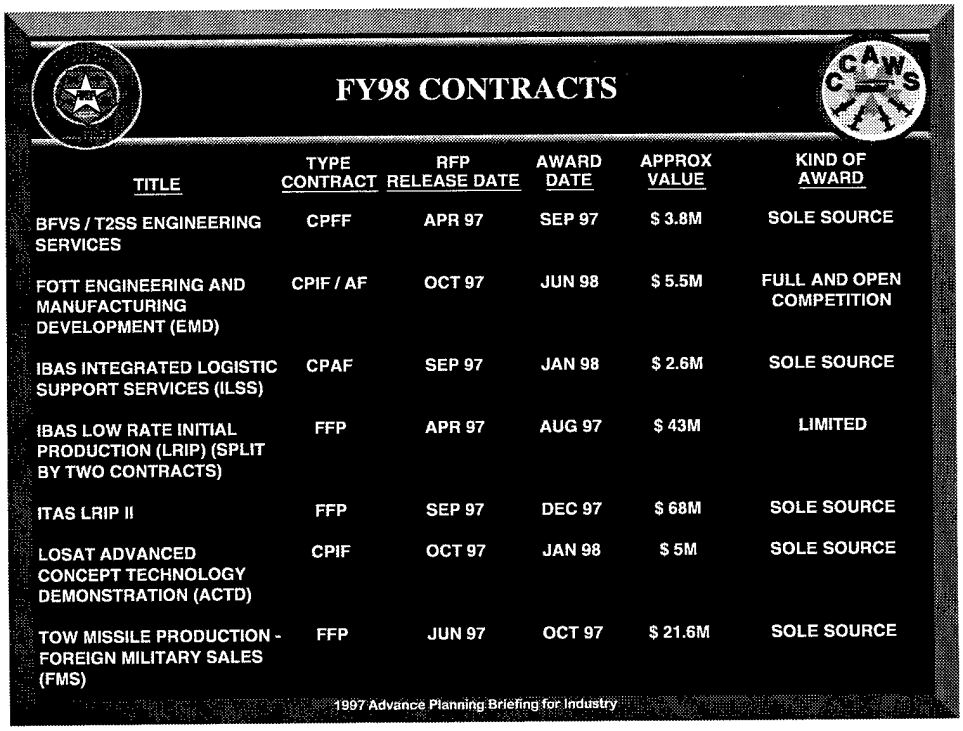
1997 Advance Planning Briefing for Industry

CCAWS PROGRAMS

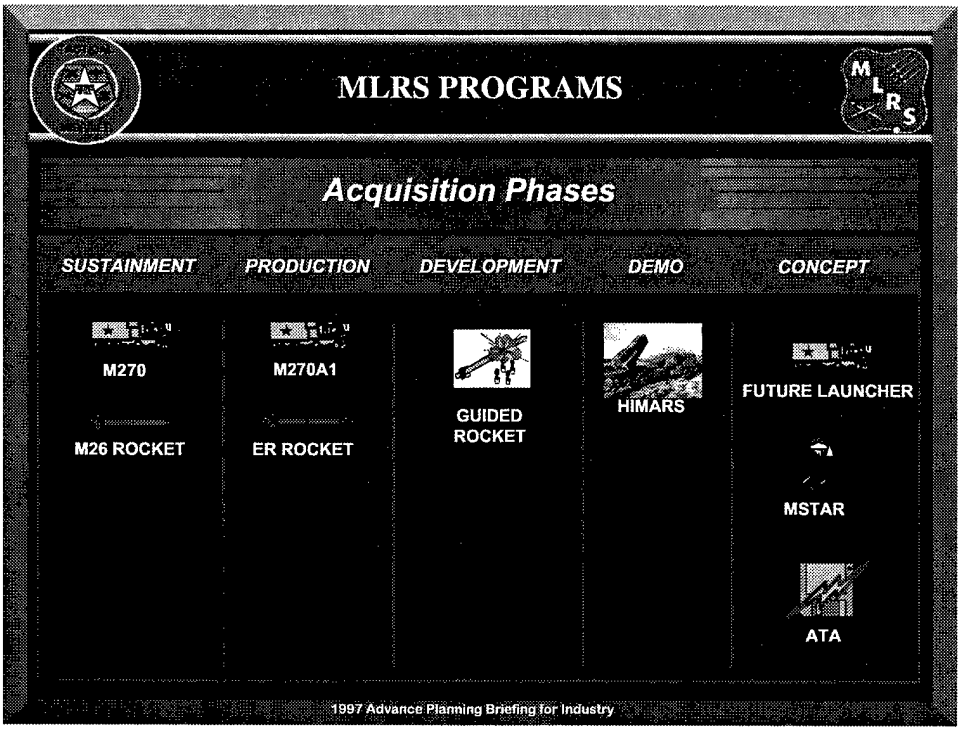
Acquisition Phases

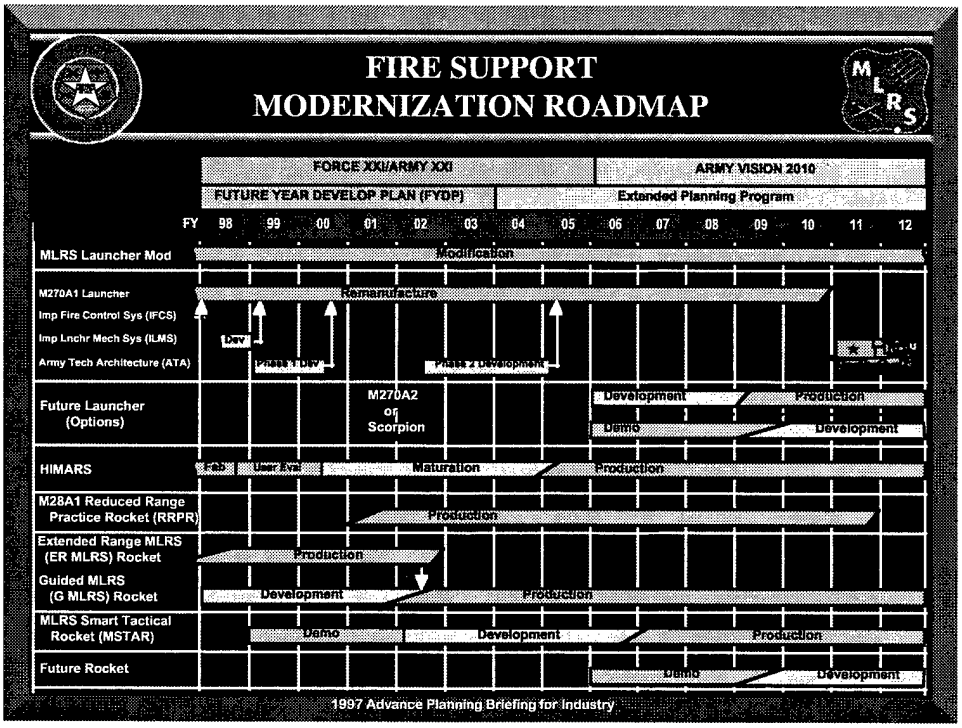
SUSTAINMENT	PRODUCTION	DEVELOPMENT	DEMO	CONCEPT
TOW 2A	TOW 2B	IBAS	LOSAT	
	ITAS		FOTT	





TITLE	TYPE CONTRACT	RFP RELEASE DATE	AWARD DATE	APPROX VALUE	KIND OF AWARD
BFVS / T2SS ENGINEERING SERVICES	CPFF	APR 97	SEP 97	$ 3.8M	SOLE SOURCE
FOTT ENGINEERING AND MANUFACTURING DEVELOPMENT (EMD)	CPIF / AF	OCT 97	JUN 98	$ 5.5M	FULL AND OPEN COMPETITION
IBAS INTEGRATED LOGISTIC SUPPORT SERVICES (ILSS)	CPAF	SEP 97	JAN 98	$ 2.6M	SOLE SOURCE
IBAS LOW RATE INITIAL PRODUCTION (LRIP) (SPLIT BY TWO CONTRACTS)	FFP	APR 97	AUG 97	$ 43M	LIMITED
ITAS LRIP II	FFP	SEP 97	DEC 97	$ 68M	SOLE SOURCE
LOSAT ADVANCED CONCEPT TECHNOLOGY DEMONSTRATION (ACTD)	CPIF	OCT 97	JAN 98	$ 5M	SOLE SOURCE
TOW MISSILE PRODUCTION - FOREIGN MILITARY SALES (FMS)	FFP	JUN 97	OCT 97	$ 21.6M	SOLE SOURCE


MLRS PROGRAMS
Acquisition Phases
SUSTAINMENT
PRODUCTION
DEVELOPMENT
DEMO
CONCEPT
M270
M270A1
M26 ROCKET
ER ROCKET
GUIDED ROCKET
HIMARS
FUTURE LAUNCHER
MSTAR
ATA
1997 Advance Planning Briefing for Industry


FIRE SUPPORT
MODERNIZATION ROADMAP
FORCE XXI/ARMY XXI
ARMY VISION 2010
FUTURE YEAR DEVELOP PLAN (FYDP)
Extended Planning Program
FY 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12
MLRS Launcher Mod
Modification
M270A1 Launcher
Remanufacture
Imp Fire Control Sys (IFCS)
Imp Lnchr Mech Sys (ILMS)
Army Tech Architecture (ATA)
Future Launcher (Options)
M270A2 or Scorpion
Development
Production
Demo
Development
HIMARS
Maturation
Production
M28A1 Reduced Range Practice Rocket (RRPR)
Production
Extended Range MLRS (ER MLRS) Rocket
Production
Guided MLRS (G MLRS) Rocket
Development
Production
MLRS Smart Tactical Rocket (MSTAR)
Demo
Development
Production
Future Rocket
Demo
Development
1997 Advance Planning Briefing for Industry

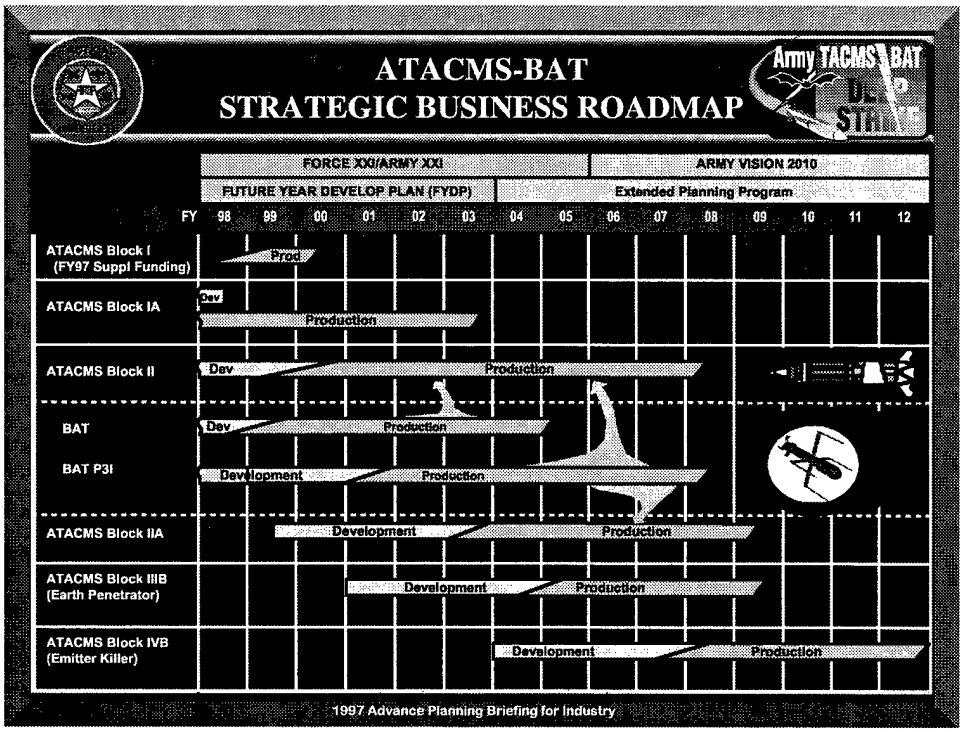
FY98 CONTRACTS

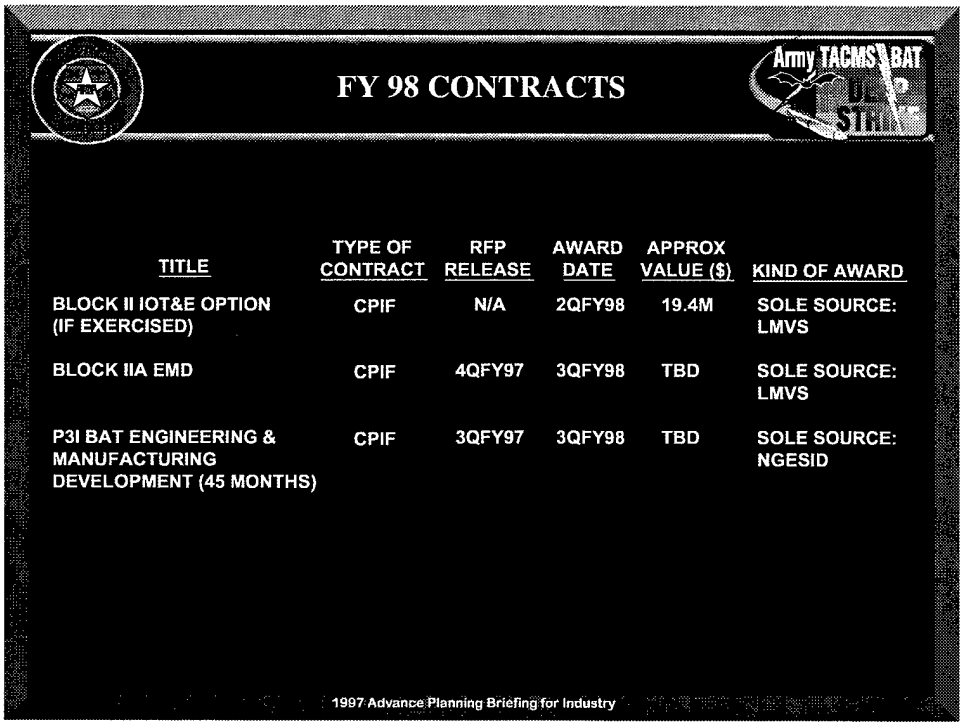
TITLE	TYPE CONTRACT	RFP RELEASE DATE	AWARD DATE	APPROX VALUE	KIND OF AWARD
MLRS LAUNCHER	CPFF	N/A	MAR 98	$ 1.08	SOLE SOURCE/ LMVS
HIMARS ACTD INC FND	CPIF	N/A	JAN 98	$ 3.4	SOLE SOURCE/ LMVS
M270A1 KITS (IFCS)	FFP	10 JUL 97	JAN 98	$32.5	SOLE SOURCE/ LMVS
M270A1 KITS (ILMS)	FFP	N/A	JUL 98	$ 35.7	SOLE SOURCE/ LMVS
GUIDED MLRS	CPIF	30 AUG 97	FEB 98	$ 136.0	SOLE SOURCE/ LMVS
FDDM INTG OPTION	CPFF	N/A	FEB 98	$ 2.2	SOLE SOURCE/ TEC MASTERS
ARMY TECH ARCHITEC	CPIF	30 SEP 97	FEB 98	$ 5.0	SOLE SOURCE/ LMVS
ENGINEERING SVCS	CPFF	01 NOV 97	APR 98	$ 16.0	SOLE SOURCE/ LMVS

ATACMS-BAT PROGRAMS

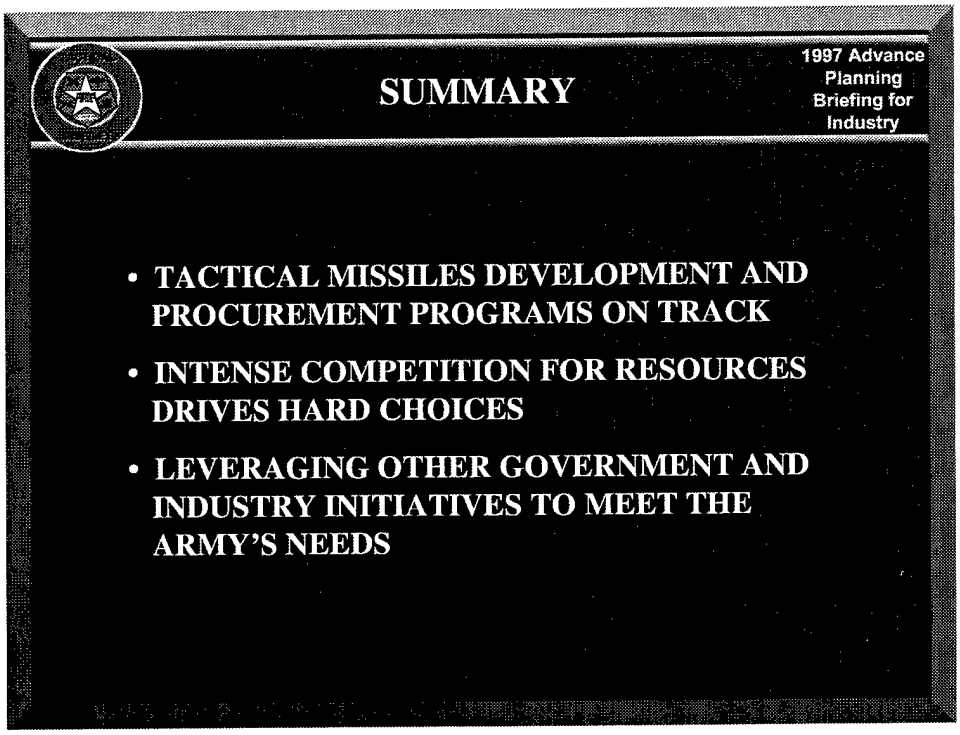
Acquisition Phases

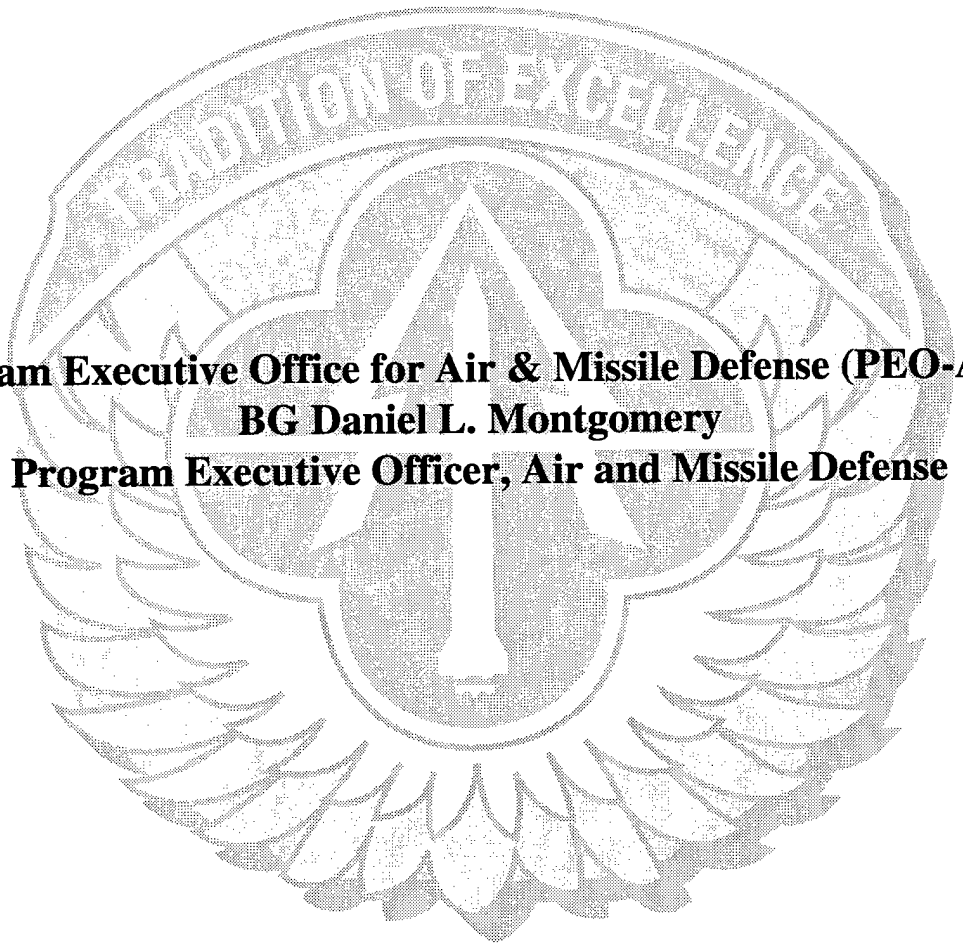
SUSTAINMENT	*PRODUCTION*	*DEVELOPMENT*	*DEMO*	*CONCEPT*
ATACMS BLK I	ATACMS BLK IA	ATACMS BLK II		ATACMS BLK IIA/IIIB/IVB
	M28AI RRPR	BAT/P3I BAT		FUTURE ROCKET





TITLE	TYPE OF CONTRACT	RFP RELEASE	AWARD DATE	APPROX VALUE ($)	KIND OF AWARD
BLOCK II IOT&E OPTION (IF EXERCISED)	CPIF	N/A	2QFY98	19.4M	SOLE SOURCE: LMVS
BLOCK IIA EMD	CPIF	4QFY97	3QFY98	TBD	SOLE SOURCE: LMVS
P3I BAT ENGINEERING & MANUFACTURING DEVELOPMENT (45 MONTHS)	CPIF	3QFY97	3QFY98	TBD	SOLE SOURCE: NGESID


SUMMARY
1997 Advance Planning Briefing for Industry
• TACTICAL MISSILES DEVELOPMENT AND PROCUREMENT PROGRAMS ON TRACK
• INTENSE COMPETITION FOR RESOURCES DRIVES HARD CHOICES
• LEVERAGING OTHER GOVERNMENT AND INDUSTRY INITIATIVES TO MEET THE ARMY'S NEEDS



Program Executive Office for Air & Missile Defense (PEO-AMD)
BG Daniel L. Montgomery
Program Executive Officer, Air and Missile Defense

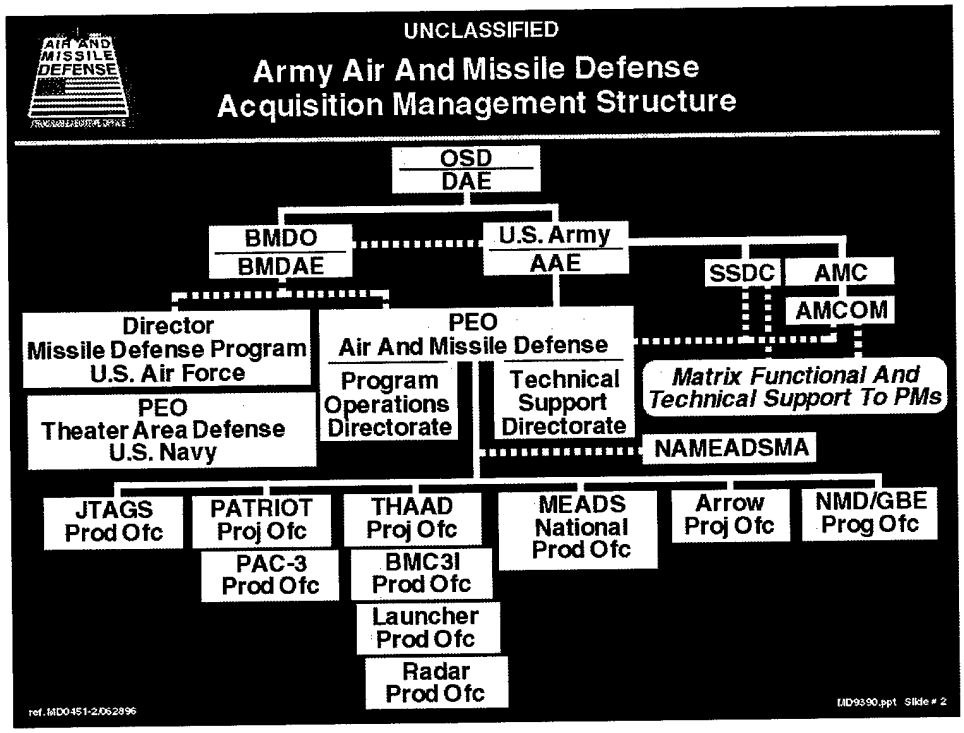
UNCLASSIFIED

1997
ADVANCE PLANNING BRIEFING FOR INDUSTRY

AIR AND MISSILE DEFENSE
PROGRAM EXECUTIVE OFFICE

PRESENTED BY
MR. A.Q. OLDACRE
PROGRAM EXECUTIVE OFFICE AIR AND MISSILE DEFENSE

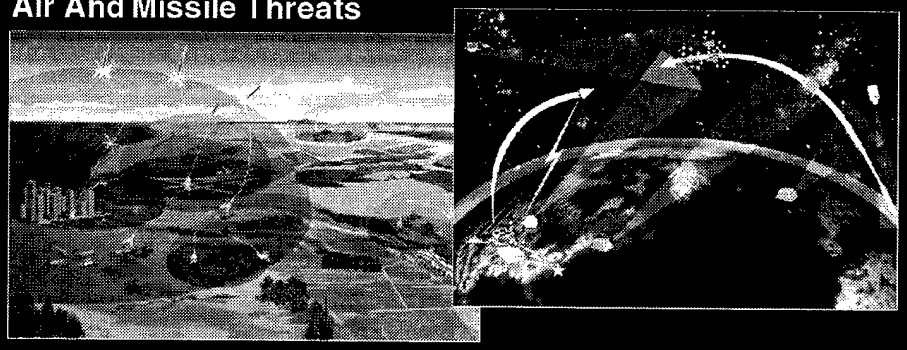
UNCLASSIFIED



UNCLASSIFIED

Mission

The Program Executive Office For Air And Missile Defense Develops, Integrates, Acquires, And Fields Quality Air And Missile Defense Systems To Defeat All Current And Future Air And Missile Threats



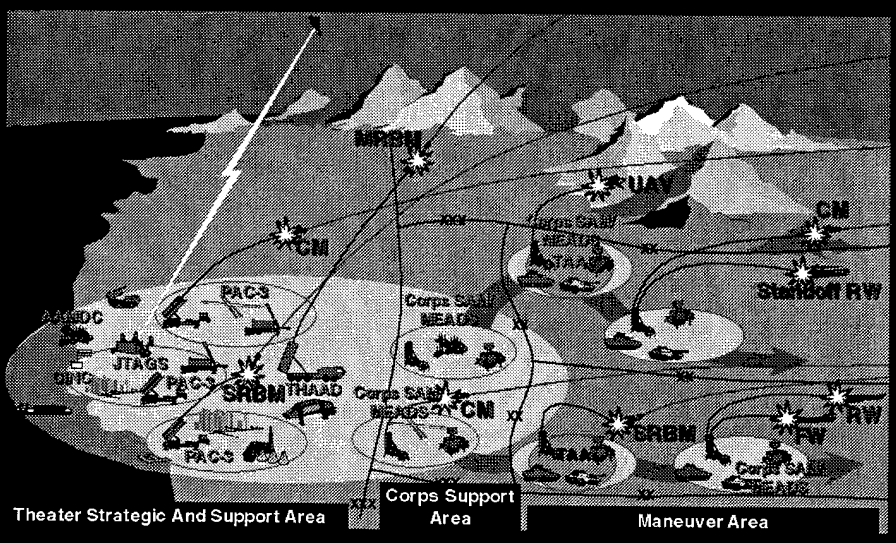
Protecting The Force. . .And The Nation

Ref. MD9298

MD9390.ppt Slide # 3

UNCLASSIFIED

Army Air And Missile Defense Objective Architecture



Ref. MD0825a

MD9390.ppt Slide # 4

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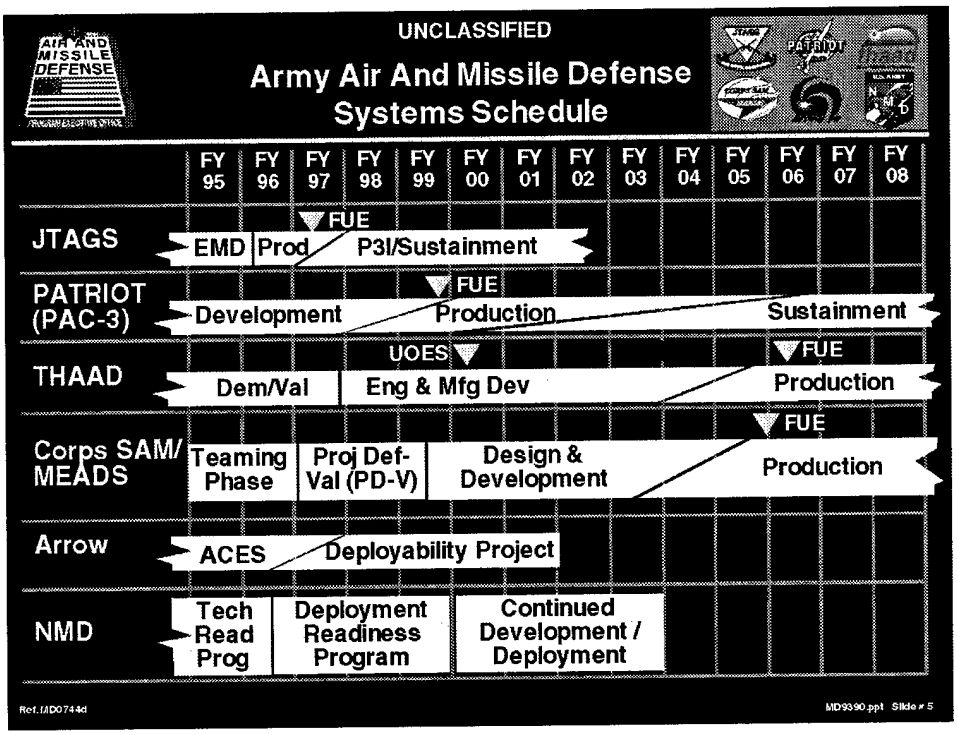
Army Air And Missile Defense Systems Schedule



Ref. MD0744d

MD9390.ppt Slide # 5

UNCLASSIFIED

Key Upcoming Events

- PAC-3 EMD Control Flight Test 1 (September 1997)
- PAC-3 Longlead LRIP Contract Award (October 1997)
- Dem/Val Flight Test 8 (December 1997)
- SBIRS P3I Startup (Fiscal Year 1998)
- Initiate D&D Phase MOU (September 1997)
- Downselect To One Contractor (December 1998)
- Arrow II Intercept Flight Test 4 (December 1997)
- Integrated Flight Test 2 (January 1998)
- EKV Downselect (April 1999)

Ref. MD5441c

MD9390.ppt Slide # 6

UNCLASSIFIED

PATRIOT

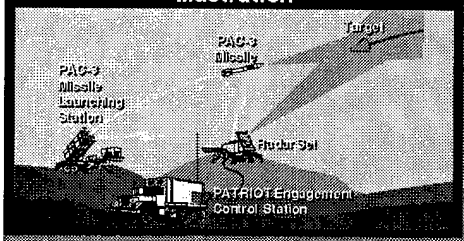
COL Stephen J. Kuffner
Project Manager

MD9390.ppt Slide # 7

UNCLASSIFIED

PATRIOT (PAC-3)

Illustration



Objective

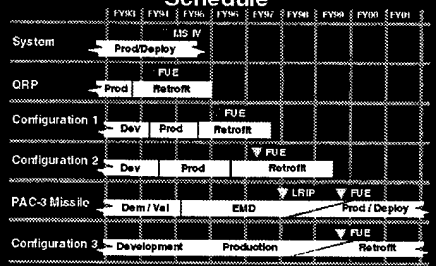
- Provide System Enhancements That Fully Respond To PAC-3 ORD Requirements
- Incrementally Satisfy ORD Requirements Through Phased Fielding Of System Enhancements
- Constitute Lower Tier Of Two Tiered TBM Defense
- Provide PATRIOT 8 Fold Volume Increase Over Desert Storm PAC-2 System

Status

- EMD Contract 68% Complete; FUE... July 1999
- Configuration 2 (PAC-3) Mods Being Fielded
- PAC-3 Flight Tests Begin September 1997
- Integrated Diagnostic Support System (IDSS)
  - Factory To Foxhole Connectivity... Diagnostic/Repair Expert Anywhere, Anytime
  - Development Ongoing/System Procurement Unfunded

Ref. MD0003ab

Schedule



MD9390.ppt Slide # 8

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Contracting Opportunity

Contracting Opportunity
Remote Launch/Communications Enhancement Upgrade (LPA)

Estimated Value
$16M–$20M....FY98 Basic
$30M–$35M....FY99 Option I
$13M–$15M....FY00 Option II

Contract Point Of Contact
Valeta Crandall (205-876-1109)
Dan Beck (205-955-3576)

Contract Type
FFP

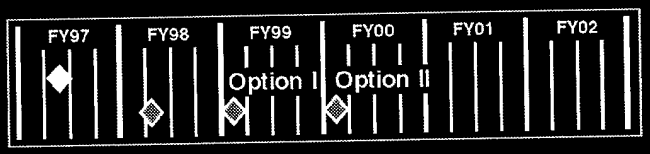
Kind Of Award
Sole Source

Program Description
Information Coordination Controls (ICCs), Engagement Control Station (ECS), Communications Relay Groups (CRGs) Upgrade Kits. CRG Shelters And Antenna Mast Groups (AMGs).

Contractor
Raytheon Company

Contractor Point Of Contact
Jeff Hamel (617-274-4082)

▲ Issue Draft RFP
◆ Issue Solicitation
◈ Contract Award



MD9390.ppt Slide # 9

UNCLASSIFIED

Contracting Opportunity

Contracting Opportunity
Radar Enhancement Phase III

Estimated Value
$34M–$37M....FY98 Basic
$34M–$37M....FY99 Option I
$34M–$37M....FY00 Option II

Contract Point Of Contact
Valeta Crandall (205-876-1109)
Jim Pope (205-955-3576)

Contract Type
FFP

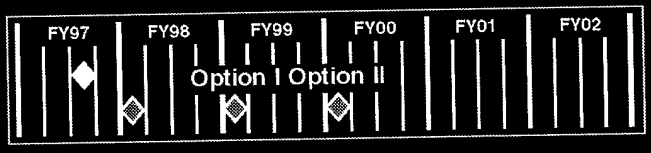
Kind Of Award
Sole Source

Program Description
Modification Kits With Installation. Basic Requirements Plus Two Options.

Contractor
Raytheon Company

Contractor Point Of Contact
Dick Conti (617-274-3051)

▲ Issue Draft RFP
◆ Issue Solicitation
◈ Contract Award



MD9390.ppt Slide # 10

UNCLASSIFIED

Contracting Opportunity

PATRIOT

Contracting Opportunity
Classification, Discrimination And Identification 3 (CDI-3)

Estimated Value
$24M–$26M....FY98 Basic
$12M–$14M....FY99 Option I
$12M–$14M....FY00 Option II

Contract Point Of Contact
Valeta Crandall (205-876-1109)
Jim Pope (205-955-3575)

Contract Type
FFP

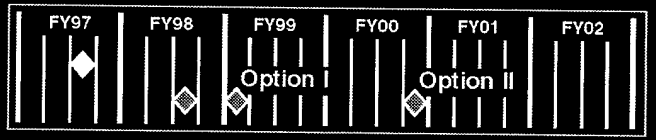
Kind Of Award
Sole Source

Program Description
CDI-3 Modification Kits With Installation.

Contractor
Raytheon Company

Contractor Point Of Contact
Bob Smith (617-274-3010)

▲ Issue Draft RFP
Issue Solicitation
◈ Contract Award



MD9390.ppt Slide # 11

UNCLASSIFIED

Contracting Opportunity

PATRIOT

Contracting Opportunity
FY98 Engineering Services

Estimated Value
$70M–$80M
$60M–$70M Option

Contract Point Of Contact
Valeta Crandall (205-876-1109)
Dennis Day (205-955-2378)

Contract Type
CPAF

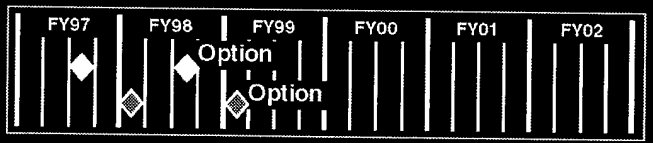
Kind Of Award
Sole Source

Program Description
Level Of Effort Type Contract to Perform Engineering Services For The PATRIOT Project Office.

Contractor
Raytheon Company

Contractor Point Of Contact
Steve Horlitz (617-274-1598)

▲ Issue Draft RFP
◆ Issue Solicitation
◈ Contract Award



MD9390.ppt Slide # 12

UNCLASSIFIED

Contracting Opportunity

Contracting Opportunity
General Purpose Electronic Test Set

Estimated Value
S1M–S3M....FY97
S1M–S3M....FY98

Contract Point Of Contact
Valeta Crandall (205-876-1109)
Gayle Frank (205-955-1089)

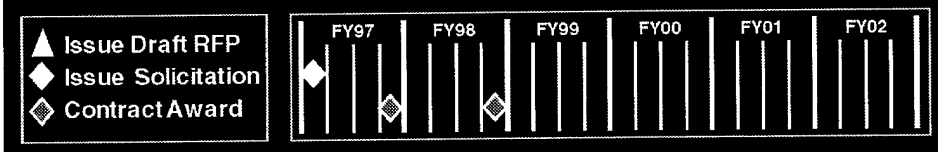
Contract Type
FFP

Kind Of Award
Sole Source

Program Description
Fabricate For Delivery Of General Purpose Electronic Test Set (GETS) Test Program Set (TPS).

Contractor
Lockheed-Martin Systems

Contractor Point Of Contact
Robert Gustafson (205-722-2621)



MD9390.ppt Slide # 13

UNCLASSIFIED

Contracting Opportunity

Contracting Opportunity
Launcher Global Positioning System Input/Output Northfinding System

Estimated Value
S500K–$1M

Contract Point Of Contact
Valeta Crandall (205-876-1109)
Todd Tran (205-876-9550)

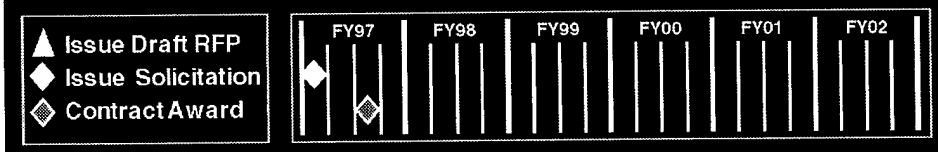
Contract Type
FFP

Kind Of Award
Sole Source

Program Description
Retrofit Kits For U.S. And Kuwait With Options For Israel, Netherlands, And Saudi Arabia.

Contractor
Raytheon Company

Contractor Point Of Contact
Bill Veno (617-274-4768)



MD9390.ppt Slide # 14

UNCLASSIFIED

Contracting Opportunity

Contracting Opportunity
Low Voltage Power Supply (LVPS) High Density Module

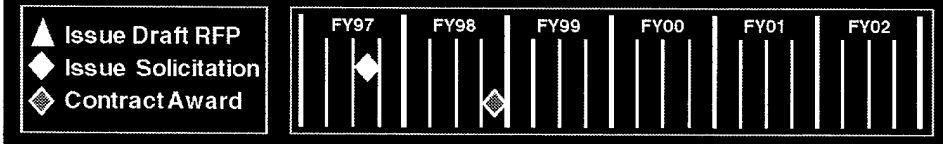
Estimated Value
$500K–$1M

Contract Point Of Contact
Valeta Crandall (205-876-1109)
Vern Chance (205-955-3654)

Contract Type
FFP

Kind Of Award
Competitive - Full And Open

Program Description
Development, Fabrication, Initial Testing, Delivery, And System Test Support For The Redesign And Prove-Out Of Low Voltage Power Supplies For PATRIOT.



MD9390.ppt Slide # 15

UNCLASSIFIED

Contracting Opportunity

Contracting Opportunity
Anti-Cruise Missile (ACM)

Estimated Value
$8M–$11M

Contract Point Of Contact
Valeta Crandall (205-876-1109)
Richard Brown (205-955-3806)

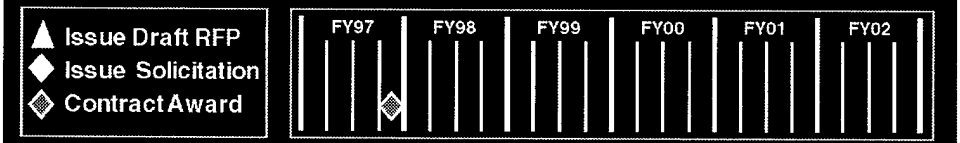
Contract Type
CPIF

Kind Of Award
Sole Source

Program Description
Option Exercise For ACM Materials For Test Support.

Contractor
Raytheon Company

Contractor Point Of Contact
Bob De Rosa (617-274-2898)



MD9390.ppt Slide # 16

UNCLASSIFIED

Contracting Opportunity

PATRIOT

Contracting Opportunity
PAC-3 Missile IPF

Estimated Value
$18M–$20M

Contract Point Of Contact
Valeta Crandall (205-876-1109)
Larry Easterwood (205-955-3577)

Contract Type
FFP

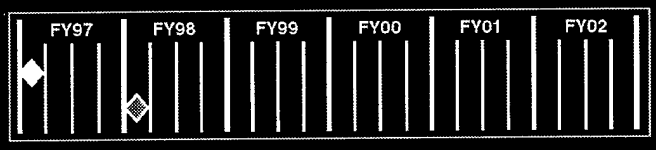
Kind Of Award
Sole Source

Program Description
Initial Production Facilities (IPF) Required To Produce PAC-3 Missiles

Contractor
Lockheed-Martin Vought Systems

Contractor Point Of Contact
Charlie Simpson (972-603-2807)

- Issue Draft RFP
- Issue Solicitation
- Contract Award



MD9390.ppt Slide # 17

UNCLASSIFIED

Contracting Opportunity

PATRIOT

Contracting Opportunity
PAC-3 Missile Low Rate Initial Production (LRIP)

Estimated Value
$120M–$130M

Contract Point Of Contact
Valeta Crandall (205-876-1109)
Larry Easterwood (205-955-3577)

Contract Type
FFP

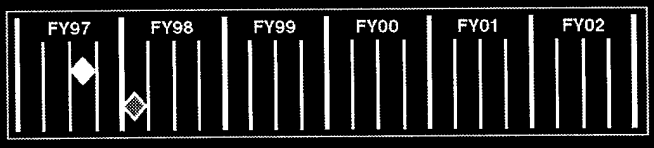
Kind Of Award
Sole Source

Program Description
LRIP Of 60 PAC-3 Missiles, 11 Enhanced Launcher Electronic Systems (ELESs), and 9 Fire Solution Computers (FSCs)

Contractor
Lockheed-Martin Vought Systems

Contractor Point Of Contact
Charlie Simpson (972-603-2807)

- Issue Draft RFP
- Issue Solicitation
- Contract Award



MD9390.ppt Slide # 18

UNCLASSIFIED

Contracting Opportunity

Contracting Opportunity
LRIP Of PAC-3 Missile

Estimated Value
$7M–$10M

Contract Point Of Contact
Valeta Crandall (205-876-1109)
Dan Beck (205-955-3576)

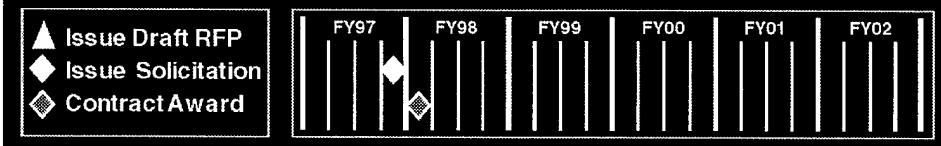
Contract Type
FFP

Kind Of Award
Sole Source

Program Description
LRIP Of PAC-3 Missile Integration/ Configuration 3 Upgrade Hardware.

Contractors
Raytheon
Lockheed-Martin Vought Systems

Contractor Point Of Contact
Jay Mortimar (617-274-1836)



UNCLASSIFIED

Contracting Opportunity

Contracting Opportunity
PATRIOT Independent Integration Analysis

Estimated Value
$ 4M–$ 6M....FY97
$15M–$20M....FY98 Option I
$15M–$20M....FY99 Option II
$15M–$20M....FY00 Option III
$15M–$20M....FY01 Option IV
$10M–$15M....FY02 Option V

Contract Point Of Contact
Janice Daniels (205-876-7321)
Jim Pope (205-955-3575)

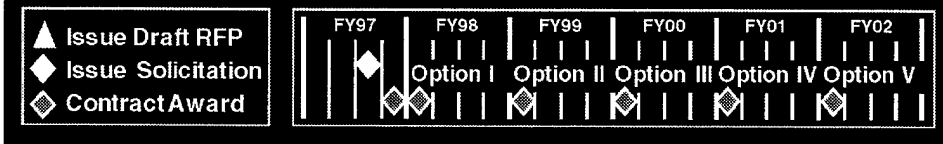
Contract Type
CPFF

Kind Of Award
Small Business Set Aside

Program Description
Independent PATRIOT System Engineering Integration Analyses Of The PATRIOT Derivatives. SETA Support For PATRIOT Project Office. Basic Requirements Plus Options.

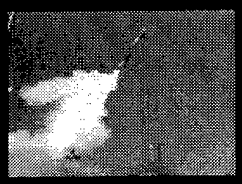
Contractor
CAS, Inc.

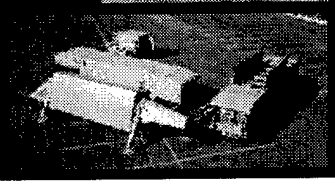
Contractor Point Of Contact
Jack Rissé (205-895-8629)



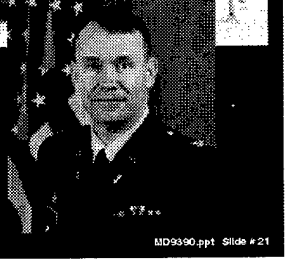
UNCLASSIFIED

Theater High Altitude Area Defense (THAAD) System





COL Louis P. Deeter
Project Manager

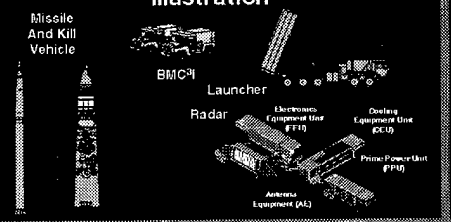


MD9390.ppt Slide #21

UNCLASSIFIED

Theater High Altitude Area Defense (THAAD) System

Illustration



Objective

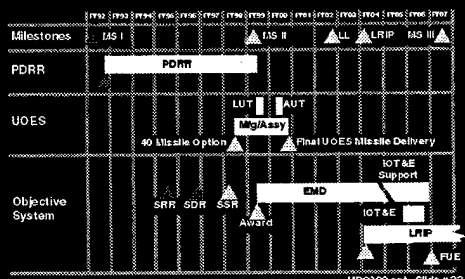
- Provide Aerial Defense Against Short and Medium Range Ballistic Missiles
- Employ Hit-To-Kill Technology
- Capable Of Both Endo- And Exo-Atmospheric Intercepts
- Constitute Upper Tier Of Two Tiered TBM Defense
- Field Two Battalions

Status

- Currently In PDRR Flight/System Test Phase
  - 7 Flights Conducted
  - System Is Fully Integrated
- UOES Delivered - Less Missiles
- Cause Of Flight Test 7 Failure - Contaminant Introduced By Shorting Plug
- Next Flight Test - 1st Quarter CY98
  - 2+4 Approach
- Milestone II - FY99
- Current Program - FUE FY06
- Focus On Component Reliability And Improved End-To-End Ground Testing Of Missile

Ref. MD00004ag

Schedule



MD9390.ppt Slide #22

UNCLASSIFIED

Contracting Opportunity

Contracting Opportunity
THAAD User Operational Evaluation System (UOES)

Estimated Funding
$190M–$195M

Contract Point Of Contact
W.L. Schick (205-955-3044)

Contract Type
CPFF

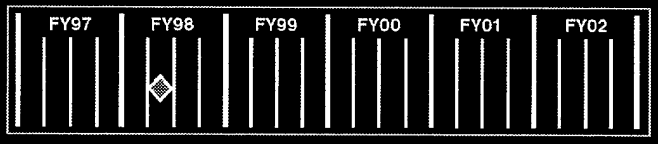
Kind Of Award
Exercise Of Existing Contract Option

Program Description
Contract Option To Manufacture, Integrate, Assemble, Ground Test, And Deliver 40 Missiles For The THAAD User Operational Evaluation System (UOES).

Contractor
Lockheed-Martin Missile And Space

Contractor Point Of Contact
Perry Bakke (408-756-7669)

- Issue Draft RFP
- Issue Solicitation
- Contract Award



MD9390.ppt Slide #23

UNCLASSIFIED

Contracting Opportunity

Contracting Opportunity
THAAD Engineering Manufacturing And Development

Estimated Value
$340M–$350M....FY99
$340M–$350M....FY00
$340M–$350M....FY01

Contract Point Of Contact
W.L. Schick (205-955-3044)

Contract Type
CPAF

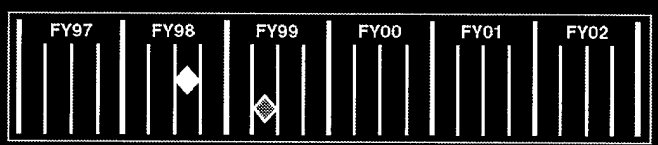
Kind Of Award
Sole Source

Program Description
The THAAD System Is The U.S. Land-Based Upper Tier TMD System. The High Altitude And Wide Area Protection Furnished By The THAAD System Will Complement The Lower Tier Systems.

Contractor
Lockheed-Martin Missile And Space

Contractor Point Of Contact
Perry Bakke (408-756-7669)

- Issue Draft RFP
- Issue Solicitation
- Contract Award



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UNCLASSIFIED

Contracting Opportunity

Contracting Opportunity
Software Independent Verification And Validation (IV&V)

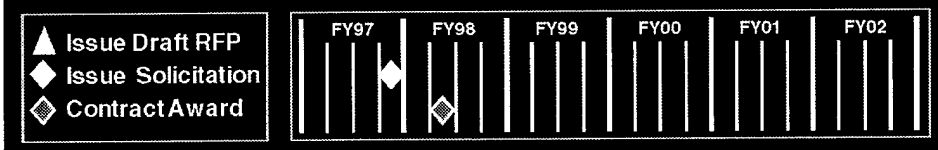
Estimated Value
$90M–$110M

Contract Point Of Contact
W.L. Schick (205-955-3044)

Contract Type
CPAF

Kind Of Award
Small Business Set Aside

Program Description
Software IV&V To Support And Maintain The Transition From Program Definition And Risk Reduction (PD&RR) Phase To The Engineering Manufacturing Development (EMD) Phase Of THAAD.



UNCLASSIFIED

Contracting Opportunity

Contracting Opportunity
Simulation/Hardware-In-The-Loop (HWIL) Development

Estimated Value
$40M–$50M

Contract Point Of Contact
W.L. Schick (205-955-3044)

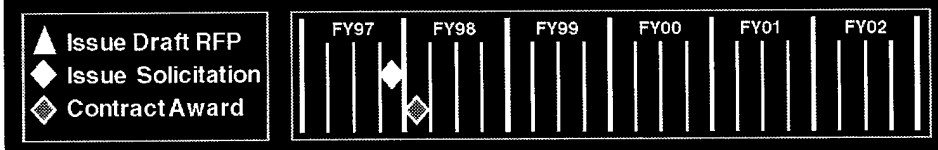
Contract Type
CPAF

Kind Of Award
Sole Source 8(a) Award

Program Description
Scientific, Engineering, Analysis, And Technical Efforts To Design, Continue To Develop, Fabricate, And Test Simulations, Drivers, And HWIL For The THAAD System.

Contractor
Tech Masters, Inc

Contractor Point Of Contact
Frank Jennings (205-721-6613)



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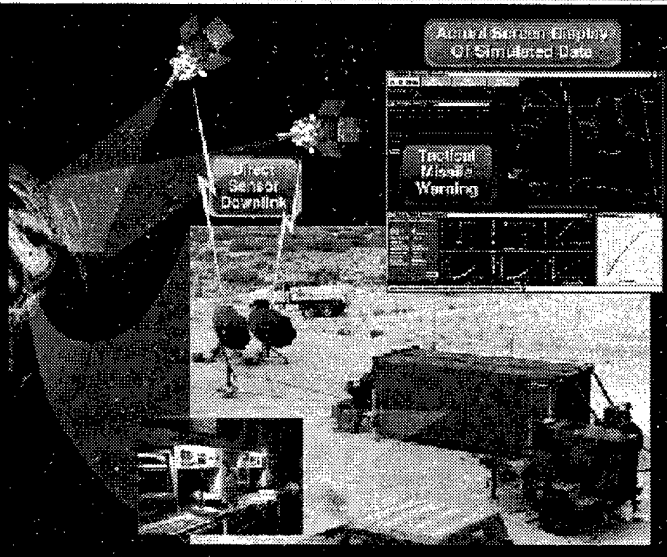
Joint Tactical Ground Station (JTAGS)

Mr. Charles Rayner
Director

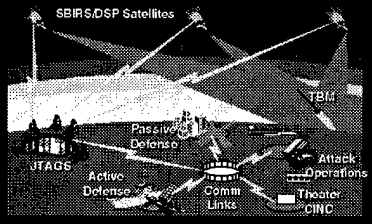


MD9390.ppt Slide # 27

UNCLASSIFIED

Joint Tactical Ground Station (JTAGS)

Illustration



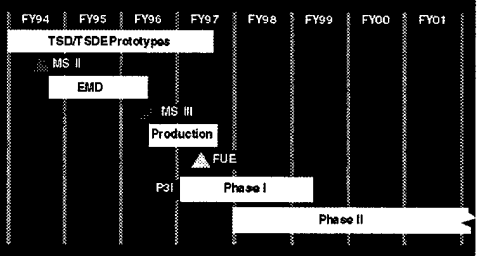
Objective

- Field Joint Tactical Ground Stations To Provide In-Theater Real Time Tactical Warning, Alerting, And Cueing Information
- Use Direct Down-Link From Defense Support Program (DSP) And The Follow-On Space-Based Infrared Sensors (SBIRS)

Status

- Fielding To Europe, Korea, And CONUS Completed
- Phase 1 P3I Program Ongoing
- Phase II Program Incorporates SBIRS
  - Begin in FY98
  - Cooperative Effort With Air Force
  - Retains In-Theater Capability

Schedule



Ref. MD0007ac

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UNCLASSIFIED

Contracting Opportunity

Contracting Opportunity
Space Based Infrared System (SBIRS) Multi-Mission Mobile Processor (M3P)

Estimated Value
$20M–$25M (FY98–FY03)

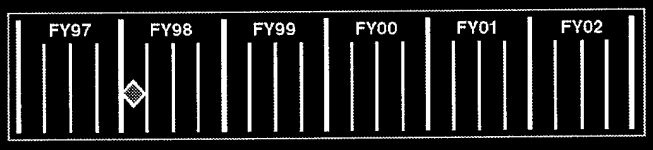
Contract Point Of Contact
Zane Smith (205-722-1142)

Contract Type
CPAF

Kind Of Award
Sole Source Option Exercise Under AF Contract F04701-95-C-0017

Program Description
Air Force Space Based Infrared Systems (SBIRS) High Component Endurable Element

- Issue Draft RFP
- Issue Solicitation
- Contract Award



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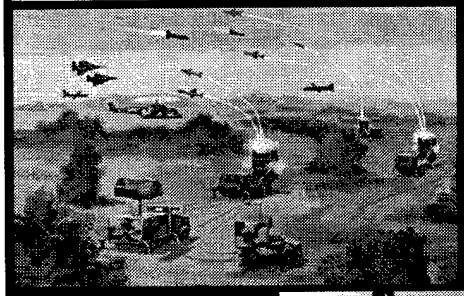
UNCLASSIFIED

MEADS



BG Hunrich Meunier
General Manager
NAMEADSMA

Signing of Memo of Understanding by Representatives from United States, Germany, and Italy.

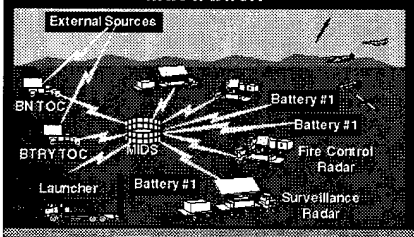
LTC Richard P. De Fatta
Product Manager
U.S. MEADS
National Product Office

MD9390.ppt Slide # 30

UNCLASSIFIED

MEADS

Illustration



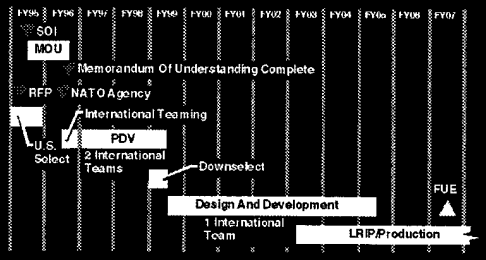
Objective

- 360° Protection Against TBMs, CMs, And Other Air Breathing Threats (ABTs)
- Transportability Consistent With Contingency Operations
- Mobility Consistent With That Of The Maneuver Force
- Highly Survivable And Operationally Versatile Netted And Distributed Architecture
- Lower Manpower Requirements Than Current Systems

Status

- NAMEADSMA Charter Approved June 1996
- Program Definition/Validation Phase With Two International Partners Underway
  - Down Select In December 1998
- Funding In Place To Begin Design And Development Phase
- POM Issues

Schedule



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CLOSE HOLD

Contracting Opportunity

Contracting Opportunity
Design and Development

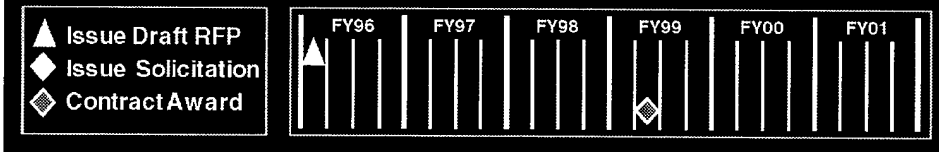
Estimated Value
In Excess of $1B

Contract Point Of Contact
U.S. MEADS National Product Office (205-895-4080)

Contract Type
CPIF

Kind Of Award
Limited Competition

Program Description
MEADS Provides Protection Of The Maneuver Forces. MEADS Defends Critical Assets And Forces Of Both The U.S. Army And U.S. Marine Corps By Providing Robust Defense Against Mass Casualty And Mass Destruction Producing Weapons Such As Cruise Missiles And Short Range Ballistic Missiles.



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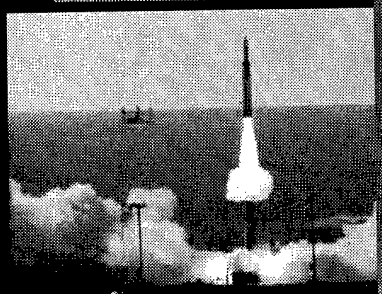
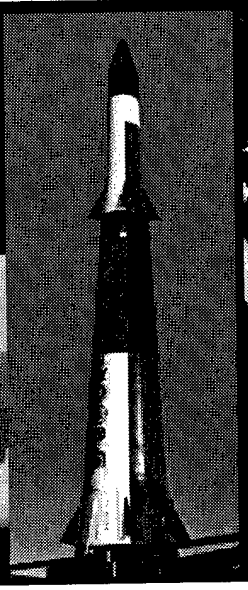
UNCLASSIFIED

Arrow





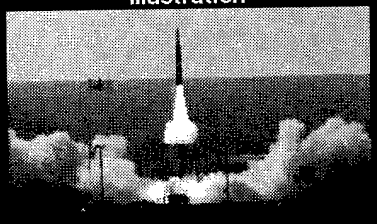
Mr. Joe Butler
Project Manager

MD9390.ppt Slide # 33

UNCLASSIFIED

Arrow

Illustration



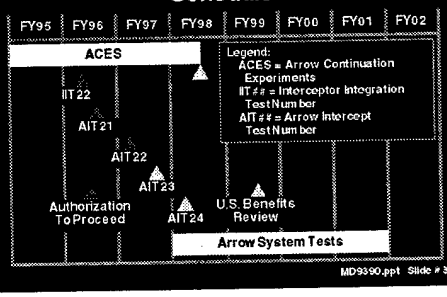
Objective

- Assist Israel In Development Of National Missile Defense Capability
- Complete Development Of Arrow Interceptor
- Integrate And Conduct System Level Tests of AWS
- Develop Interoperability Capability

Status

- Two Successful Intercepts
  - August 1996
  - March 1997
- Arrow Weapon System (AWS) Integration Underway
- Intercept Test Conducted August 1997

Schedule



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MD9390.ppt Slide # 34

UNCLASSIFIED

Contracting Opportunity

Contracting Opportunity
Modified Arrow Radar Seeker Test Set

Estimated Value
$400K–$600K

Contract Point Of Contact
Kim Smith (205-955-4665)

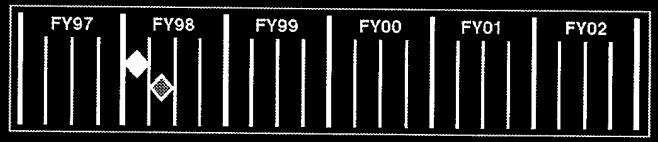
Contract Type
CPFF

Kind Of Award
Sole Source

Program Description
To Provide A Modified Arrow Radar Seeker Test Set For Use In Emulations Of The Seeker For Software And System Tests.

Contractor
TBD

- Issue Draft RFP
- Issue Solicitation
- Contract Award



MD9390.ppt Slide # 35

UNCLASSIFIED

National Missile Defense

Dr. Shelba Proffitt
Program Manager

MD9390.ppt Slide # 36

UNCLASSIFIED

NMD/Ground Based Element Program

Illustration

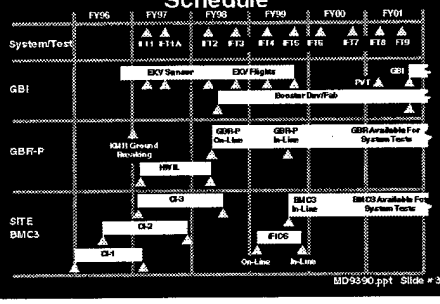
Objective

- Develop And Test Elements Of Initial NMD System Within 3 Years
- Support Capability To Deploy Within 3 Years Of Decision
- Conduct Integrated System Test At USAKA In FY99

Status

- Joint Program Office Established 1 April 1997
- First EKV Sensor Flight Test Successfully Conducted 23 June 1997

Schedule



Ref. MD0008w

MD9390.ppt Slide # 37

UNCLASSIFIED

Contracting Opportunity

Contracting Opportunity
NMD Lead Systems Integration Execution Phase

Estimated Value
TBD - Based On Industry Approach

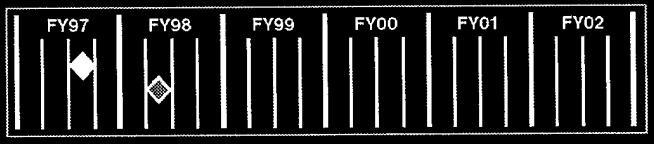
Contract Point Of Contact
Mr. Alex Austin At BMDO
(703-604-4288)

Contract Type
CPAF/IF

Kind Of Award
Limited Competition

Program Description
Design, Develop, Integrate NMD System. Prepare For FY99 Integrated Test. Prepare To Deploy.

- ▲ Issue Draft RFP
- ◆ Issue Solicitation
- ◈ Contract Award



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Summary

- The Nation Relies On The Army For Strong Air And Missile Defense
- The Army Looks To PEO AMD For The Development Of Quality Air And Missile Defense Systems
- The PEO AMD Is Committed To Serving Our Nation, Our Army, And Its Soldiers

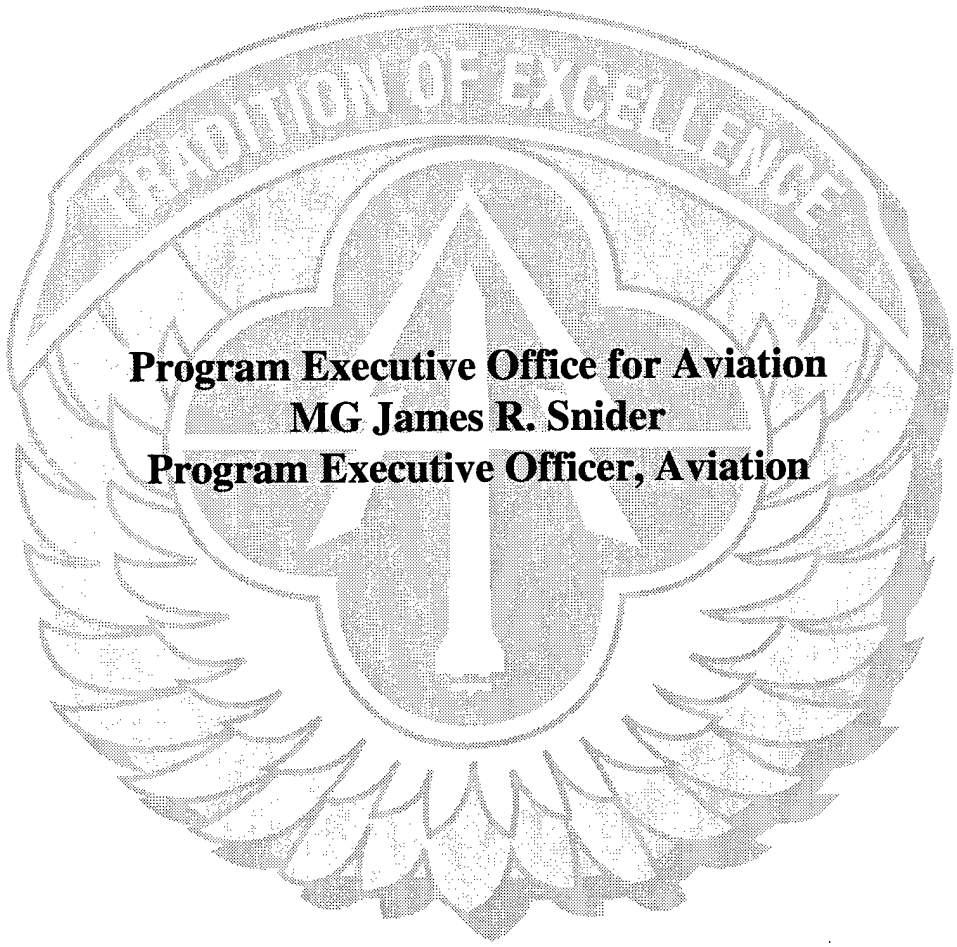
MD9390.ppt Slide # 39

U. S. ARMY

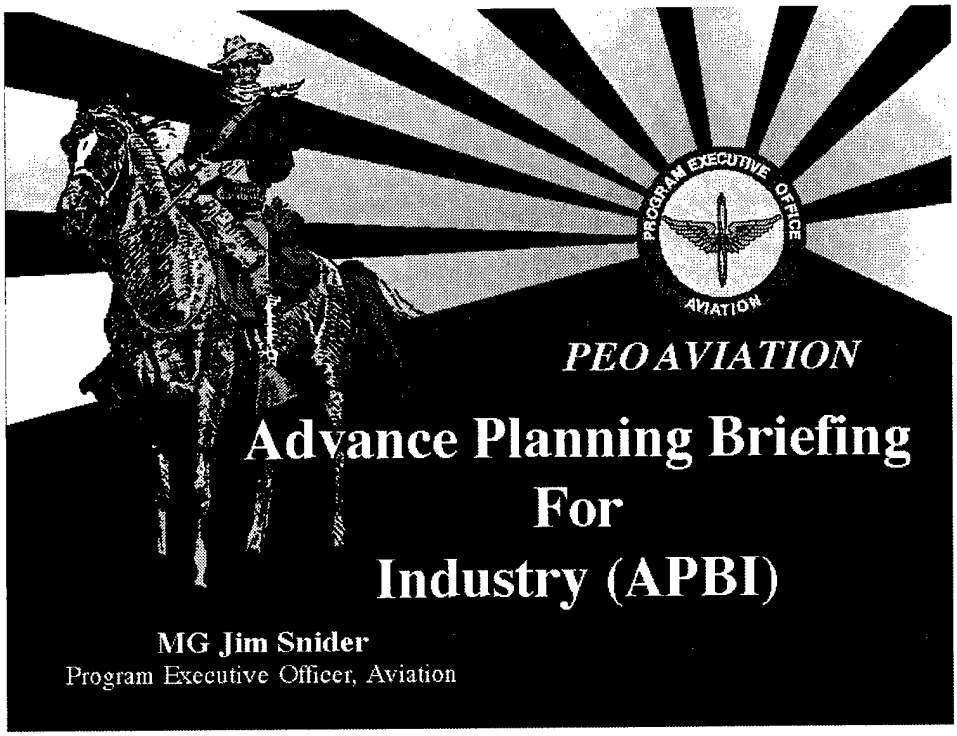
AIR AND MISSILE DEFENSE

PROGRAM EXECUTIVE OFFICE

MD9390.ppt Slide # 40



Program Executive Office for Aviation
MG James R. Snider
Program Executive Officer, Aviation



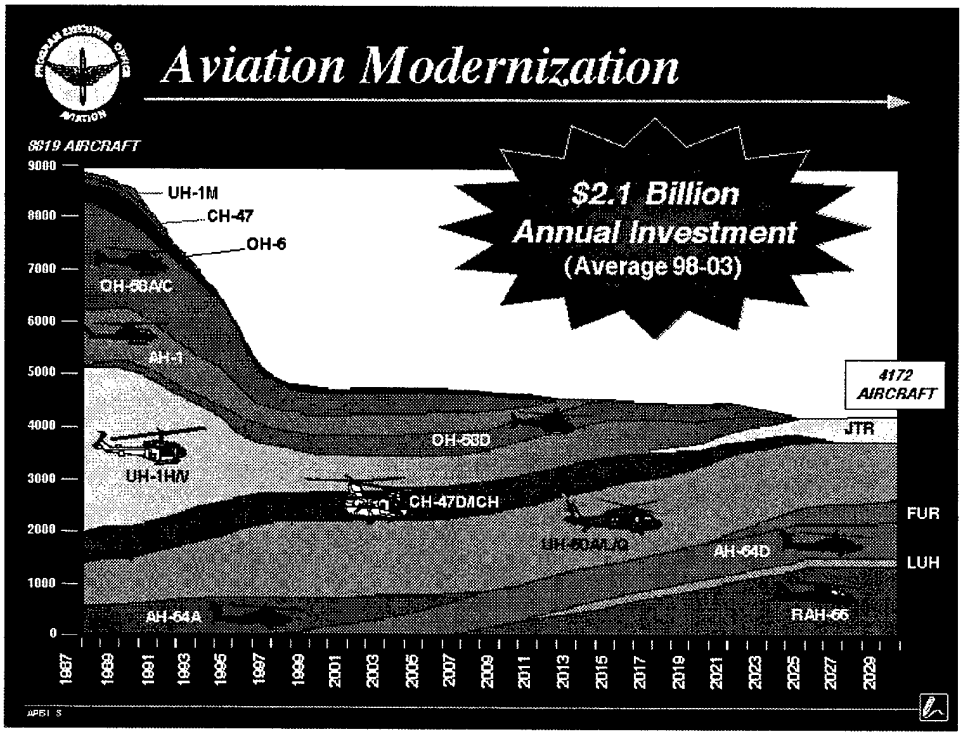
PEO AVIATION

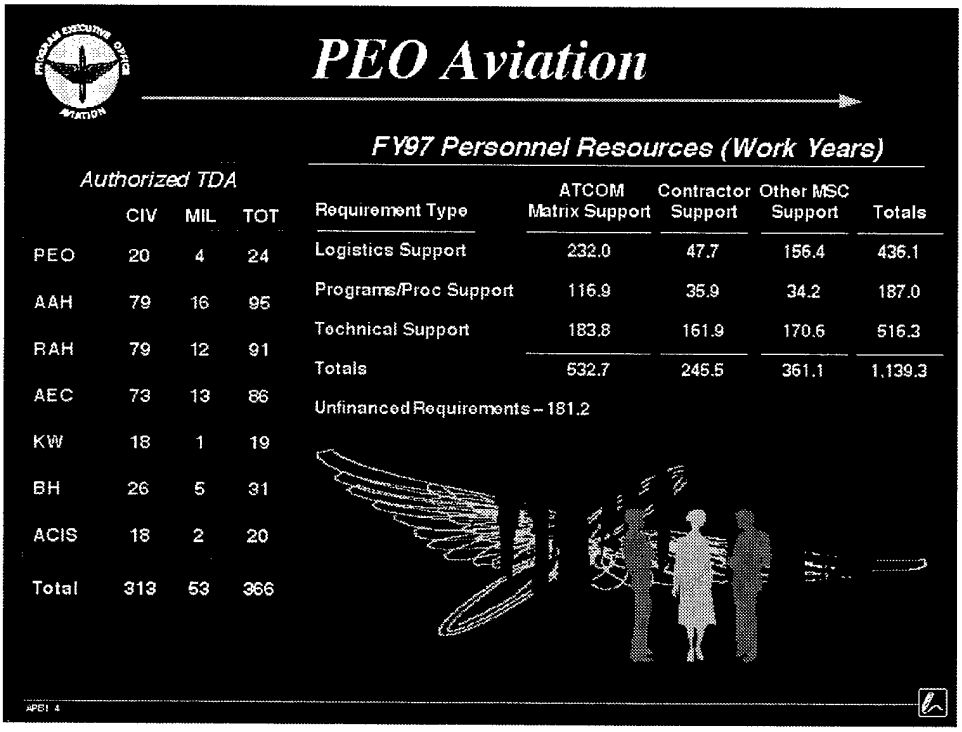
Advance Planning Briefing For Industry (APBI)

MG Jim Snider
Program Executive Officer, Aviation

PEO, Aviation Goals

- Modernize Army Aviation for Least Cost IAW Army Vision 2010
  - Leverage Acquisition Reform, Science & Technology, Recapitalization, Contractor Logistics Support
- Ensure Required Aviation Systems Are Ready and Equipped for FY00 Digitized Division
  - Longbow Apache
  - Kiowa Warrior
  - Army Airborne Command and Control System (A2C2S)


Aviation Modernization
$619 AIRCRAFT
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
UH-1M
CH-47
OH-6
OH-58A/C
AH-1
UH-1H/V
$2.1 Billion
Annual Investment
(Average 98-03)
4172
AIRCRAFT
JTR
OH-58D
CH-47D/CH
FUR
UH-60A/L/Q
AH-64D
LUH
AH-64A
RAH-66
1987
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021
2023
2025
2027
2029


PEO Aviation
Authorized TDA
CIV MIL TOT
PEO 20 4 24
AAH 79 16 95
RAH 79 12 91
AEC 73 13 86
KW 18 1 19
BH 26 5 31
ACIS 18 2 20
Total 313 53 366
FY97 Personnel Resources (Work Years)
Requirement Type | ATCOM Matrix Support | Contractor Support | Other MSC Support | Totals
Logistics Support 232.0 47.7 156.4 436.1
Programs/Proc Support 116.9 35.9 34.2 187.0
Technical Support 183.8 161.9 170.6 516.3
Totals 532.7 245.5 361.1 1,139.3
Unfinanced Requirements – 181.2

Long Term Benefits of Huntsville Relocation

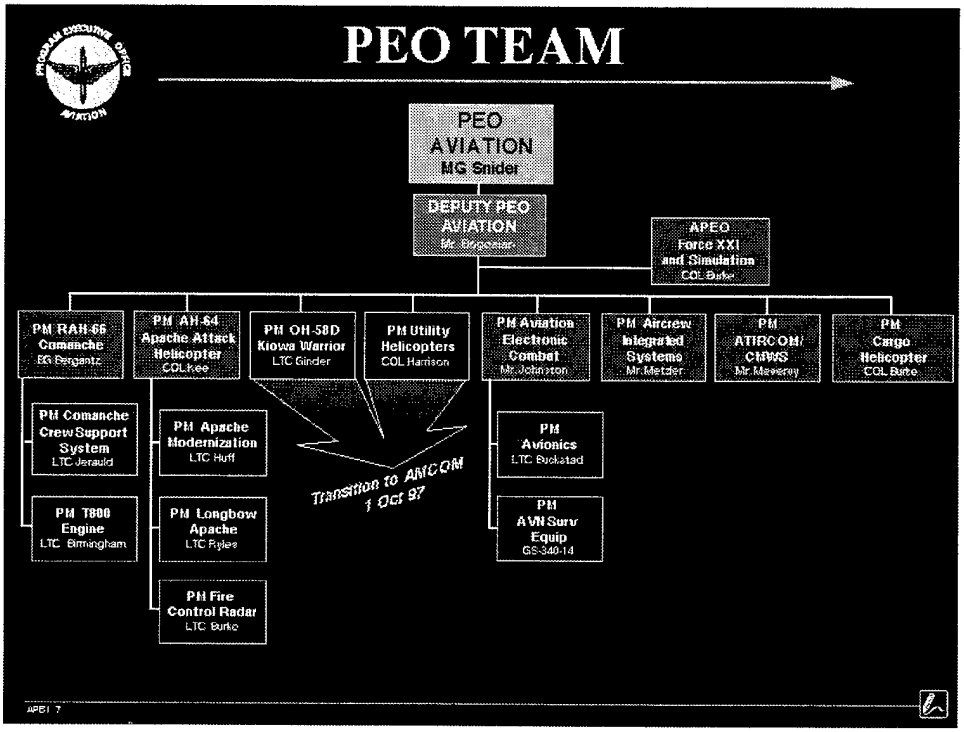
- Increased Cooperation/Synergy from Collocation of:
  - Aviation & Missile PM's
  - AMCOM Combined Aviation & Missile RDEC Elements
  - AMCOM Combined Comprehensive Support Structure
- Redstone Arsenal On-Site Advantages
  - Airfield & Aviation Facilities
  - Test & Evaluation Facilities
  - Software Engineering Directorate
  - Systems Simulation & Development Directorate

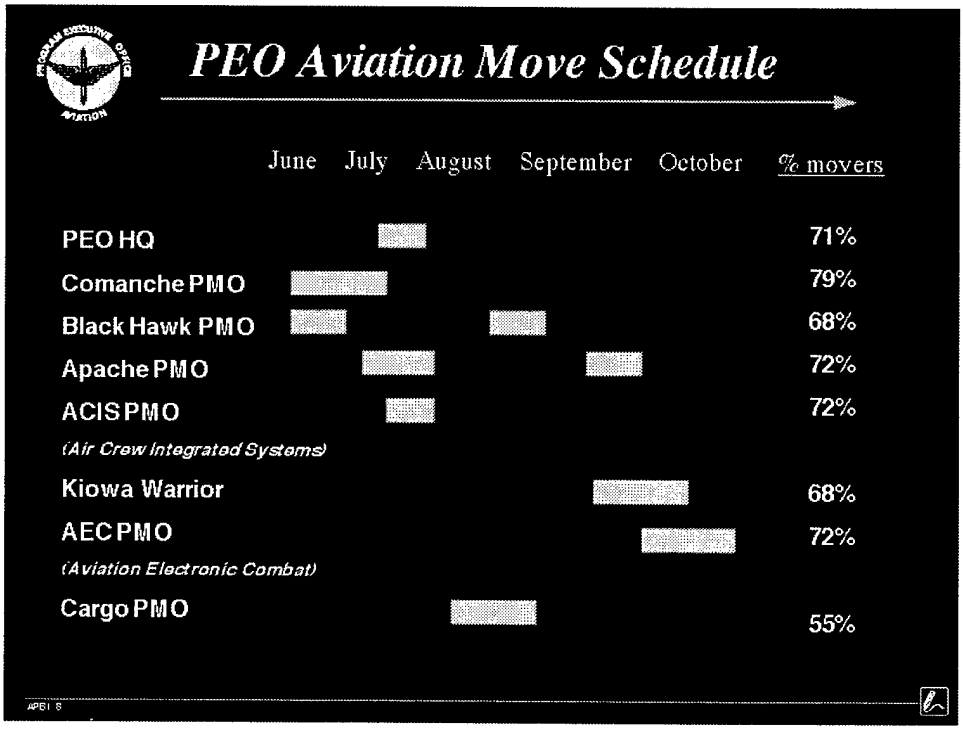
APEI 5

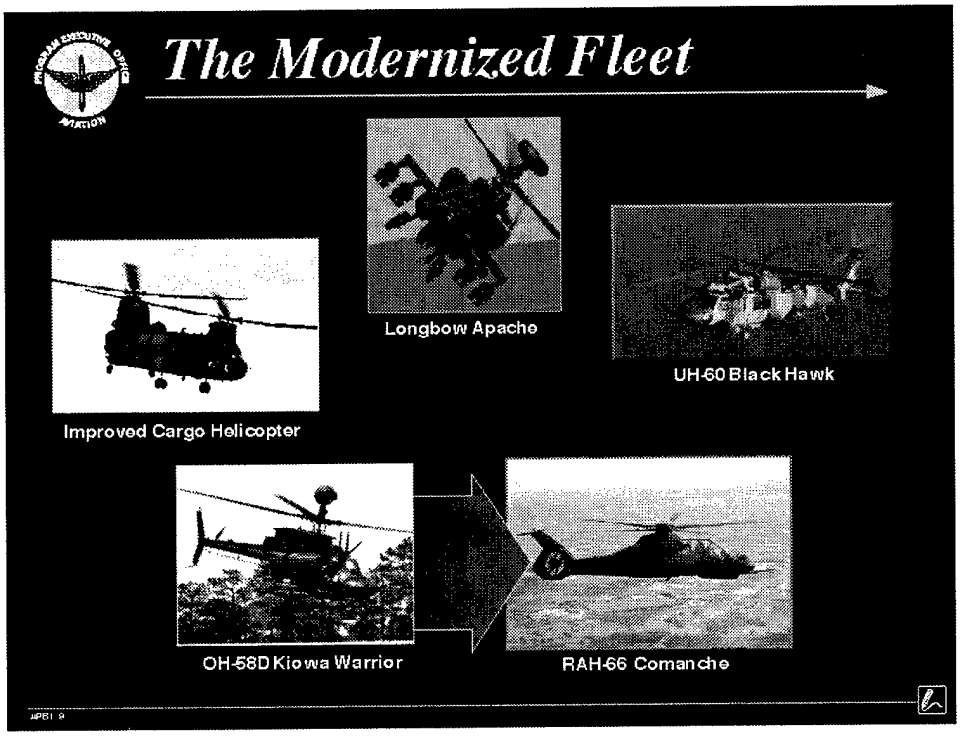
Long Term Benefits of Huntsville Relocation (Cont'd)

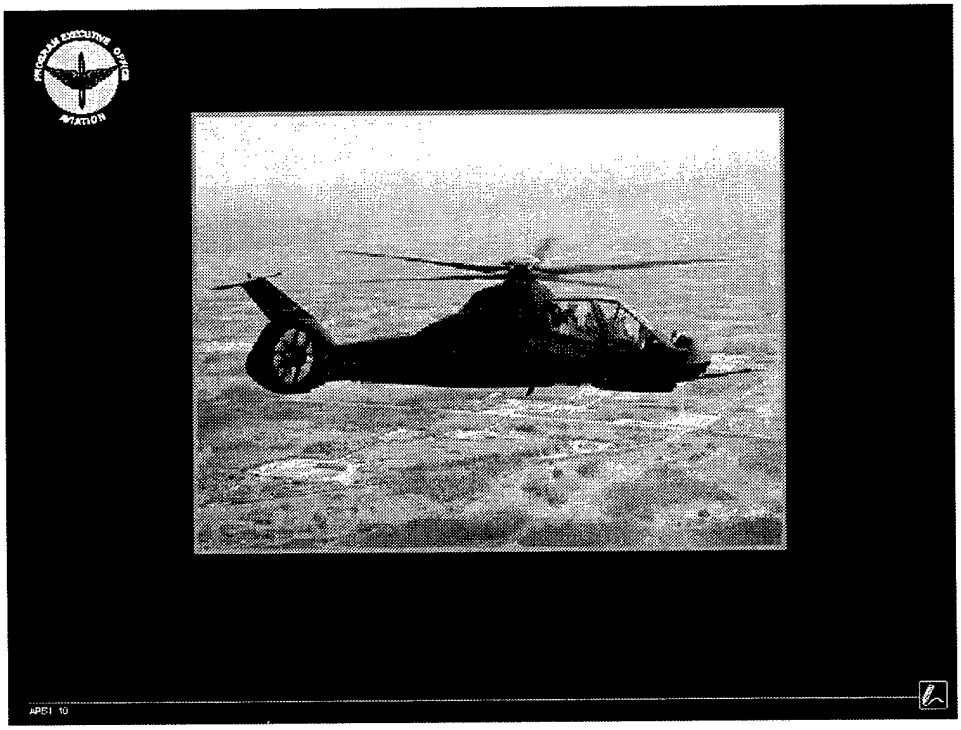
- Ready Access to:
  - Missile Defense Battle Integration Center
  - NASA Talent and Facilities
  - TMDE and LOGSA Activities
  - Numerous High Tech Industry & Support Contractors Located in Huntsville
- Close Proximity to USAAVNC & Ft. Rucker

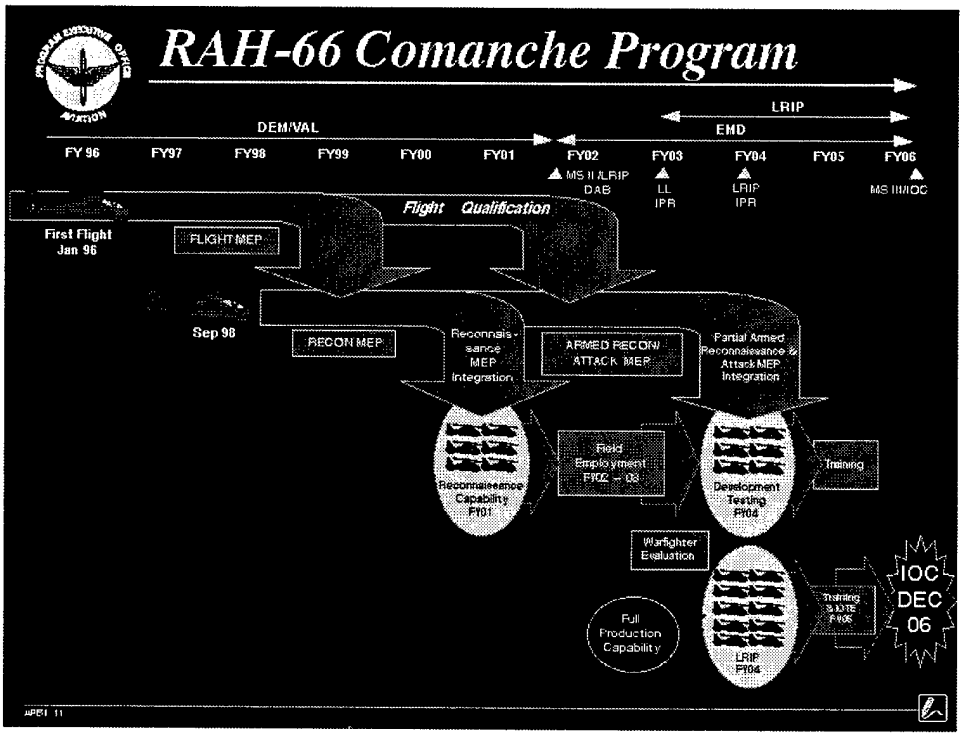
APEI 6

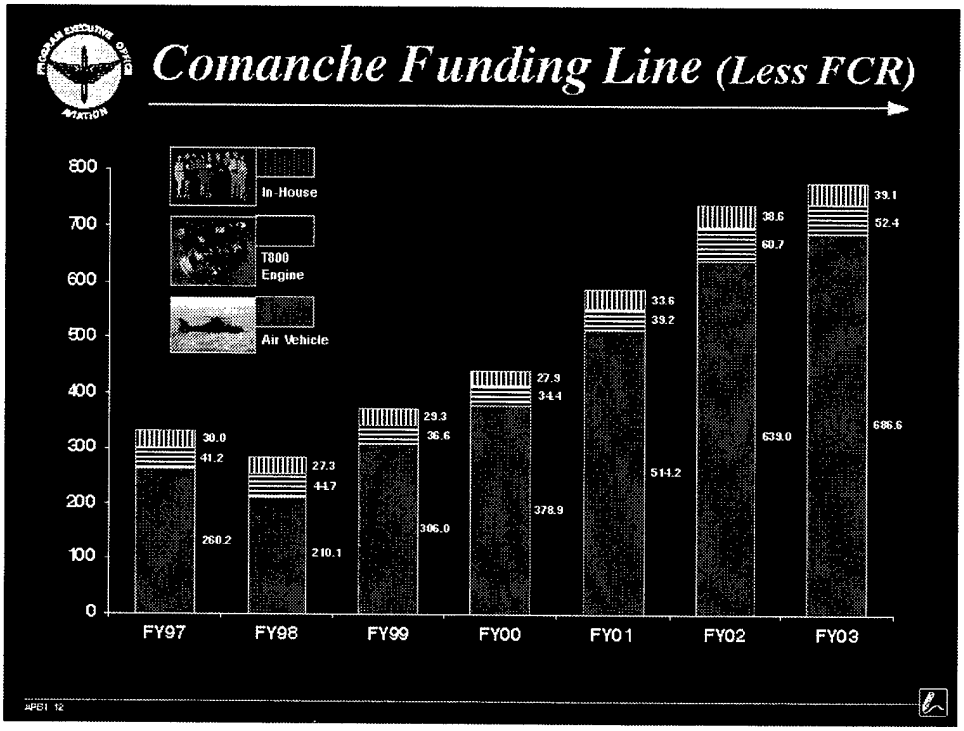

PEO TEAM
PEO AVIATION
MG Snider
DEPUTY PEO AVIATION
APEO Force XXI and Simulation
COL Burke
PM RAH-66 Comanche
BG Pergantz
PM AH-64 Apache Attack Helicopter
COL Kee
PM OH-58D Kiowa Warrior
LTC Ginder
PM Utility Helicopters
COL Harrison
PM Aviation Electronic Combat
Mr. Johnston
PM Aircrew Integrated Systems
Mr. Metzler
PM ATIRCOH/ CHRWS
Mr. Mawerey
PM Cargo Helicopter
COL Burke
PM Comanche Crew Support System
LTC Jerauld
PM T800 Engine
LTC Birmingham
PM Apache Modernization
LTC Huff
PM Longbow Apache
LTC Ryles
PM Fire Control Radar
LTC Burke
Transition to AMCOM 1 Oct 97
PM Avionics
LTC Bukatad
PM AVN Surv Equip
GS-340-14
APEI 7


PEO Aviation Move Schedule
June
July
August
September
October
% movers
PEO HQ
71%
Comanche PMO
79%
Black Hawk PMO
68%
Apache PMO
72%
ACIS PMO
72%
(Air Crew Integrated Systems)
Kiowa Warrior
68%
AEC PMO
72%
(Aviation Electronic Combat)
Cargo PMO
55%
APEI 8


The Modernized Fleet
Longbow Apache
UH-60 Black Hawk
Improved Cargo Helicopter
OH-58D Kiowa Warrior
RAH-66 Comanche



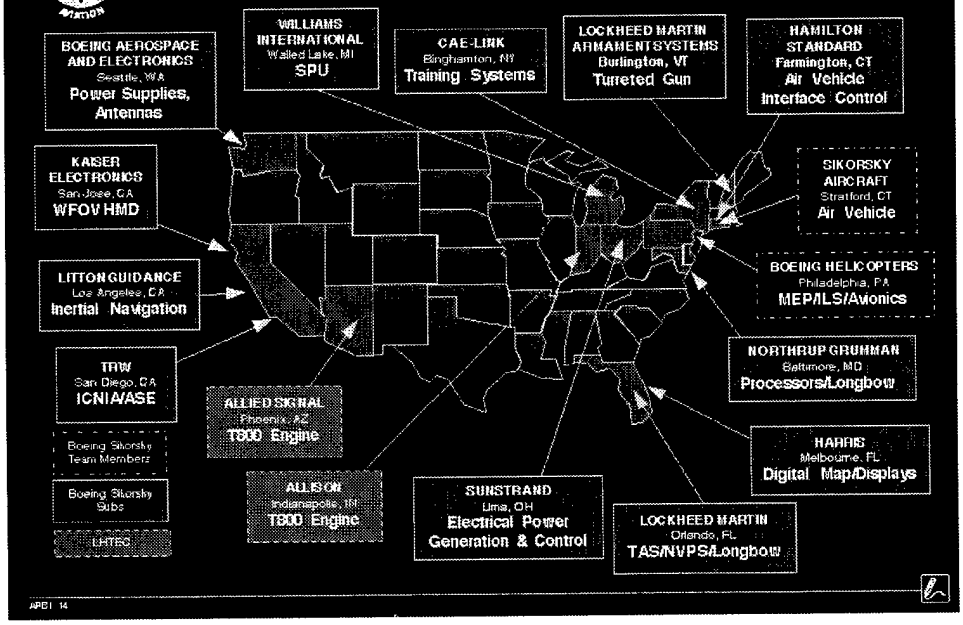

RAH-66 Comanche Program
DEM/VAL
EMD
LRIP
FY 96
FY97
FY98
FY99
FY00
FY01
FY02
FY03
FY04
FY05
FY06
MS II/LRIP DAB
LL IPR
LRIP IPR
MS III/IOC
Flight Qualification
First Flight Jan 96
FLIGHT MEP
Sep 98
RECON MEP
Reconnais-sance MEP Integration
ARMED RECON/ ATTACK MEP
Partial Armed Reconnaissance & Attack MEP Integration
Reconnaissance Capability FY01
Field Employment FY02 - 06
Development Testing FY04
Training
Warfighter Evaluation
Full Production Capability
LRIP FY04
IOC DEC 06


Comanche Funding Line (Less FCR)
In-House
T800 Engine
Air Vehicle
800
700
600
500
400
300
200
100
0
30.0
41.2
260.2
27.3
44.7
210.1
29.3
36.6
306.0
27.9
34.4
378.9
33.6
39.2
514.2
38.6
60.7
639.0
39.1
52.4
686.6
FY97
FY98
FY99
FY00
FY01
FY02
FY03

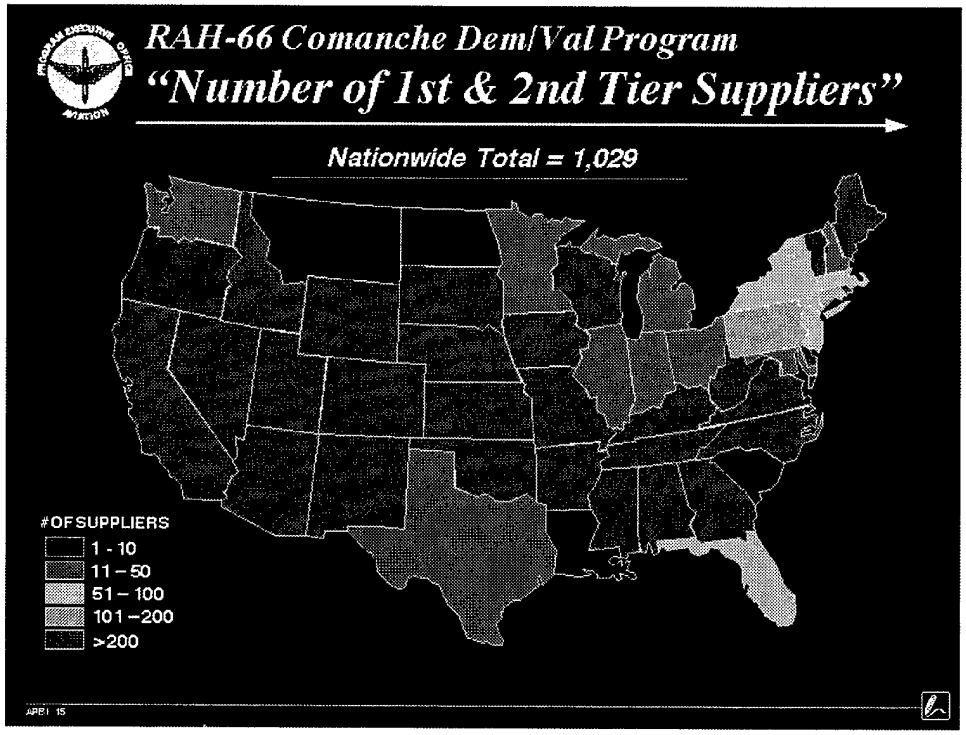
RAH-66 Comanche Crew Station

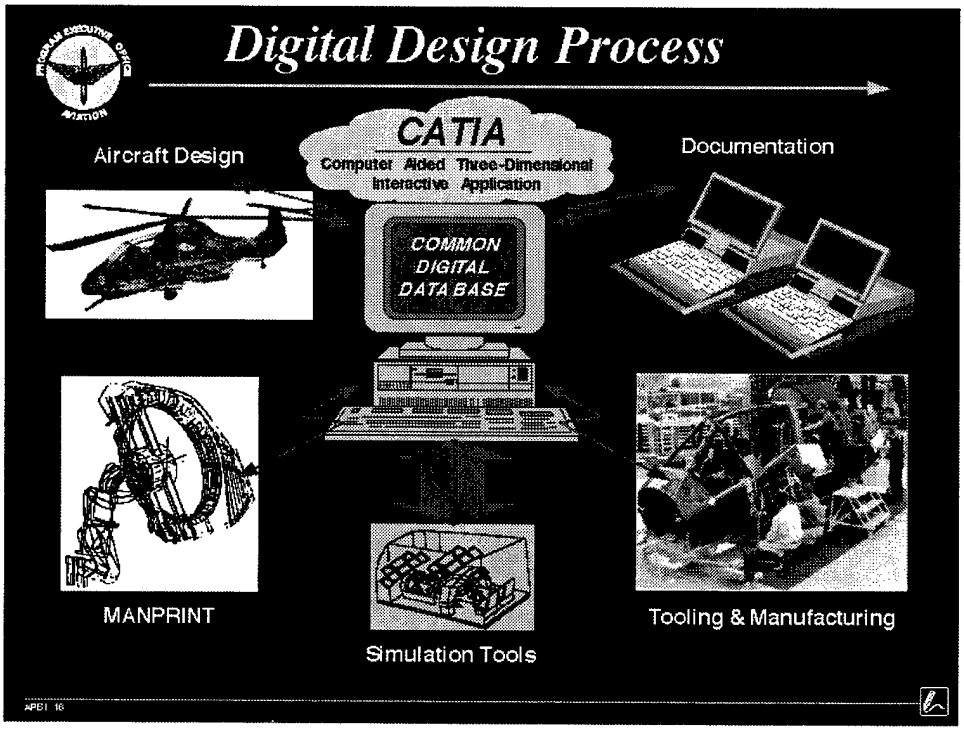
APEI 13

RAH-66 Comanche Contractors



APEI 14

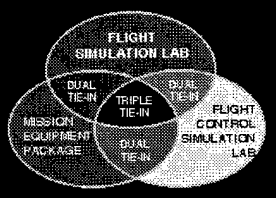

RAH-66 Comanche Dem/Val Program
"Number of 1st & 2nd Tier Suppliers"
Nationwide Total = 1,029
#OF SUPPLIERS
1 - 10
11 – 50
51 – 100
101 – 200
>200
APEI 15

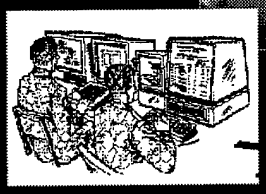

Digital Design Process
CATIA
Computer Aided Three-Dimensional Interactive Application
Aircraft Design
Documentation
COMMON DIGITAL DATA BASE
MANPRINT
Simulation Tools
Tooling & Manufacturing
APEI 16

RAH-66 Comanche Simulation Tools

FULL MISSION SIMULATOR

CATIA





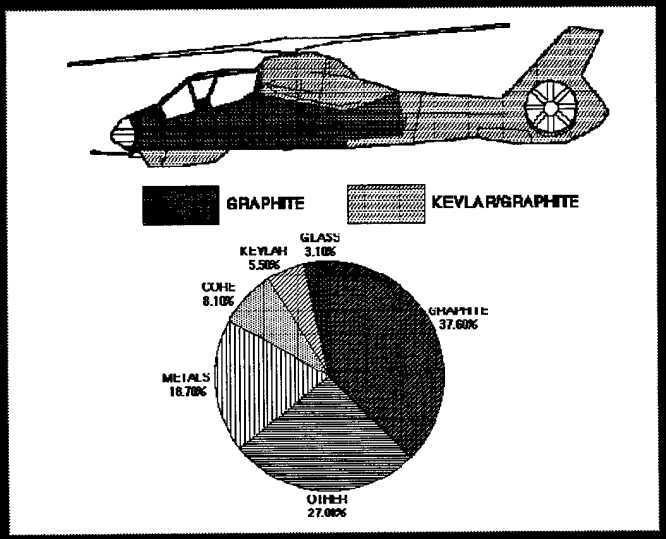
Battle Labs

System Integration
Laboratories

ENGINEERING & FLIGHT TEST

APBI 17

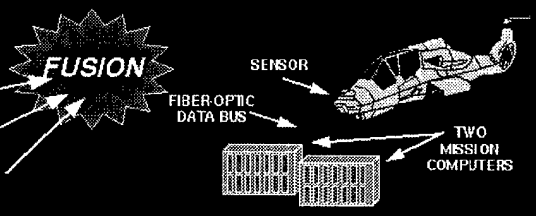
RAH-66 Comanche Composites



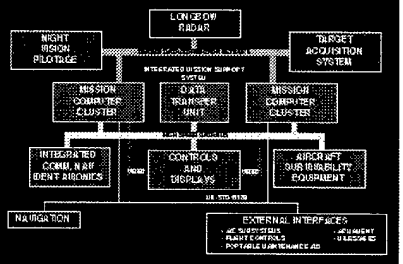
APBI 18

RAH-66 Comanche Open Architecture

- Sensor Package
  - –2nd Generation FLIR
  - –Image Intensification
  - –Milli-Meter Wave Radar



- Software Driven Com/Nav
- Composites/Advanced Metals
- Processing Capability



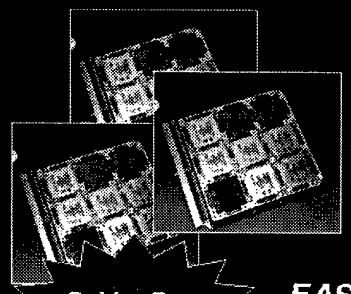
APEI 19

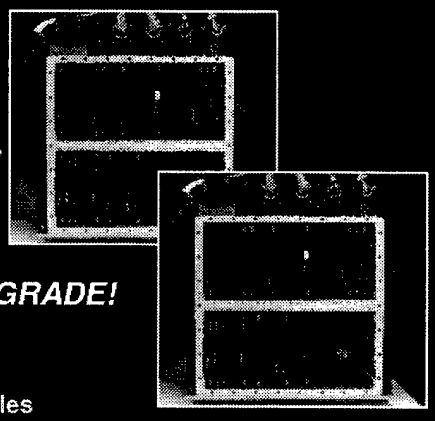
Comanche Processing

Designed For Growth and Technology Upgrades

SEM-E Modules

Two Mission Computers



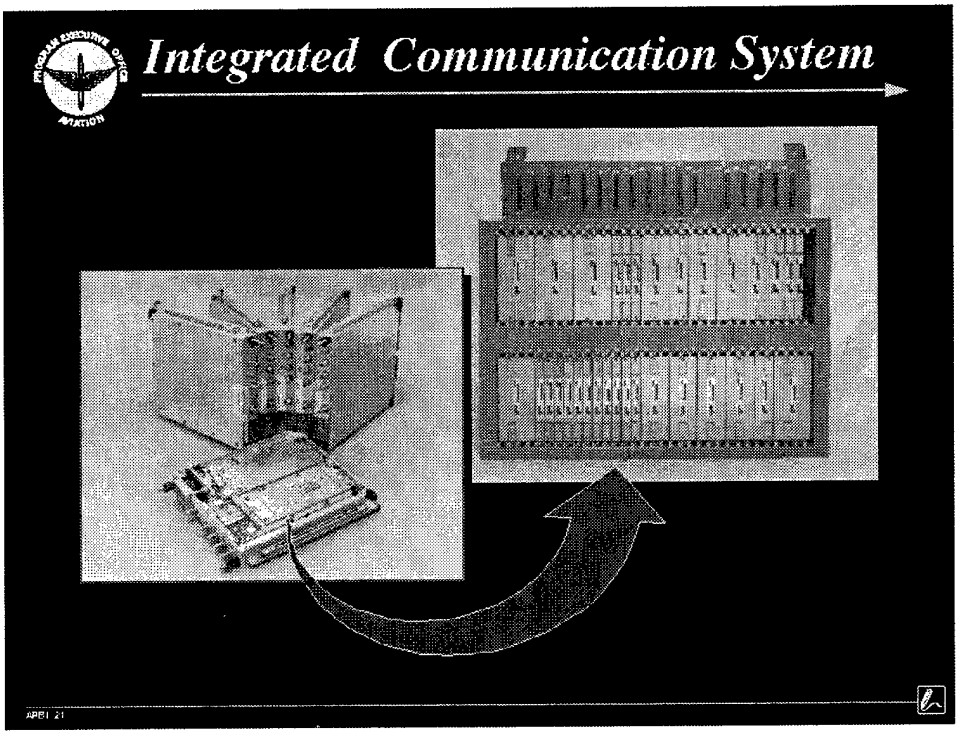


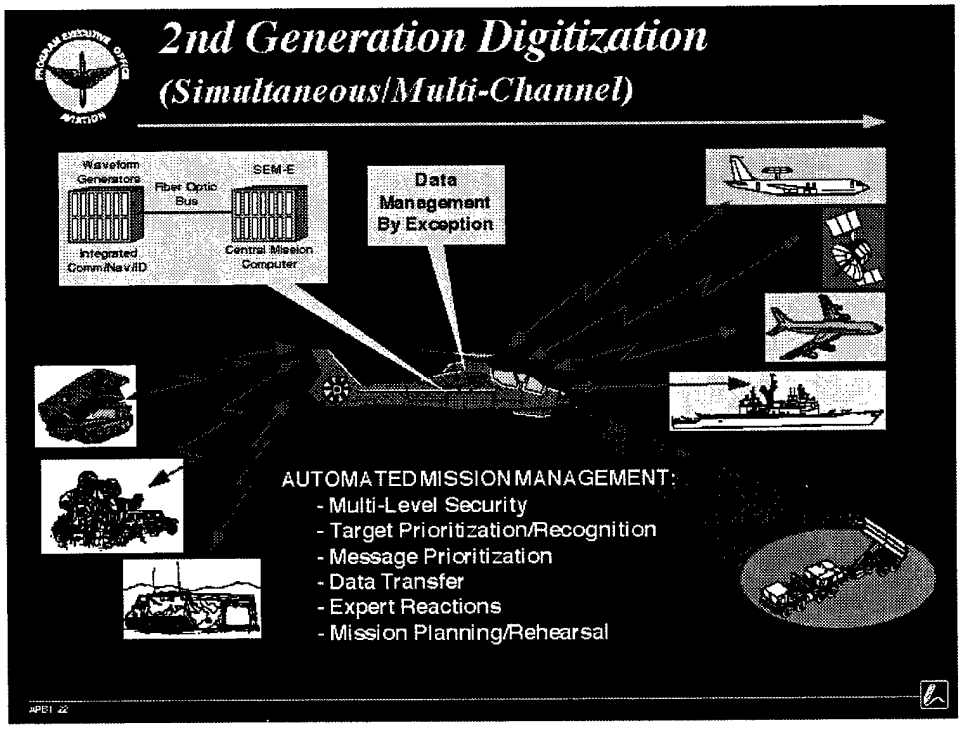
Solder-Free Technology

EASY UPGRADE!

- Add Modules
- Replace Modules
- Replace Multi-Chip Packages

APEI 20


Integrated Communication System


2nd Generation Digitization
(Simultaneous/Multi-Channel)
Waveform Generators
Fiber Optic Bus
SEM-E
Integrated Comm/Nav/ID
Central Mission Computer
Data Management By Exception
AUTOMATED MISSION MANAGEMENT:
- Multi-Level Security
- Target Prioritization/Recognition
- Message Prioritization
- Data Transfer
- Expert Reactions
- Mission Planning/Rehearsal

Science and Technology Support

Comanche Technology Challenges Status (3-6-97)

No.	Top 9 Tech Challenges	Assigned Government Organization	Status	Technology Issue
1.	High Temperature Composite Materials	AVRDEC-AATD (Phil LeFerriere) 757-878-3977	R / Y	Current Shafts within Firewall are Subject to Failure Due to Heat or Fire. Need Low Cost/Lightweight High Temperature (>1100 Deg.F) Drive Shaft.
2.	LO Canopy Transparency	AVRDEC-AATD (Mac Dinning) 757-878-2561	Y	Multiple Scatter Between Rotor and Canopy Dominates Dynamic Signature at Some Viewing Aspects
3.	Lightweight, Ballistic Armor	AVRDEC – AATD (Kent Smith) 757-878-5875	Y	Existing Armor Technology Will Not Provide Ballistic Protection At Desired Low Aerial Density
4.	Helmet Mounted Flat Panel Display	NVSED (Howard Kessler) 703-704-1382	Y	Need For High-Light-Throughput Operation Integrated Heater Element, and Full MIL Ruggedization
5.	Paint (IR, Visual, etc.)	AVRDEC – AATD (Mac Dinning) 757-8787-2561	Y	Current Baseline MIL-SPEC 46186 Aircraft Green Paint Does Not Meet Comanche Established Requirement
6.	LO Dielectric/High Strength Materials	AVRDEC – AATD (Mac Dinning) 757-878-2561	W	Material Design Required to Overcome High Frequency Skin Limitations and Improve RCS Performance Over Baseline Skin

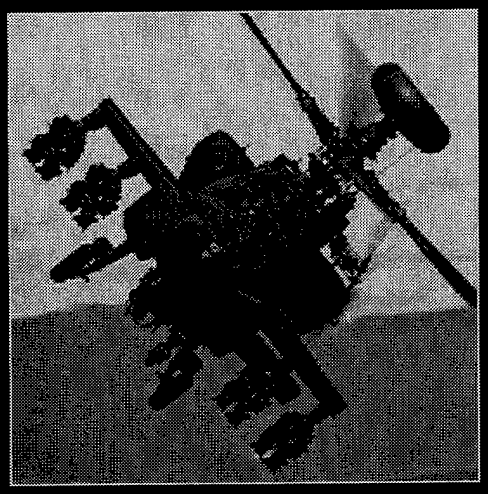
APEI 23

Science and Technology Support (Cont'd)

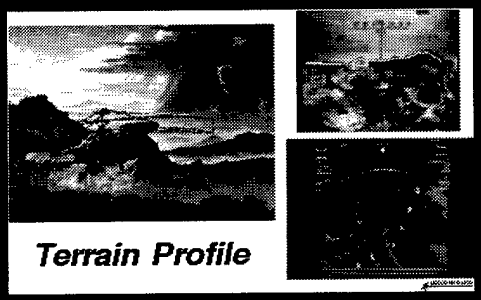
Comanche Technology Challenges Status (3-6-97)

No.	Top 9 Tech Challenges	Assigned Government Organization	Status	Technology Issue
7.	Aluminum Beryllium/Lithium Aluminum	AVRDEC-AATD (Michael Galvas) 757-878-5732	B	Corrosion Protection Coating Technology and Methods For Application of Coatings
8.	Regime Recognition, Safe-Life and Damage Tolerance (Usage Monitoring)	AVRDEC (Jack Tanney) 757-878-5602	B	Regime Recognition Integration and Risk Reduction/Regime Recognition Application to Usage Monitoring
9.	ECS/Regenerative Filters	AVRDEC – AATD (Kevin Nolan) 757-878-5875	W	Current Pressure Swing Absorber (PSA) Filter Failed to Meet Established Performance Requirement

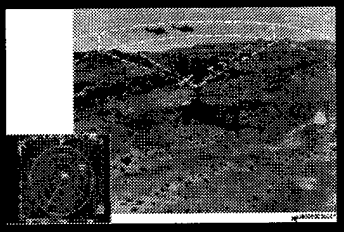
APEI 24



Longbow Capability



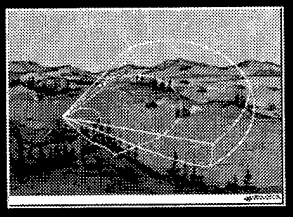
Terrain Profile



Air Targeting

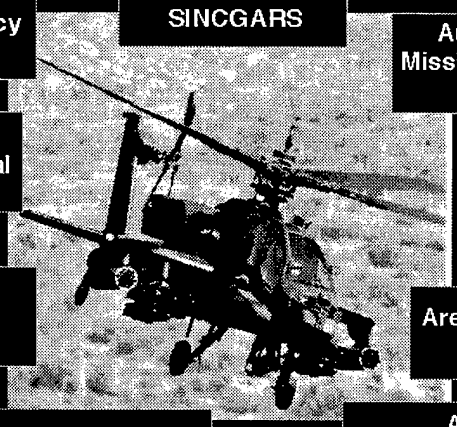
Longbow Apache Provides:

- Automatic target detection, classification, and prioritization
- Adverse weather precision strike capability
- Multi target engagement capability
- Fire and forget capability
- Destruction of Enemy Air Defense



Ground Targeting

AH-64A Apache Modernization



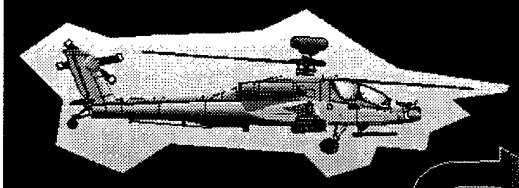
- High Frequency Radio
- SINCGARS
- Automated Mission Planning System
- EGI Embedded Global Inertial
- Alternate Laser Code
- TADS/PNVS Reliability
- Area Weapon System Reliability
- Fire Control Computer Improvements
- AVR2 Laser Detecting Set

APEI 27

US Army Apache Modernization

FY	84-91	92	93	94	95	96	97	98	99	00	01	02

Full Fleet Modernization



AH-64D Longbow Apache
227 w/FCR Mission Kits
T701C Engines

AH-64D Apaches
527 w/o FCR Mission Kits
T701 Engines

AH-64A Mod Upgrade 752

AH-64A
Current Fleet
821 Procured

Present System

821
-45 Attrition
-24 FMSI
752 aircraft

6 AH-64D Delivered

237 FORSCOM
114 USAREUR
72 EUSA
147 NG
45 Reserve
71 TRADOC
32 AMC
94 Remanf
746

APEI 28

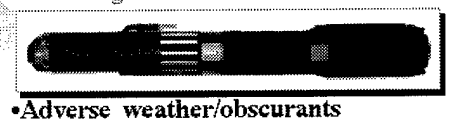
The System

- Adverse weather/ obscurants
- Automatic multitarget
  - Detection
  - Classification
  - Prioritization
- Terrain profiling
- Air targeting
- Moving and stationary targets

Compatible with all previous and new models of HELLFIRE

- **701C engine**
- **Improved Navigation with GPS**
- **Digital communication**
- **Glass cockpit**
- **Enhanced fault isolation**
- **Improved cooling**
- **MANPRINT**

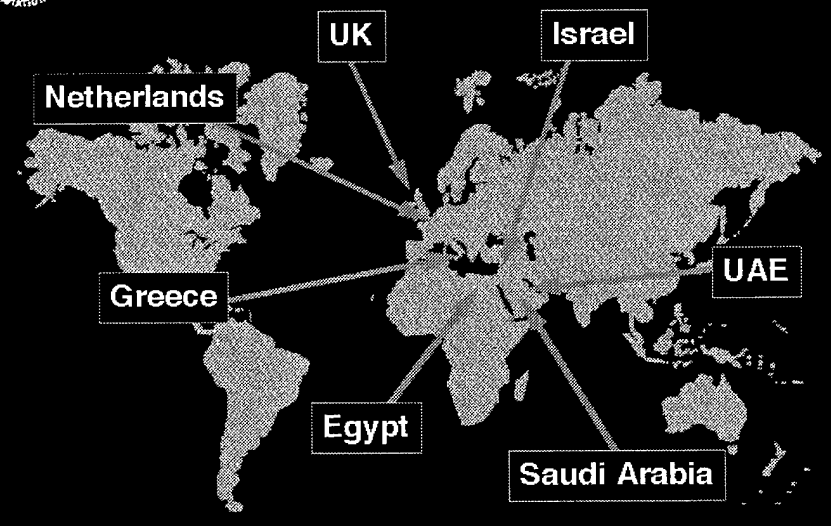
AGM114L Longbow HELLFIRE Missile



- **Adverse weather/obscurants**
- **Fire and Forget**

APBI 29

Apache FMS



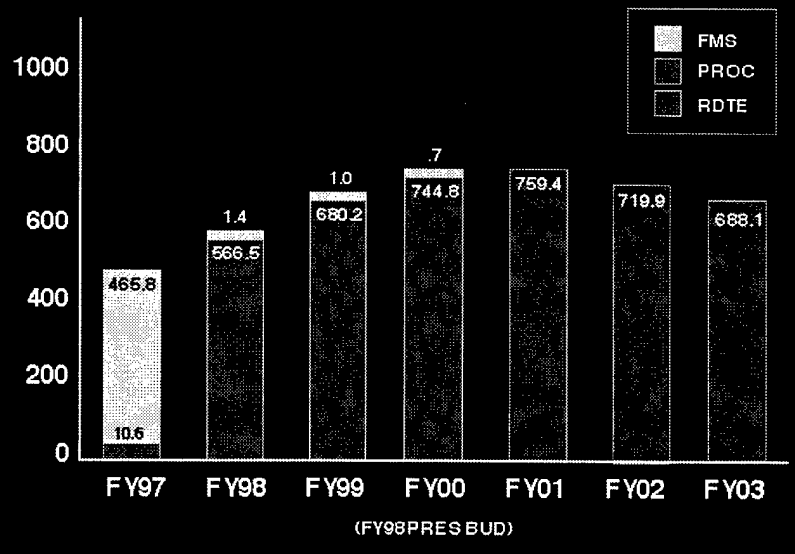
APBI 30

Apache Challenges

- Top five technical:
  - Improved Sensors
  - Digitization
  - Software Acquisition/Support Under Commercial Practices
  - Propulsion / Drive Train Upgrades
  - Airframe Life Extension

APEI 31

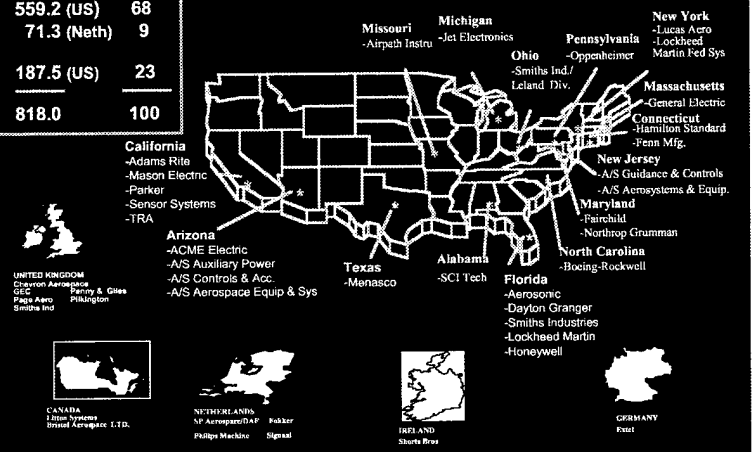
Apache Funding ($M)



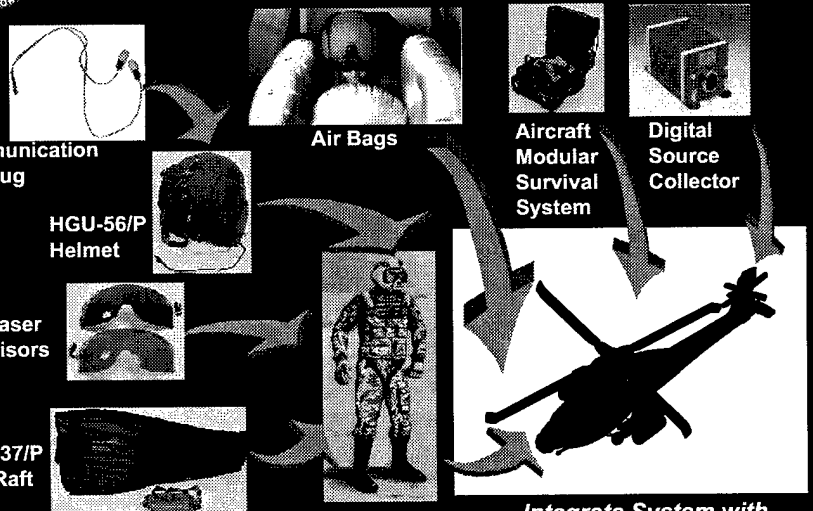
APEI 32

AH-64D Apache Vendor Base

Prime	System	FY 97/98 Workshare $(M)	%
Boeing	Apache	559.2 (US)	68
		71.3 (Neth)	9
LB Ltd	FCR/RFI	187.5 (US)	23
	Total	818.0	100

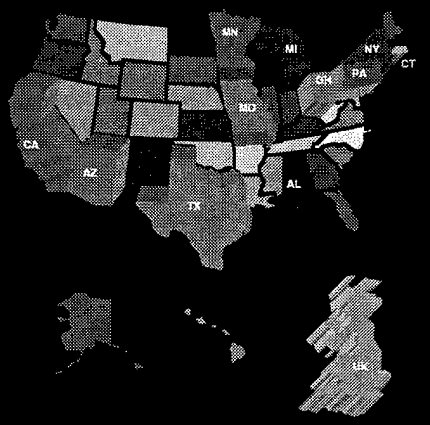


Aircrew Integrated Systems Projects



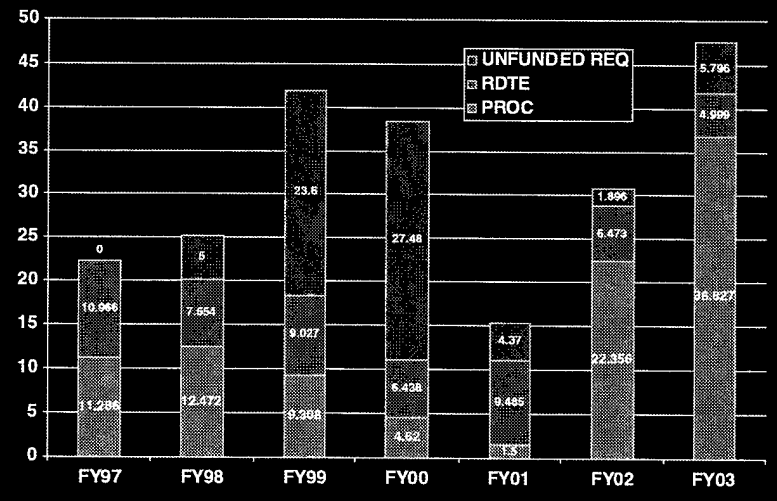
ACIS PMO Vendor Base

PRIME	SYSTEM	FY97/98 WORK SHARE $(M)	%
Gentex	AIHS	5.994	12
Simula	CABS	27.138	55
Motorola	Air Warrior	6.868	14
AOtec	JALEPV	4.215	8
Production Products	CEP	0.100	<1
Smiths Industries	DSC	0.100	<1
Programmatic and Technical Support	All	4.337	9
	TOTAL	48.752	100



APBI 35

ACIS PMO Funding

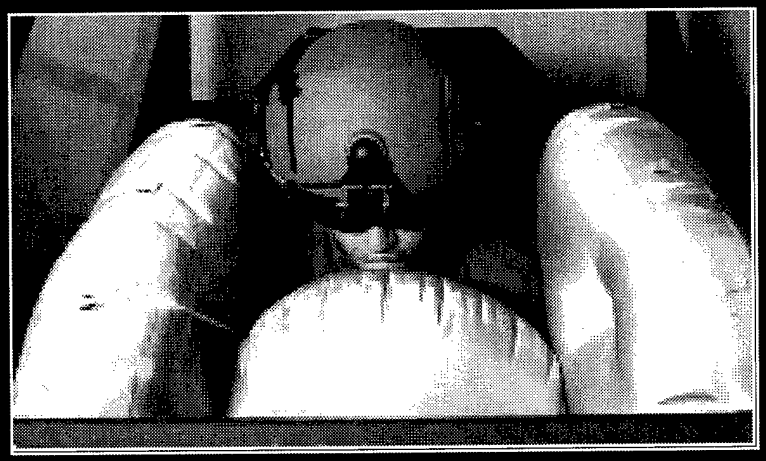


APBI 36

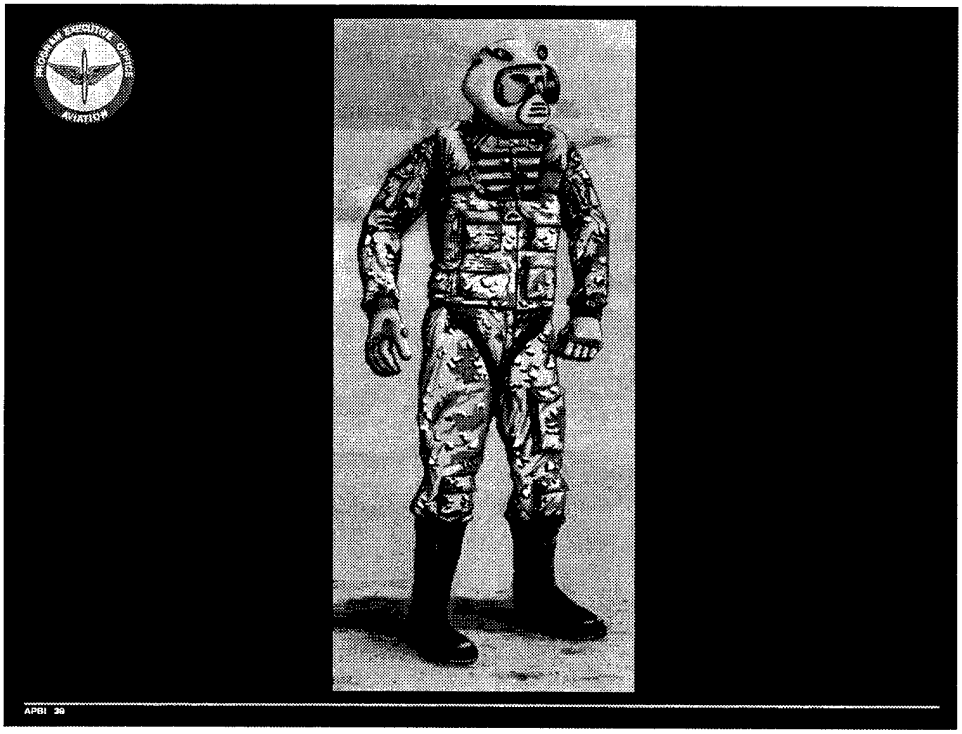
Future Technology Needs

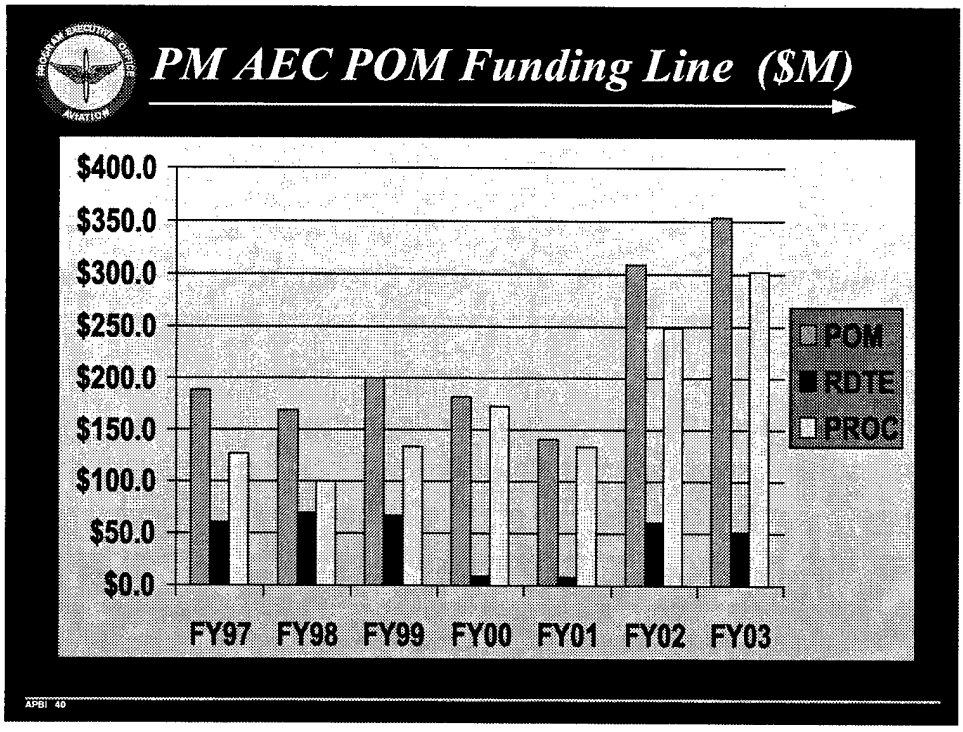
- Light Weight Helmet Mounted Display Components
- Air Bag Gas Generators
- Weight and Bulk Reduction
- Heat Stress (Eliminate) for Air Warrior Components
- Significant O & S Savings from Digital Source Collector

APBI 37



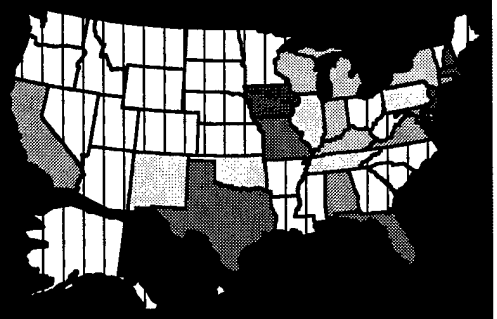
APBI 38


APBI 39


PM AEC POM Funding Line ($M)
$400.0
$350.0
$300.0
$250.0
$200.0
$150.0
$100.0
$50.0
$0.0
FY97
FY98
FY99
FY00
FY01
FY02
FY03
POM
RDTE
PROC
APBI 40

AEC Contractor Location By State

CONTRACTOR	PROGRAM	FY 97/FY 98	ST	%
ASSURANCE TECH CORP	A2C2S, DIV XXI,GPS, IDM, TF XXI	$ 22,911	MA	7.8%
ASTRONAUTICS	GPS	$ 5,167	WI	1.8%
BOEING (MDHS)	ATRJ, ATIRCM, AN/ARC-220, IDM	$ 15,958	MO	5.5%
CAS	AN/ARC-220, ATIRCM	$ 8,766	AL	3.0%
DYNCORP	AN/ARC-220, AN/AVR-2A, GPS, AVESSA	$ 13,762	TX	4.7%
GEC MARCONI	GPS	$ 19,585	NJ	6.7%
HONEYWELL	GPS	$ 5,360	FL	1.8%
HUGHES, DANBURY	AN/AVR-2A	$ 7,938	CT	2.7%
ITT	ATRJ, AN/ARC-220	$ 29,639	NJ	10.1%
LOCKHEED SANDERS	ATIRCM	$ 35,871	NH	12.3%
ROCKWELL INTL	IDM, AN/ARC-164, AN/ARC-220, AMPS	$ 45,440	IA	15.6%
SAIC	AN/ARC-164, TF XXI, A2C2S, AMPS	$ 12,999	CA	4.4%
SIKORSKY	ARC-220	$ 8,009	CT	2.7%
SYMETRICS	IDM	$ 8,116	FL	2.8%
UNC AV SVCS	A2C2S, AN/ARC-164, AN/ARC-220, TF XXI, IDM	$ 10,083	MD	3.5%



ONLY CONTRACT TOTALS GREATER THAN $5M SHOWN

APBI 41

AEC CONTRACTOR LOCATIONS (TOTALS LESS THAN $5.0M)

CONTRACTOR	PROGRAM	FY 97/FY 98	ST	%
AEL INDUSTRIES	AN/ARC-164	$ 70	PA	0.0%
ALLIED SIGNAL	A2C2S TF XXI	$ 2,159	MD	0.4%
ARINC	ARC-220	$ 550	MD	0.1%
BELL HELICOPTERS TEXTRON	AN/ARC-220	$ 4,066	TX	0.8%
BOEING SIKORSKY A/C SUPT	AN/ARC-220	$ 100	TN	0.0%
CAMBER	ATRJ, ATIRCM, TF XXI	$ 402	AL	0.1%
COBRO	GPS	$ 51	MO	0.0%
COLEMAN RESEARCH CORP	TF XXI	$ 124	FL	0.0%
COMPUTER SCIENCE CORP	AMPS, AN/ARC-220	$ 3,447	VA	0.7%
DATA INC	TF XXI	$ 133	MO	0.0%
ENGINEERING & PROFESSIONAL SVCS	AMPS, ATRJ	$ 315	NJ	0.1%
FIBERTEC	ATIRCM	$ 116	MI	0.0%
HUGHES DEFENSE COMM	AN/ARC-164	$ 3,891	IN	0.7%
IIT RESEARCH INSTITUTE	AN/ARC-220	$ 356	IL	0.1%
INNOVATIVE CONCEPTS INC	AN/ARC-220, IDM	$ 3,558	VA	0.7%
ISYSCON	AN/ARC-220	$ 366	MD	0.1%

CONTRACTOR	PROGRAM	FY 97/FY 98	ST	%
LBGAD - RAYTHEON E SYS	AN/ARC-220	$ 3,424	KY	0.7%
LITTON	AMPS	$ 424	CA	0.1%
LOCAL ECONOMY (ST LOUIS)	TF XXI	$ 201	MO	0.0%
LOCKHEED MARTIN FED	AN/ARC-220, IDM	$ 2,270	NY	0.4%
LOCKHEED MARTIN LOG	AN/ARC-220, IDM	$ 1,119	TX	0.2%
MANTECH	ARC-220	$ 530	NJ	0.1%
MNEMONICS INC	A2C2S	$ 709	VA	0.1%
NATIONS INC	AMPS, AN/ARC-220, GPS, IDM	$ 1,212	NJ	0.2%
SCI	AMPS, IDM	$ 2,450	AL	0.5%
SMITH IND	AMPS, GPS	$ 2,037	MI	0.4%
STI	A2C2S, DIV XXI, TF XXI	$ 4,460	FL	0.9%
THIOKOL	AIRCMM	$ 2,780	AL	0.5%
UNC LEAR SERVICES, INC	AN/ARC-164, AN/ARC-220	$ 94	OK	0.0%
VITRONICS	IDM	$ 439	NJ	0.1%
WESTAR	TF XXI, AN/ARC-220, ATRJ, GPS, IDM	$ 1,190	MI	0.2%

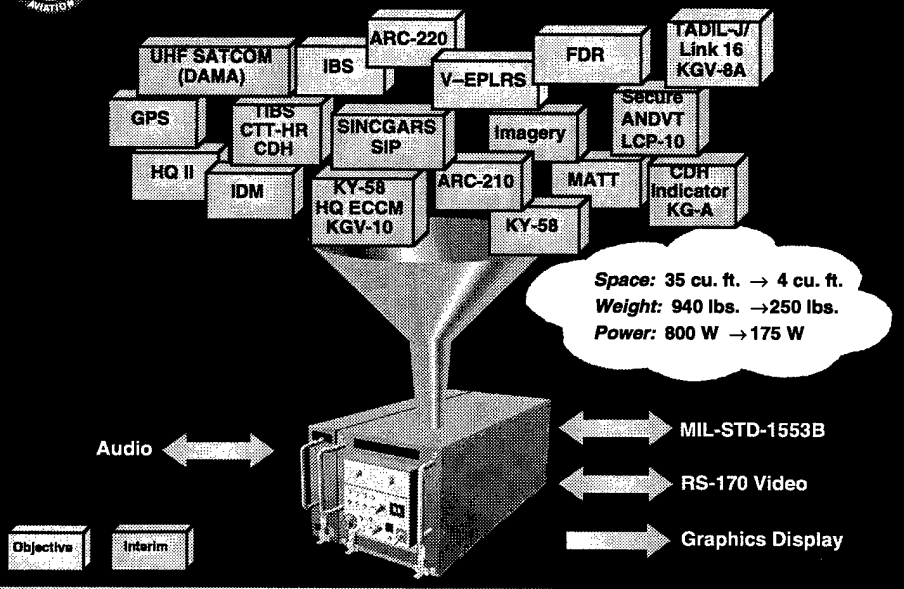
APBI 42

Program Facts

- Technology
  - CMWS — Passive Missile Warning
  - ATIRCOM — Laser Based IR Countermeasures
- Funds — Total
  - RDT&E — $408M (US $100M, USAF $245M, USN $62M)
  - Production — $2,110M (USA $1,203M, USAF $570M, USN $335M)
  - Total — $2,375M
- Quantities
  - Platforms — 6 — B-Kit: Sanders – Lockheed Martin
  - CMWS — 1858 — Group A Integration: Each Platform Prime
  - ATIRCOM

APBI 43

JCIT:
Joint Combat Information Terminal



APBI 44

PM Aviation Electronic Combat Computerized - Digitized Products

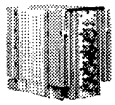
AMPS

Mission Planning
Terrain Analysis Overlays
Threat Analysis

A2C2S

Army Airborne
Command & Control System
(for Maneuver Commander)

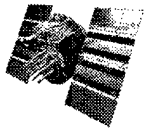
IDM



Data Message
Common Formats
Burst Transmission

Avionics Strategic Planning
- Avionics Open System Architecture
- Avionics Acquisition Guides

GPS

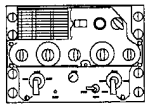


Position Navigation
Timing

HF NOE COMM

Effective Long Range
Communication

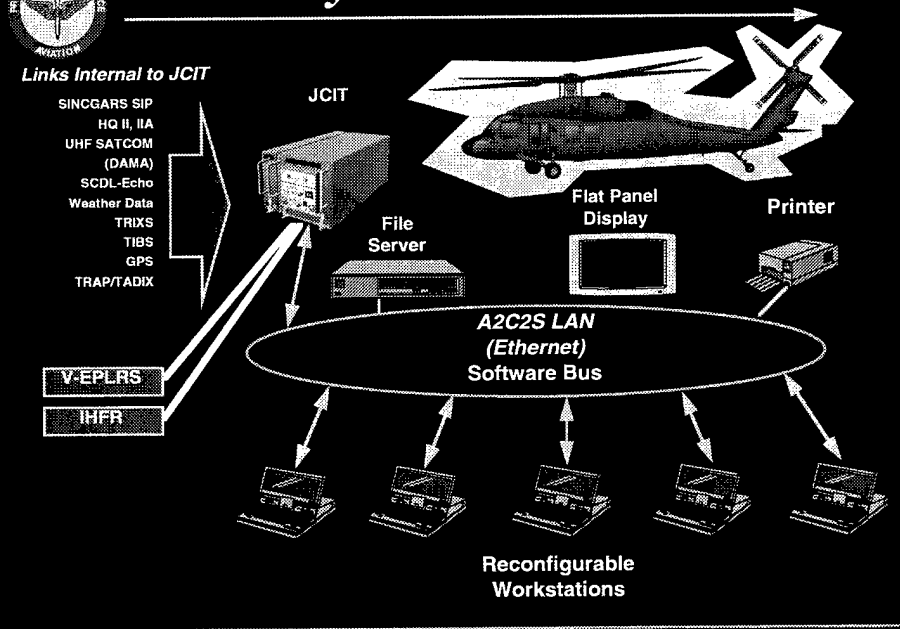
Have Quick II



Joint Communications
with USAF and Navy

APBI 45

A2C2S System Architecture



APBI 46

Total Production Funding

(TY $ in Millions)

FY98 PB

	FY97	FY98	FY99	FY00	FY01	FY02	FY03	*TC*	TOTAL
Army	9.2		12.0	28.7	28.7	80.7	84.5	*959.8*	1203.6
Air Force			7.8	28.3	51.9	76.7	105	*301.1*	570.8
Navy			15.4	38.7	31.1	43.7	49.4	*157.2*	339.9
Total	9.2		35.2	95.7	111.7	201.1	238.9	*1418.1*	2109.9

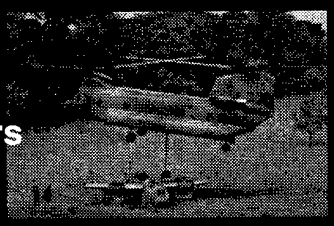
APBI 47

Science and Technology Support

No.	Technology Challenge	Assigned Gov't Organization	Status	Technology Issues
1.	Broad-Band Laser Sources For Infrared Missile Jamming	NVESD (Dr. Joe O'Connell) 908-427-4870	Y	Current Lasers Operate Naturally at Only a Few Specific Wavelengths in the Infrared
2.	Integrated Obstacle Avoidance System	NVESD (Dr. Joe O'Connell) 908-427-4870	Y	In Order to Detect and Avoid Wires at NOE, a High Repetition Rate Laser Radar Technology is Required
3.	Micro-Electronic Miniaturization	CECOM RDEC ? ?	Y	Electronics That Can Withstand Extreme Military Environments
4.	Increasing Antenna Effectiveness	CECOM RDEC (John Prorok) 732-427-3548	Y	The Close Proximity of Many Antennas on Platforms Results in "Co-Site" Interference Problems

APBI 48

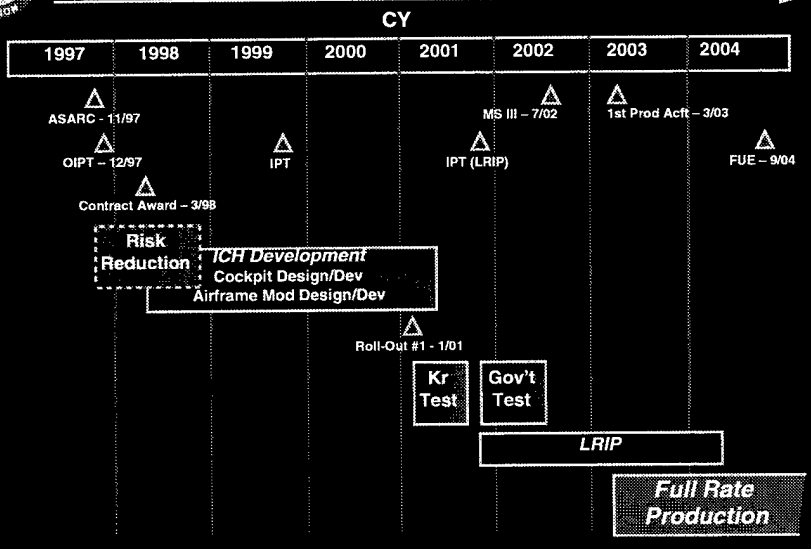
ICH Potential Contract Opportunities



- Force XXI Cockpit
  - Design Integration
  - Displays/Controls/Processors
- Engine Barrier Filter
  - Replaces Engine Air Particle Separator
- Advanced Cargo Handling System
  - Composite Floor
  - Integral Cargo Rollers
- Training/Simulation Devices for ICH

APBI 49

ICH Program Schedule



APBI 50

Current ICH Program Funding

Then Year $

MS II ▽ MS III ▽ 1st Delivery ▽

FY	97	98	99	00	01	02	03	To Complete	Total
RDT&E	17.5	2.6	28.8	31.3	6.1	0		0.0	86.3
Procure				6.1	72.0	229.7	235.7	2,595.6	3139.1
Sub Total	17.5	2.6	28.8	37.4	78.1	229.7	235.7	2,595.6	3225.4
Quantity						18	21	261	300

1. Congressional Marks to FY98 Budget – 20-3M
2. Possible POM Changes to Program By Army

APBI 51

Service Life Extension Program SLEP/ICH

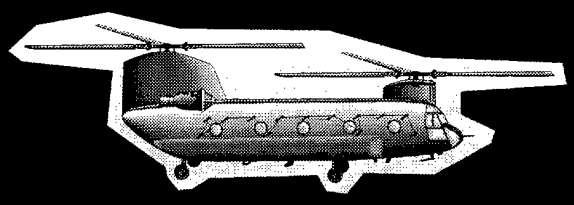
CH-47 Sustainment

DEFICIENCIES

- Rising O&S Costs and Readiness at Risk
- Avionics/Electronics
- Lift Performance

SOLUTION

- Vibration Reduction and Overhaul/Remanufacture
- Modernize to Digitization Capability
- Engine Conversion From 712 to 714 with FADEC



APBI 52

Missile RD&E Center Vision and Strategic Plan

Dr. William C. McCorkle
Technical Director, USAAMCOM and
Executive Director Missiles RD&E Center

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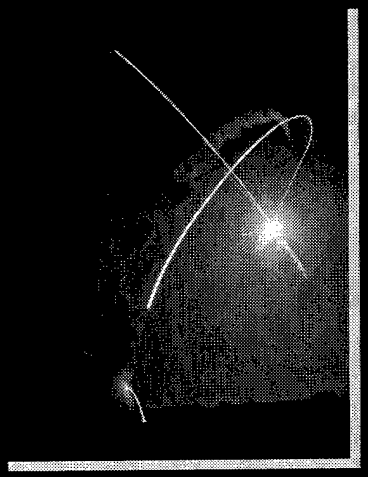
Missile RDEC
Vision and Strategic Plan

"When it takes a Rocket Scientist..."



William C. McCorkle

Missile Research, Development, and Engineering Center

US Army Aviation and Missile Command
Redstone Arsenal, Alabama

Technical Director
For Missiles
and
Director
Missile Research, Development, and Engineering Center

Website: http://www.mrdec.redstone.army.mil

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Outline

"When it takes a Rocket Scientist..."

- Organization
- Vision
- Strategic Plan
- Technology Transition
- Customer Support
- Summary

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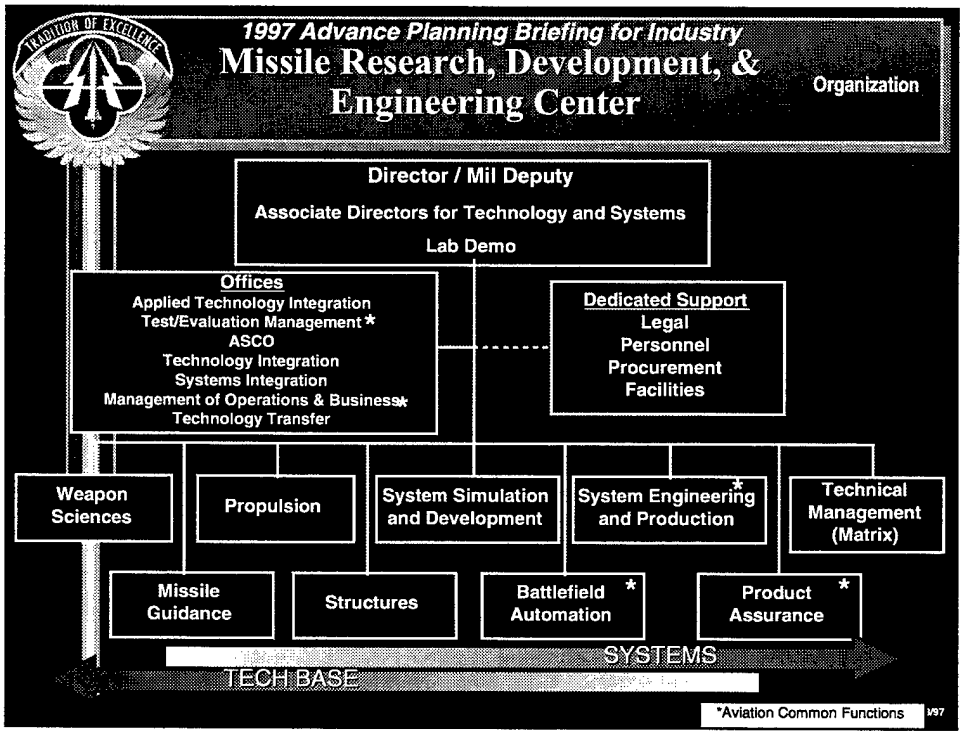
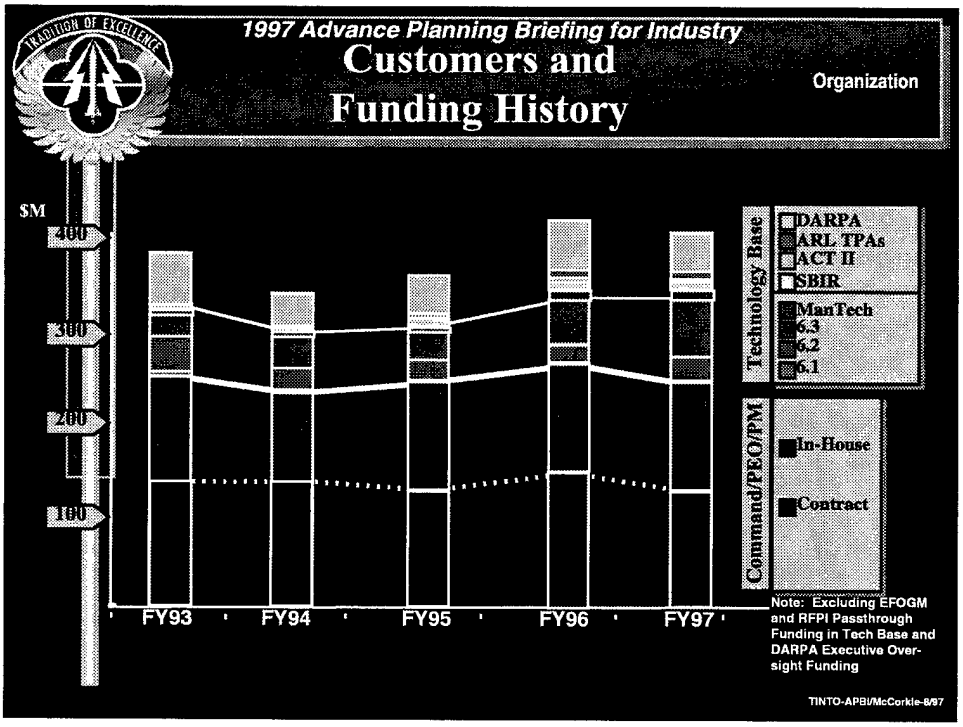

1997 Advance Planning Briefing for Industry
Missile Research, Development, & Engineering Center
Organization
Director / Mil Deputy
Associate Directors for Technology and Systems
Lab Demo
Offices
Applied Technology Integration
Test/Evaluation Management *
ASCO
Technology Integration
Systems Integration
Management of Operations & Business *
Technology Transfer
Dedicated Support
Legal
Personnel
Procurement
Facilities
Weapon Sciences
Propulsion
System Simulation and Development
System Engineering and Production *
Technical Management (Matrix)
Missile Guidance
Structures
Battlefield Automation *
Product Assurance *
SYSTEMS
TECH BASE
*Aviation Common Functions
1/97


1997 Advance Planning Briefing for Industry
Customers and Funding History
Organization
$M
400
300
200
100
FY93
FY94
FY95
FY96
FY97
Technology Base
DARPA
ARL TPAs
ACT II
SBIR
ManTech
6.3
6.2
6.1
Command/PEO/PM
In-House
Contract
Note: Excluding EFOGM and RFPI Passthrough Funding in Tech Base and DARPA Executive Oversight Funding
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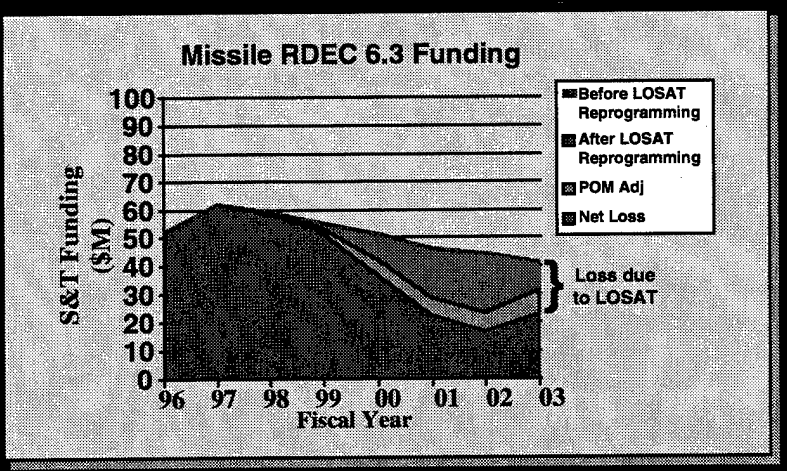
MRDEC Advanced Technology Demonstrations Funding

Organization



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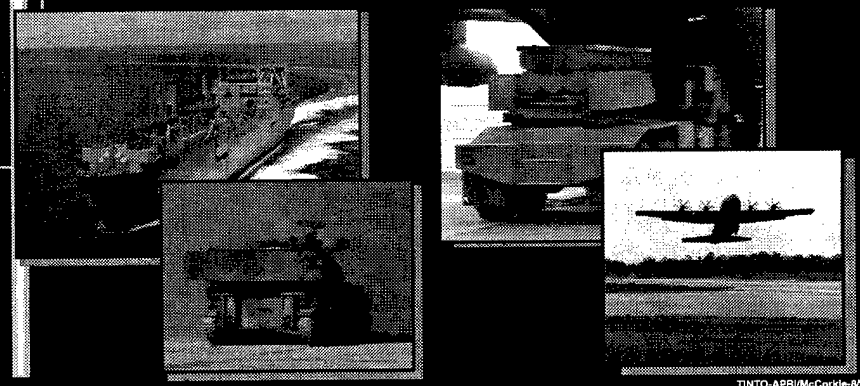
Vectors

Vision

Shaping The Force

- Mainly CONUS Based U.S. Forces
  - Emphasis on Force Projection - Premium on Deployability
  - But a Logistics-Challenged Legacy Army!



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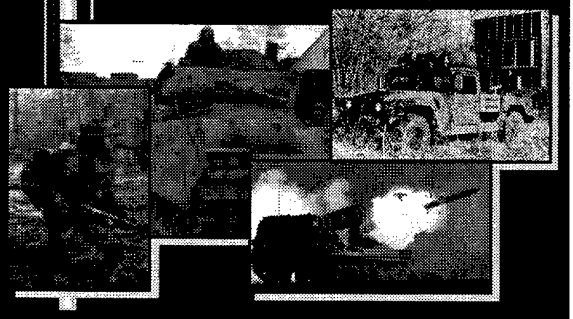
1997 Advance Planning Briefing for Industry

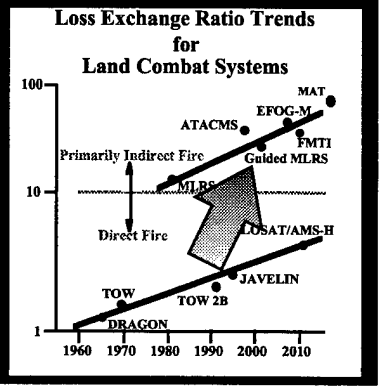
Vectors

Vision

Shaping The Force

- Mainly CONUS Based U.S. Forces
- **Future Victories Must Cost Fewer Lives**
  - **Very High Favorable Loss Exchange Ratios**
  - **Maximum Avoidance of "Close Combat" Shoot Outs**





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Vectors

Vision

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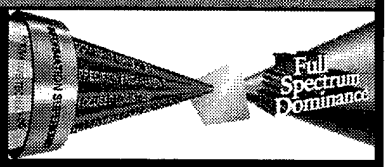
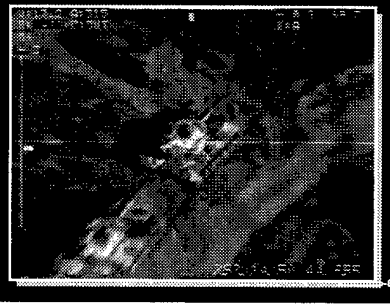
- Future Victories Must Cost Fewer Lives



- **Information Technology Revolution - Digitization**
  - **Win the Information War - Acquire/Deny**
  - **Teleoperation Provides Real-Time Battlefield Information**



8/97

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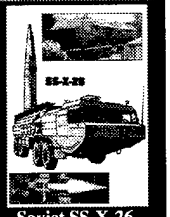
Vectors

Vision

Shaping The Force

- Mainly CONUS Based U.S. Forces
- Future Victories Must Cost Fewer Lives
- Information Technology Revolution - "The Third Wave"



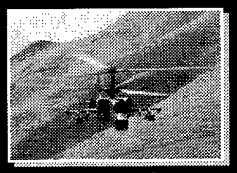
Soviet SS-X-26
"son of Scud"

Shaping The Threat

- Worldwide High Tech Threat Proliferation
  - Strong, Active Market - Not the Best, But Close Behind
  - Increasingly Sophisticated Terrorist Activities

Israeli UAV

Brazilian SS80 MRL



Russian Hokum

US Abrams MBT

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Vectors

Vision

Shaping The Force

- Mainly CONUS Based U.S. Forces
- Future Victories Must Cost Fewer Lives
- Information Technology Revolution - "The Third Wave"

Shaping The Threat

- Worldwide High Tech Threat Proliferation

NATIONAL PERFORMANCE REVIEW

DEPARTMENT OF DEFENSE

XXI

Shaping The Defense Infrastructure

- Defense Acquisition Streamlining/Downsizing
  - Common Defense - Commercial Industrial Base, "Dual Use"
  - Performance and Commercial (Vice Military) Specifications
  - Expanded User Involvement - Battle Labs, Force XXI, AWE
  - DSB/QDR - Enthusiasm For Massive Outsourcing
  - BRAC/VISION 21 - Consolidation

RTEMS

GGP

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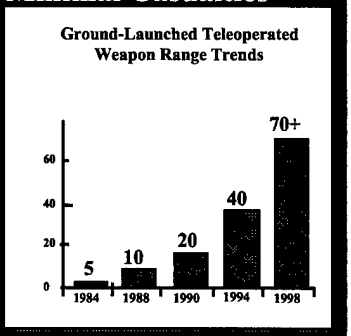
Fewer Casualties - Higher LERs

Vision

- High Survivability Is Critical for High Favorable Loss Exchange Ratios (LER) and Minimal Casualties
- Avoid "Symmetrical" Combat
- Look for and Exploit "Diode-Like" Asymmetries
  - Outrange the Enemy
  - High Precision Delivery
  - Own the Night
  - Win the Information War
  - Operate From Defilade
  - Deny Defilade to the Enemy
  - "A Trained and Ready Army"



Teleoperation Provides Battlefield Recon, Target Acquisition, Precision Delivery, BDA and "Regret Avoidance"

NEVER PLAY ON A LEVEL FIELD!

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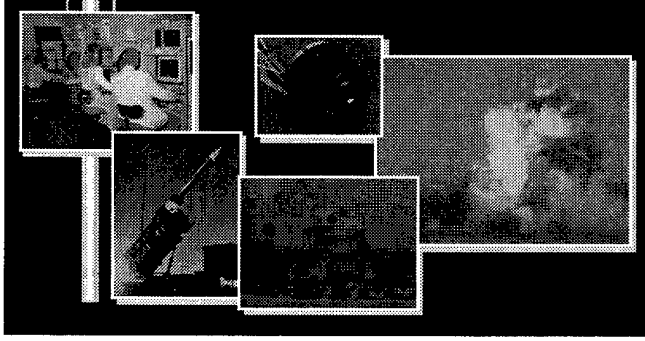
1997 Advance Planning Briefing for Industry

Vision

Vision

"Provide the Technology for Swift, Decisive Victory *without Casualties*"



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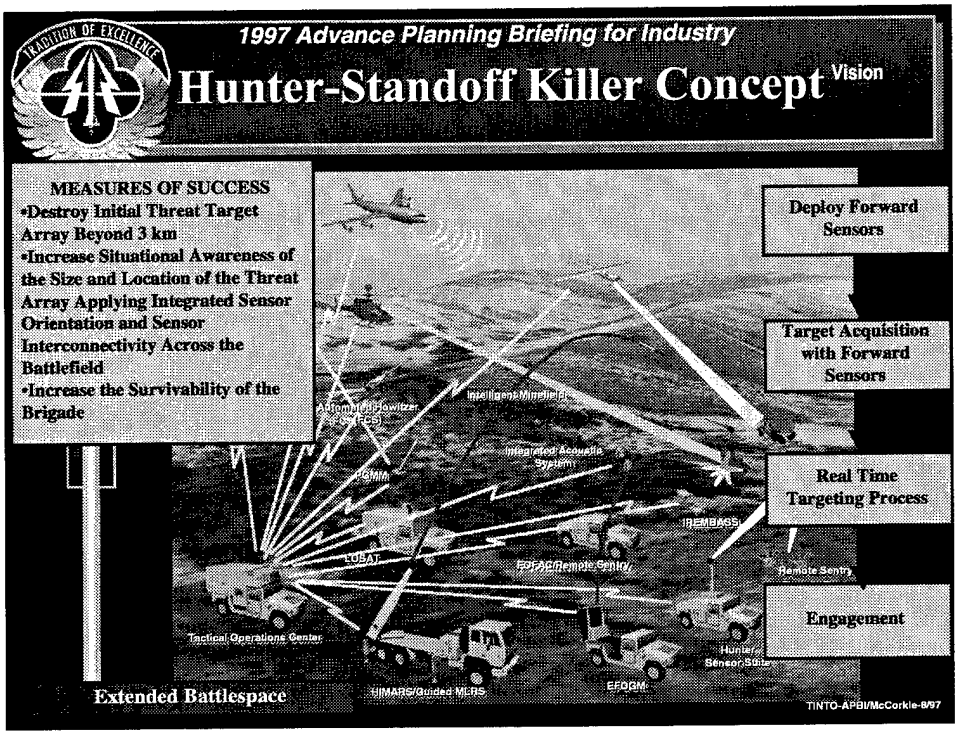
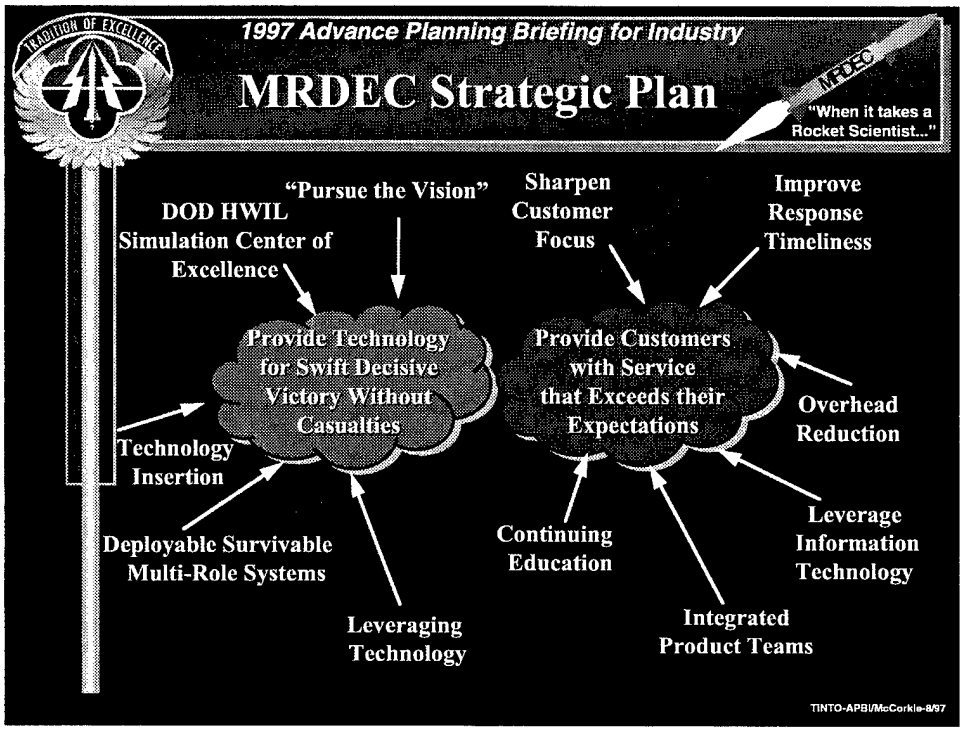
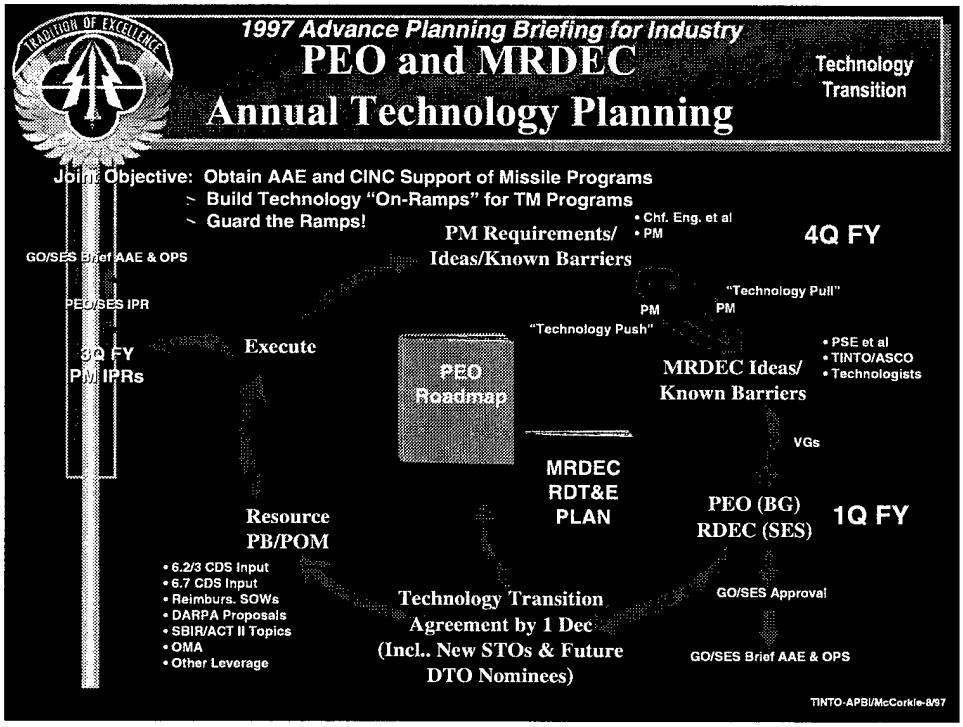
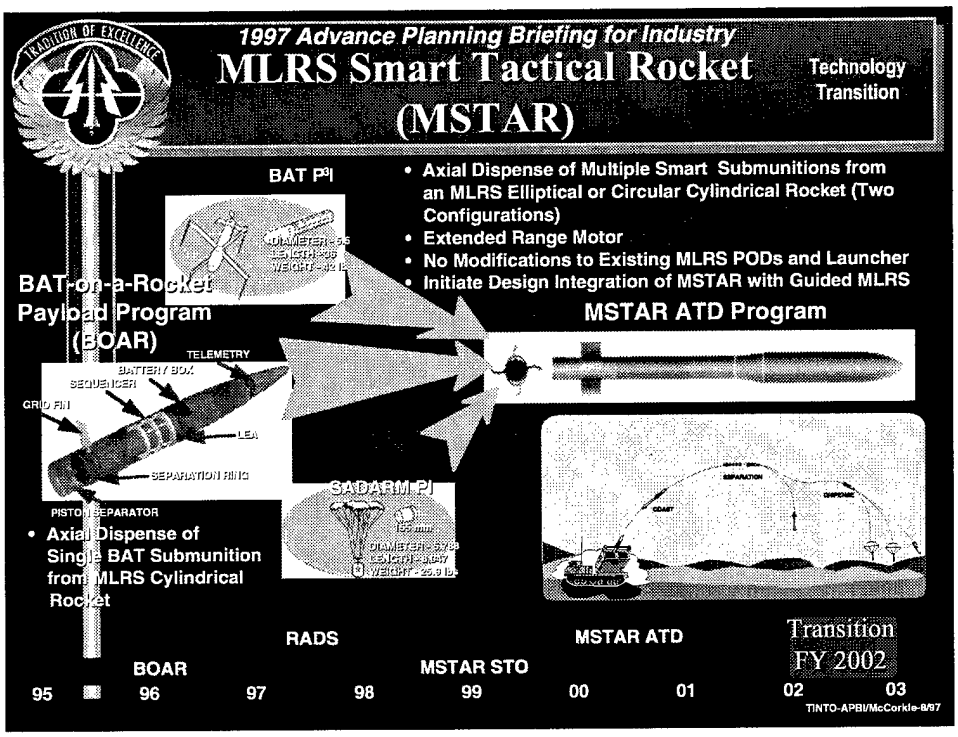
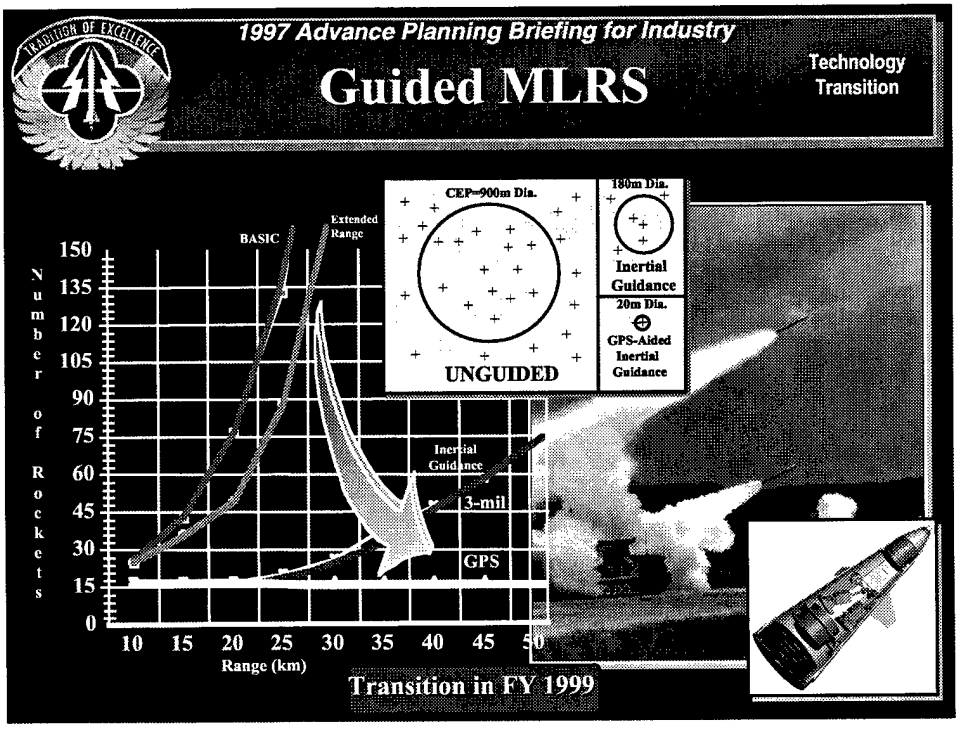

1997 Advance Planning Briefing for Industry
Hunter-Standoff Killer Concept Vision
MEASURES OF SUCCESS
•Destroy Initial Threat Target Array Beyond 3 km
•Increase Situational Awareness of the Size and Location of the Threat Array Applying Integrated Sensor Orientation and Sensor Interconnectivity Across the Battlefield
•Increase the Survivability of the Brigade
Deploy Forward Sensors
Target Acquisition with Forward Sensors
Real Time Targeting Process
Engagement
Extended Battlespace
TINTO-APBI/McCorkle-8/97

1997 Advance Planning Briefing for Industry
MRDEC Strategic Plan
MRDEC
"When it takes a Rocket Scientist..."
Strategic Goals
• Demonstrate With User Partners the Feasibility of New Systems That Significantly Enhance Warfighting Capabilities.
• Strengthen the Science and Technology Base To Support Customer and User Needs.
• Broaden the Marketplace and Increase Market Share.
• Improve the Responsiveness, Affordability, and Quality of MRDEC Engineering Products and Services.
Enabling Strategies
• Keep Key State-of-the-Art Technology Work In-House; Remain Smart Buyer.
• Sustain a Superior Workforce and a Quality Environment.
TINTO-APBI/McCorkle-8/97

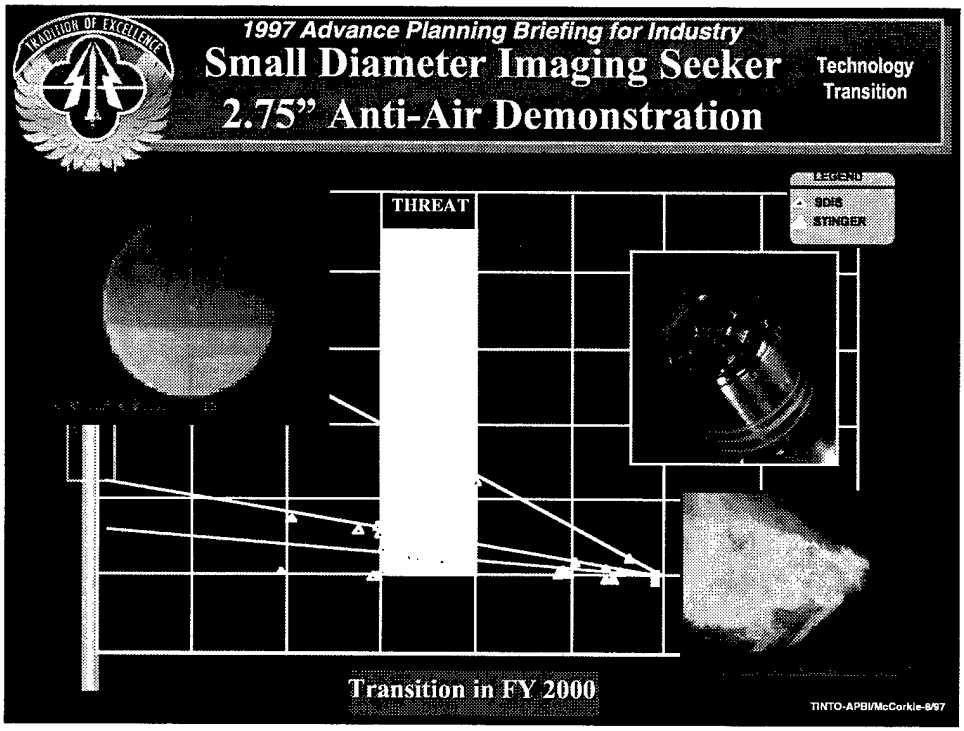

1997 Advance Planning Briefing for Industry
MRDEC Strategic Plan
MRDEC
"When it takes a Rocket Scientist..."
"Pursue the Vision"
DOD HWIL Simulation Center of Excellence
Sharpen Customer Focus
Improve Response Timeliness
Provide Technology for Swift Decisive Victory Without Casualties
Provide Customers with Service that Exceeds their Expectations
Overhead Reduction
Technology Insertion
Deployable Survivable Multi-Role Systems
Leveraging Technology
Continuing Education
Integrated Product Teams
Leverage Information Technology
TINTO-APBI/McCorkle-8/97


1997 Advance Planning Briefing for Industry
PEO and MRDEC
Annual Technology Planning
Technology Transition
Joint Objective: Obtain AAE and CINC Support of Missile Programs
Build Technology "On-Ramps" for TM Programs
Guard the Ramps!
PM Requirements/ Ideas/Known Barriers
• Chf. Eng. et al
• PM
4Q FY
GO/SES Brief AAE & OPS
PEO/SES IPR
3Q FY PM IPRs
Execute
PEO Roadmap
"Technology Pull"
PM
PM
"Technology Push"
MRDEC Ideas/ Known Barriers
• PSE et al
• TINTO/ASCO
• Technologists
VGs
MRDEC RDT&E PLAN
PEO (BG) RDEC (SES)
1Q FY
Resource PB/POM
• 6.2/3 CDS Input
• 6.7 CDS Input
• Reimburs. SOWs
• DARPA Proposals
• SBIR/ACT II Topics
• OMA
• Other Leverage
Technology Transition Agreement by 1 Dec (Incl.. New STOs & Future DTO Nominees)
GO/SES Approval
GO/SES Brief AAE & OPS
TINTO-APBI/McCorkle-8/97


1997 Advance Planning Briefing for Industry
MLRS Smart Tactical Rocket (MSTAR)
Technology Transition
BAT P³I
• Axial Dispense of Multiple Smart Submunitions from an MLRS Elliptical or Circular Cylindrical Rocket (Two Configurations)
• Extended Range Motor
• No Modifications to Existing MLRS PODs and Launcher
• Initiate Design Integration of MSTAR with Guided MLRS
BAT-on-a-Rocket Payload Program (BOAR)
MSTAR ATD Program
TELEMETRY
BATTERY BOX
SEQUENCER
GRID FIN
LEA
SEPARATION RING
PISTON SEPARATOR
SADARM P³I
• Axial Dispense of Single BAT Submunition from MLRS Cylindrical Rocket
RADS
MSTAR ATD
Transition FY 2002
BOAR
MSTAR STO
95 96 97 98 99 00 01 02 03
TINTO-APBI/McCorkle-8/97


1997 Advance Planning Briefing for Industry
Guided MLRS
Technology Transition
CEP=900m Dia.
180m Dia.
Inertial Guidance
20m Dia.
GPS-Aided Inertial Guidance
UNGUIDED
BASIC
Extended Range
Number of Rockets
150
135
120
105
90
75
60
45
30
15
0
Inertial Guidance
3-mil
GPS
10 15 20 25 30 35 40 45 50
Range (km)
Transition in FY 1999

1997 Advance Planning Briefing for Industry
CAPS Technology Development
Addressing Responsive Threats to Anti-Armor Missiles
Technology Transition
• APS Fielded / In Development
• Large Reduction in Missile Effectiveness (>2005)
• Solution Could be Retrofitted to Current Missile Inventory
Work Under Way in These Areas:
APS Sensor Jamming and Deception - Missile RCS Measurement, Breadboard Jammer Design, Fab, & Test.
Deployable Decoys & Chaff - Evaluating Decoy Size Required, Deployment Techniques, and Propulsion.
Missile Hardening - Evaluating Techniques for Hardening Against APS Countermunition Fragment Damage.
Long Standoff Warheads and Sensors - S&T for Long Standoff Design, Transition DOE S&T to Contractor.
Fly-Over-Shoot-Down Terminal Homing - Modify Homing Guidance to Fly Over and Shoot Down with Multiple EFPs.
Fly-Over-Shoot-Down Terminal Homing
Spoof or Jam Radar
Harden Against Fragment Impact
Shoot from Long Standoff
Transitions in FY 1998, 2000
TINTO-APBI/McCorkle-8/97

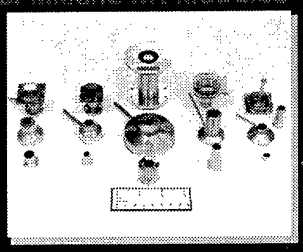

1997 Advance Planning Briefing for Industry
Small Diameter Imaging Seeker
2.75" Anti-Air Demonstration
Technology Transition
THREAT
SDIS
STINGER
Transition in FY 2000
TINTO-APBI/McCorkle-8/97

1997 Advance Planning Briefing for Industry

Manufacturing Technology

Technology Transition

Flexible Manufacturing of Missile IR Modules

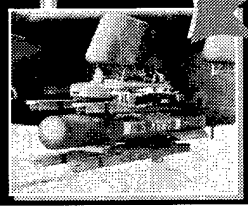


$1075 per Unit Savings

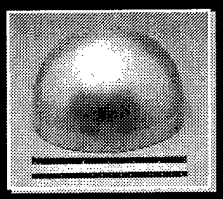
THAAD Missile

Multiple System Production Capability

Application Time Reduced from 10 Hrs to 30 Min



$ 700 per Unit Savings



EMI Shielding of Missile Domes

Photo Mask Javelin Dome

Longbow Missile Radome

TINTO-APBI/McCorkle-8/97

1997 Advance Planning Briefing for Industry

Unmanned Ground Systems

Technology Transition

Objectives:

- Increase Standoff Range for Delivery of Modular Payloads
  - — Sensors
  - — Weapons
- Accomodate Reduced Force Structure ("More with Fewer") Approach:
- Leverage DARPA, ARL, Industry efforts
- Standard Architectures for Multiple Systems/Missions
  - — Software and Computer Systems
  - — Mission Planning
  - — Payloads
  - — Command and Control

Panther in Bosnia

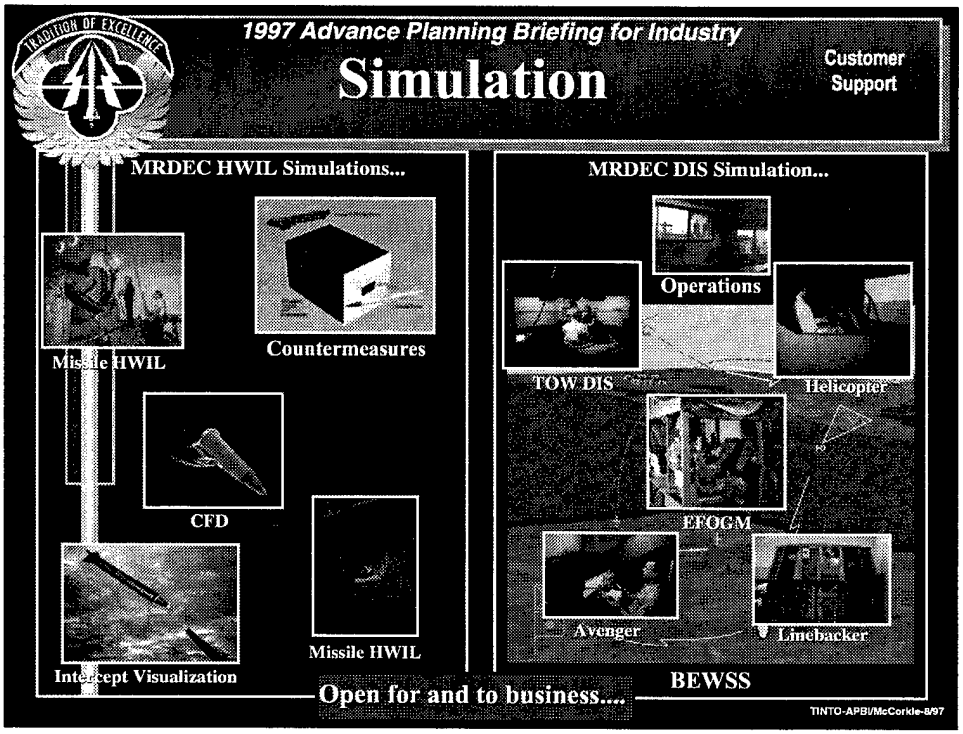
Panther Technology POP to support FY98 MS I/II for Vehicle Teloperation Capability (VTC) Kit

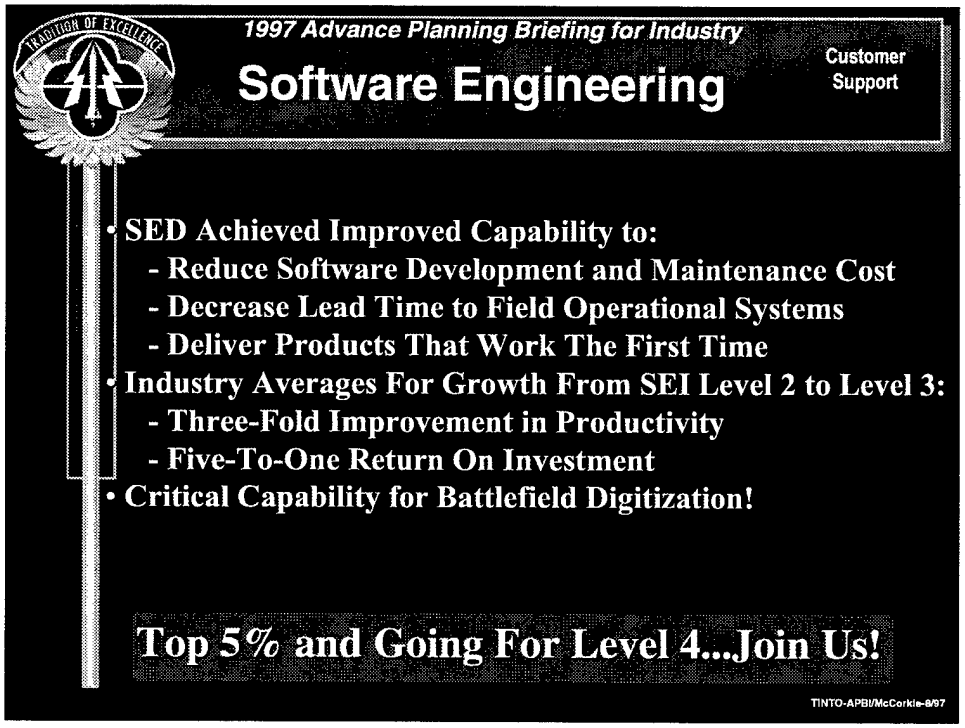
Sarge

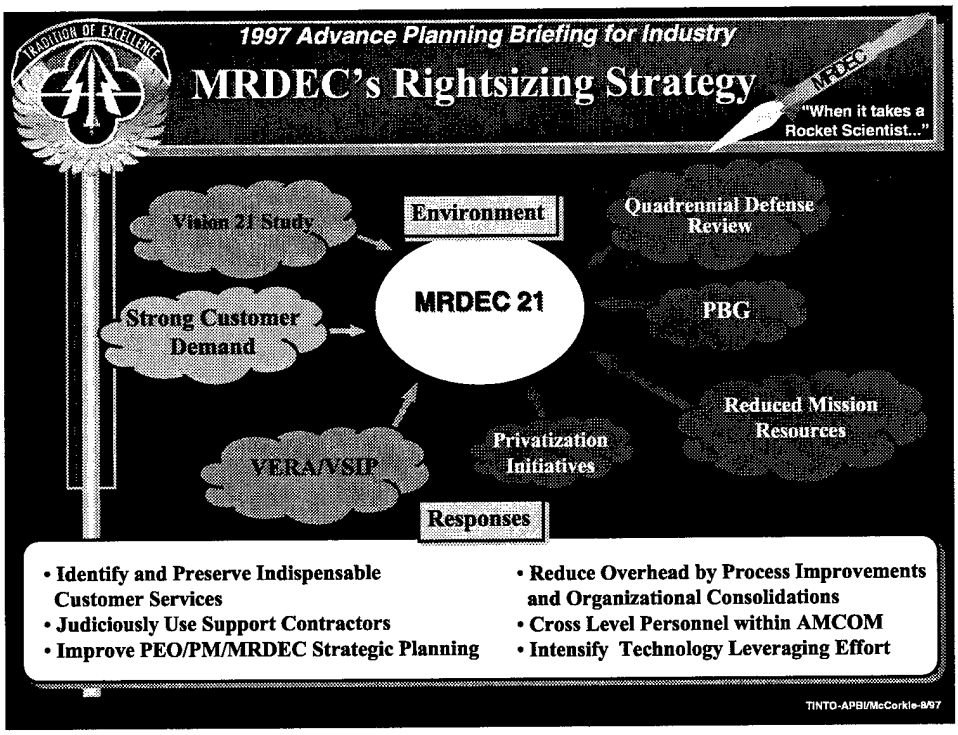
Technology POP to Support Validation of Tactical Unmanned System Performance Spec for FY98 MS II

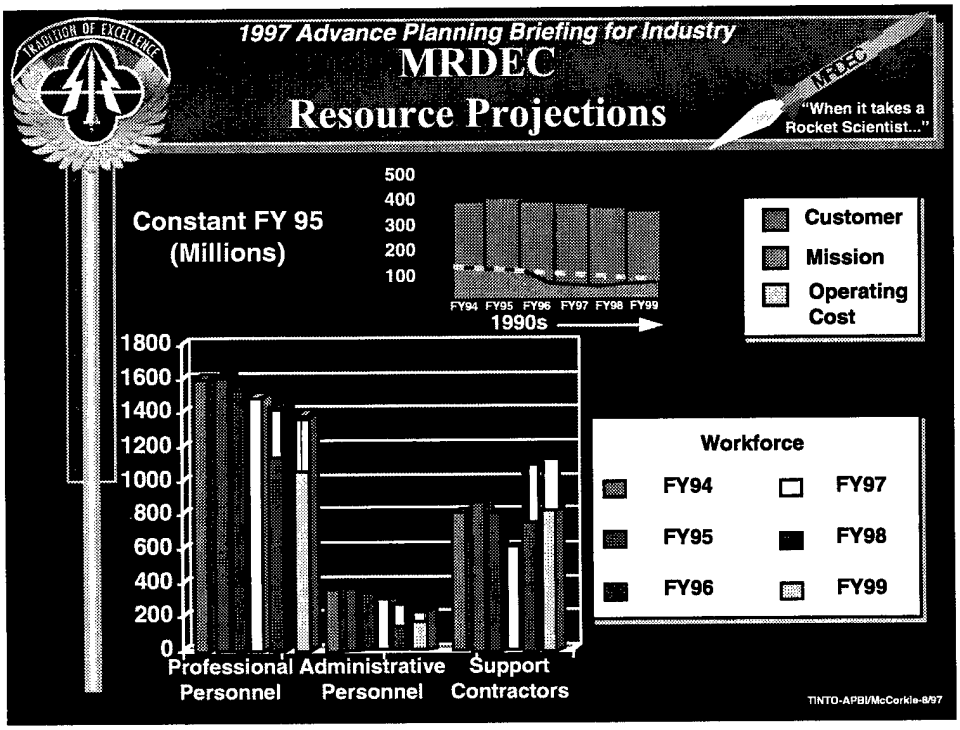
Remoted JAVELIN

TINTO-APBI/McCorkle-8/97


1997 Advance Planning Briefing for Industry
Simulation
Customer Support
MRDEC HWIL Simulations...
Missile HWIL
Countermeasures
CFD
Intercept Visualization
Missile HWIL
MRDEC DIS Simulation...
Operations
TOW DIS
Helicopter
EFOGM
Avenger
Linebacker
BEWSS
Open for and to business....
TINTO-APBI/McCorkle-8/97


1997 Advance Planning Briefing for Industry
Software Engineering
Customer Support
• SED Achieved Improved Capability to:
- Reduce Software Development and Maintenance Cost
- Decrease Lead Time to Field Operational Systems
- Deliver Products That Work The First Time
• Industry Averages For Growth From SEI Level 2 to Level 3:
- Three-Fold Improvement in Productivity
- Five-To-One Return On Investment
• Critical Capability for Battlefield Digitization!
Top 5% and Going For Level 4...Join Us!
TINTO-APBI/McCorkle-8/97


1997 Advance Planning Briefing for Industry
MRDEC's Rightsizing Strategy
"When it takes a Rocket Scientist..."
Environment
Vision 21 Study
Quadrennial Defense Review
MRDEC 21
Strong Customer Demand
PBG
Reduced Mission Resources
Privatization Initiatives
VERA/VSIP
Responses
• Identify and Preserve Indispensable Customer Services
• Judiciously Use Support Contractors
• Improve PEO/PM/MRDEC Strategic Planning
• Reduce Overhead by Process Improvements and Organizational Consolidations
• Cross Level Personnel within AMCOM
• Intensify Technology Leveraging Effort
TINTO-APBI/McCorkle-8/97

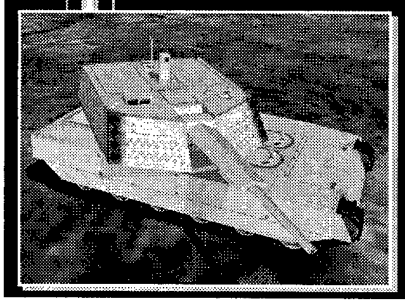

1997 Advance Planning Briefing for Industry
MRDEC
Resource Projections
"When it takes a Rocket Scientist..."
Constant FY 95 (Millions)
500
400
300
200
100
FY94 FY95 FY96 FY97 FY98 FY99
1990s
Customer
Mission
Operating Cost
1800
1600
1400
1200
1000
800
600
400
200
0
Professional Personnel
Administrative Personnel
Support Contractors
Workforce
FY94
FY95
FY96
FY97
FY98
FY99
TINTO-APBI/McCorkle-8/97

Summary

"When it takes a Rocket Scientist..."

Well-Positioned for the Future

- MRDEC's Product Lines are Key to a Survivable Force Projection Army
  - — Develop and Transition Technology
  - — Support Customers



Aviation RD&E Center Vision and Strategic Plan

Mr. Tom L. House
Executive Director Aviaiton RD&E Center

US Army Aviation and Missile Command
Aviation Research, Development and Engineering Center (AVRDEC)

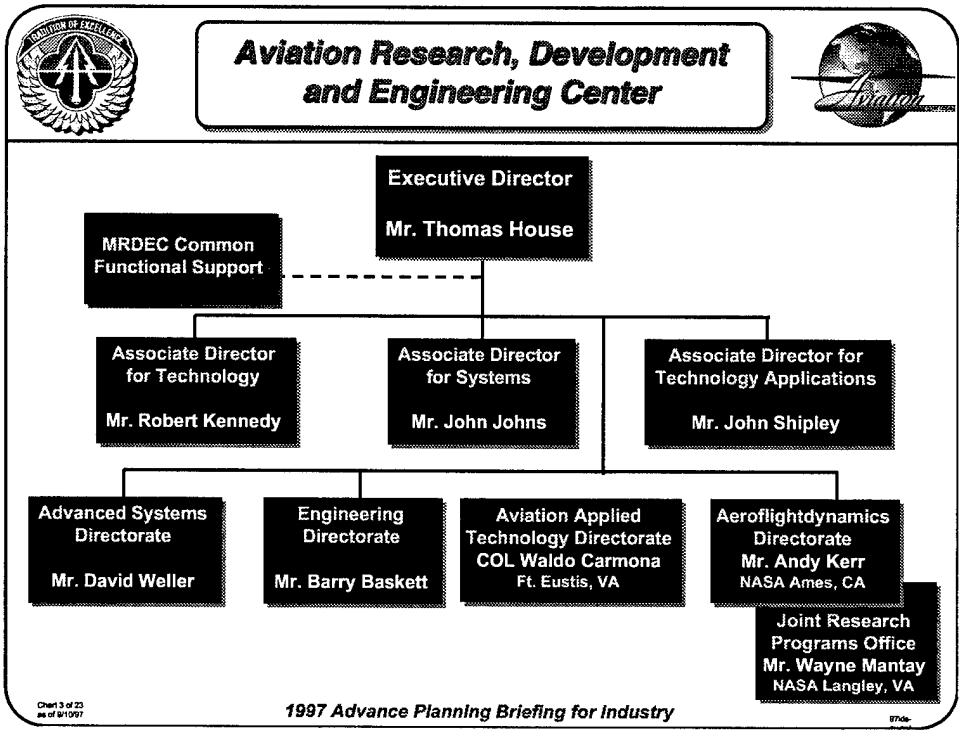
Presentation at 1997 AMCOM Advance Planning Briefing to Industry

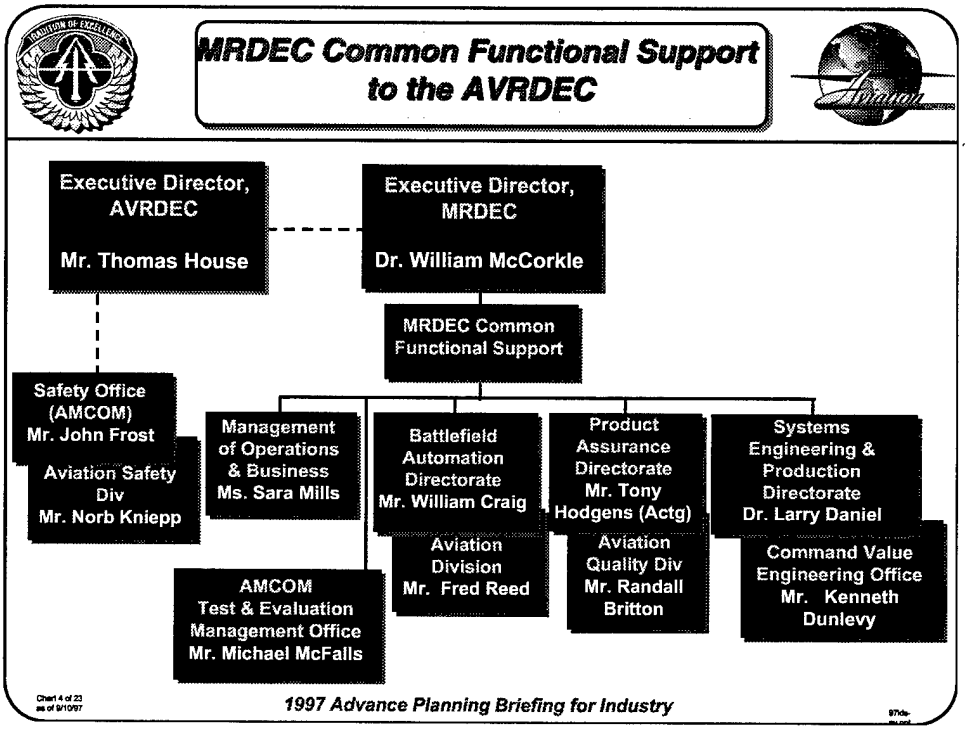
21 October 1997

Mr. Thomas L. House
Executive Director, AVRDEC

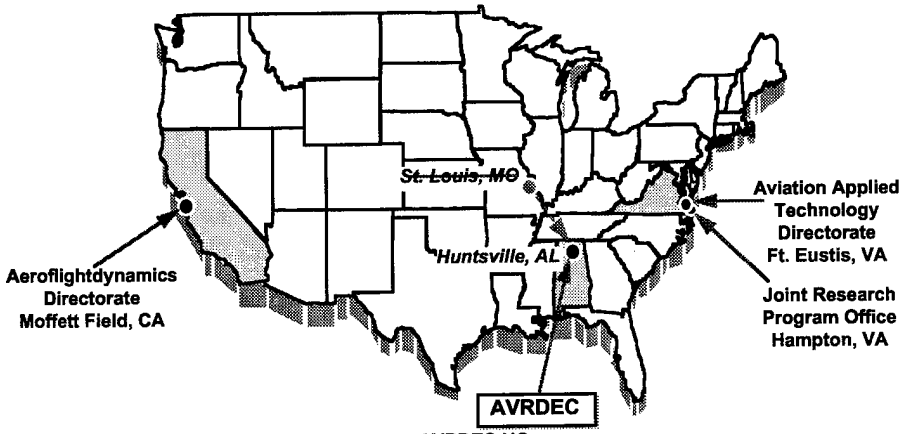
Agenda

- —Evolution of the AVRDEC under AMCOM
- —Focusing Rotorcraft S&T for Army After Next
- —The Aviation O&S Cost Reduction Challenge
- —Realigning the Aviation S&T and Engineering Processes


Aviation Research, Development and Engineering Center
Executive Director
Mr. Thomas House
MRDEC Common Functional Support
Associate Director for Technology
Mr. Robert Kennedy
Associate Director for Systems
Mr. John Johns
Associate Director for Technology Applications
Mr. John Shipley
Advanced Systems Directorate
Mr. David Weller
Engineering Directorate
Mr. Barry Baskett
Aviation Applied Technology Directorate
COL Waldo Carmona
Ft. Eustis, VA
Aeroflightdynamics Directorate
Mr. Andy Kerr
NASA Ames, CA
Joint Research Programs Office
Mr. Wayne Mantay
NASA Langley, VA
1997 Advance Planning Briefing for Industry

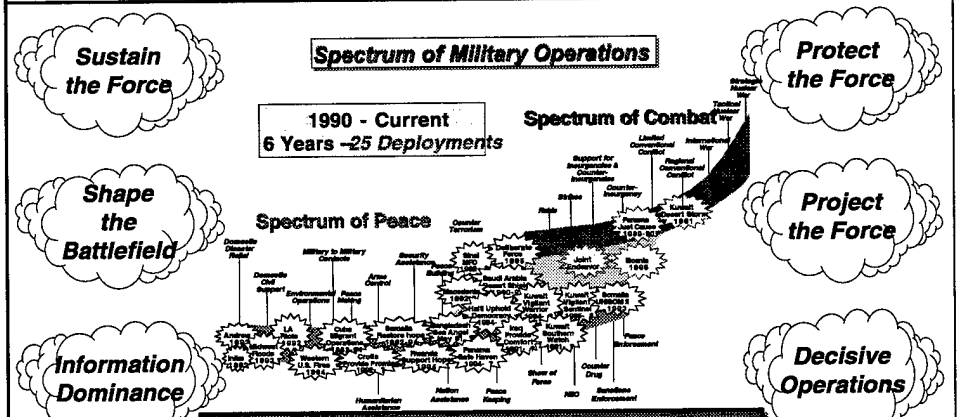

MRDEC Common Functional Support to the AVRDEC
Executive Director, AVRDEC
Mr. Thomas House
Executive Director, MRDEC
Dr. William McCorkle
MRDEC Common Functional Support
Safety Office (AMCOM)
Mr. John Frost
Aviation Safety Div
Mr. Norb Kniepp
Management of Operations & Business
Ms. Sara Mills
Battlefield Automation Directorate
Mr. William Craig
Aviation Division
Mr. Fred Reed
Product Assurance Directorate
Mr. Tony Hodgens (Actg)
Aviation Quality Div
Mr. Randall Britton
Systems Engineering & Production Directorate
Dr. Larry Daniel
Command Value Engineering Office
Mr. Kenneth Dunlevy
AMCOM Test & Evaluation Management Office
Mr. Michael McFalls
1997 Advance Planning Briefing for Industry

US Army Aviation and Missile Command (Aviation RDEC)



- AVRDEC HQ
- Engineering Directorate
- Advanced Systems Directorate
- Common Functional Support (MRDEC/AMCOM)

Army Aviation Relevance



Army Aviation
A Major Combat Contributor for Today, Vision 2010 and Army After Next...

Army After Next => Operational Needs

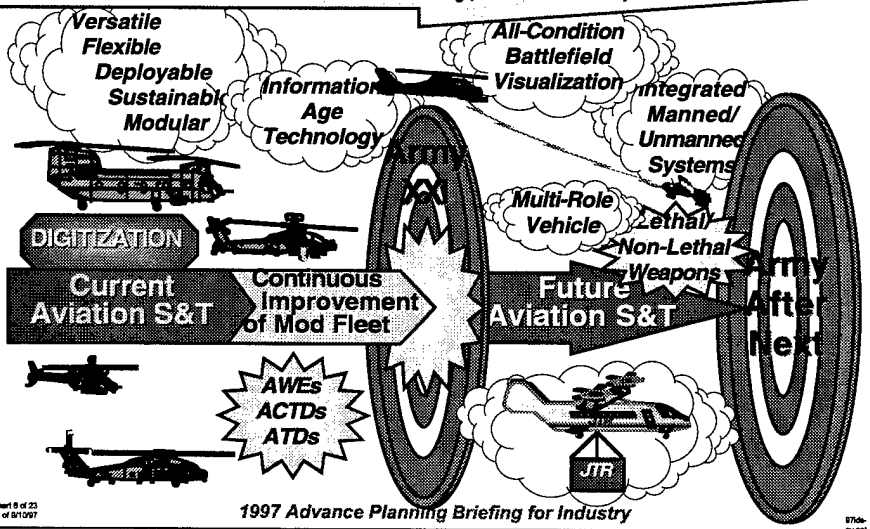
- —Power Projection
- —High Speed Strategic Lift
- —Situational Awareness
- —Tactical and Operational Fires
- —Speed: Strategic, Operational, Tactical
- —Reduced Logistics Tail
- —Dominant Maneuver and Precision Engagement
- —Tailorable, Versatile
- —Expansible

Seize the Initiative, Build Momentum...

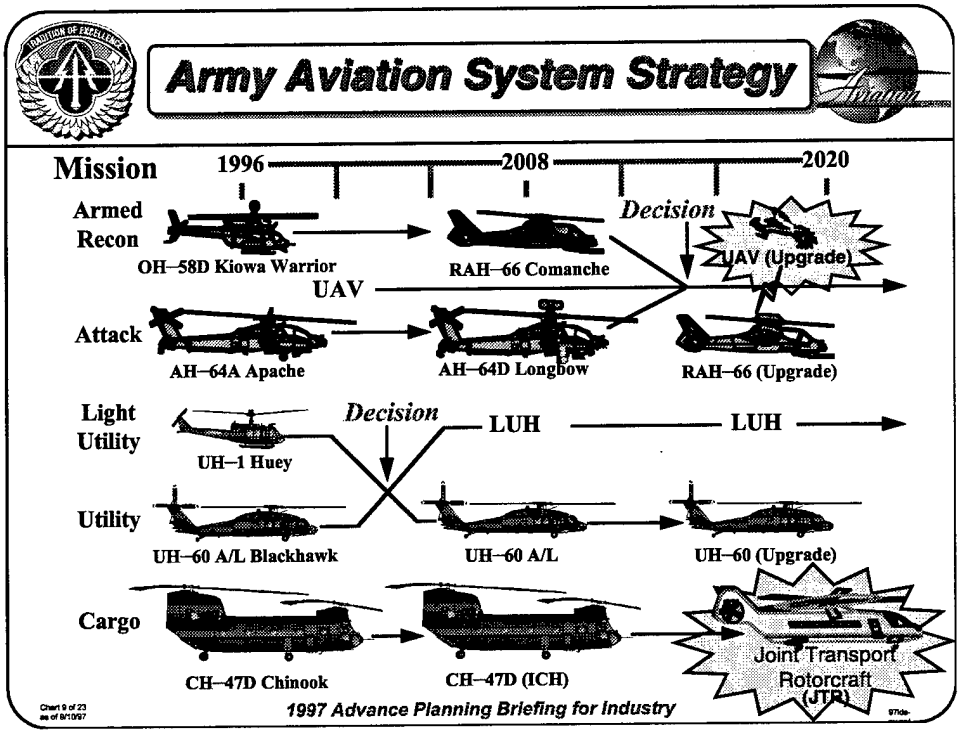
The Goal: A *globally self-deployable* force capable of striking directly at strategic and operational centers of gravity

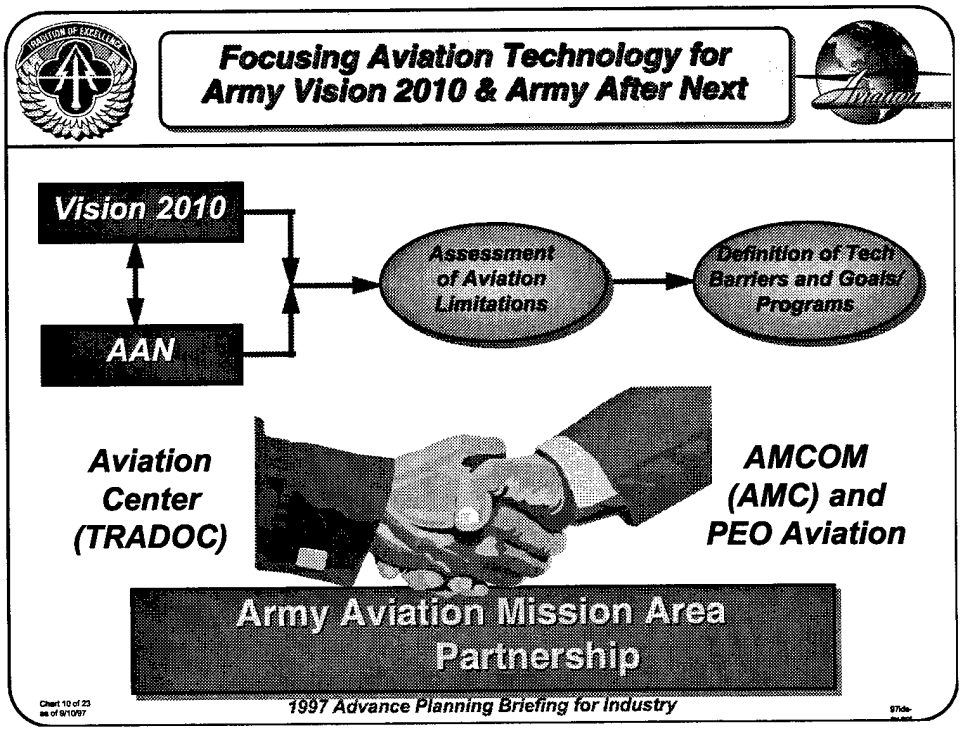
Aviation Vision

- A Relevant, Affordable Force - Today, Tomorrow , the Future

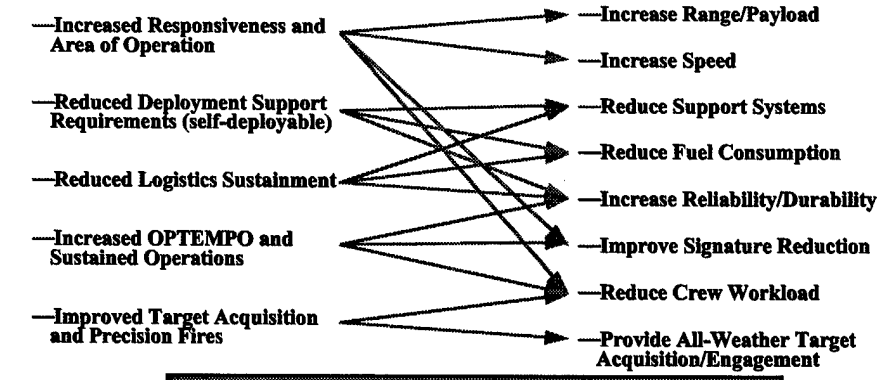


1997 Advance Planning Briefing for Industry


Army Aviation System Strategy
Mission
1996
2008
2020
Armed Recon
OH–58D Kiowa Warrior
RAH–66 Comanche
Decision
UAV (Upgrade)
UAV
Attack
AH–64A Apache
AH–64D Longbow
RAH–66 (Upgrade)
Light Utility
UH–1 Huey
Decision
LUH
LUH
Utility
UH–60 A/L Blackhawk
UH–60 A/L
UH–60 (Upgrade)
Cargo
CH–47D Chinook
CH–47D (ICH)
Joint Transport Rotorcraft (JTR)
Chart 9 of 23
as of 9/10/97
1997 Advance Planning Briefing for Industry


Focusing Aviation Technology for Army Vision 2010 & Army After Next
Vision 2010
AAN
Assessment of Aviation Limitations
Definition of Tech Barriers and Goals/ Programs
Aviation Center (TRADOC)
AMCOM (AMC) and PEO Aviation
Army Aviation Mission Area Partnership
Chart 10 of 23
as of 9/10/97
1997 Advance Planning Briefing for Industry

Aviation Challenges for AAN



Acquisition and Sustainment Affordability is an Overarching Focus Area

Technology Goals/Thrusts for AAN Aviation

Technology Goals*

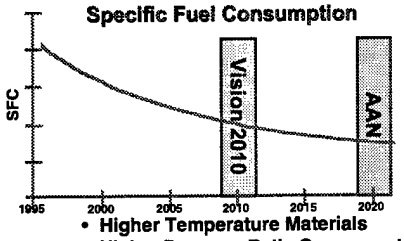
- —150/200% Increased Payload/ Range (respectively)
- —20% Increase in Speed
- —40% Reduction in Support Systems and Personnel
- —60% Reduction in Specific Fuel Consumption
- —70% Increase in Reliability/ Durability
- —80% Reduction in Signature
- —50% Increase in Crew Station Effectiveness (Lower Workload)
- —75% Reduction in Target Acquisition and Engagement Time Lines
- —40% Reduction in Acquisition and Sustainment Costs

* Against Current Mod Fleet Baselines

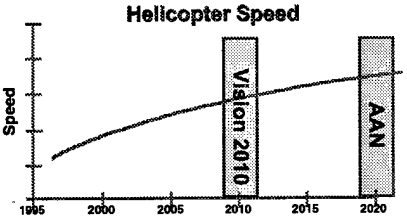
Technology Thrusts

- —Advanced Rotors and Individual On-Blade Controls
- —Large Section Lightweight Composite Structures
- —Advanced Materials and Designs for High-Temp/ Pressure Turboshaft Engines
- —Integrated Diagnostics/ Prognostics
- —6-Sigma Design
- —High Efficiency Power Transmission Concepts
- —Integrated Signature Control
- —Cognitive Aided Crew Stations
- —Integrated Sensor-Fused Targeting and Smart Lethal/ Non-Lethal Weapons
- —Integrated Manned/Unmanned Systems

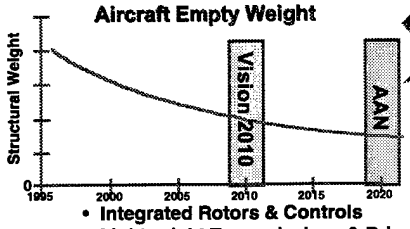
The Integrated Technology Impact for AAN



- Higher Temperature Materials
- Higher Pressure Ratio Components



- Advanced Rotors
- Individual Blade Controls
- Low Drag Airframes



- Integrated Rotors & Controls
- Lightweight Transmissions & Drives
- Lightweight Structures & Airframes

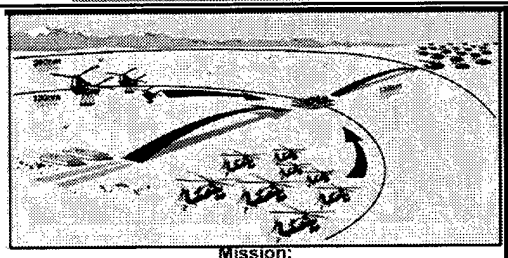
- **70% reduction in fuel for same mission**
- **200% increase in operating radius**
- **75% reduction in mission timelines**
- **Greater than 100% increase in productivity (ton-miles/day)**

1997 Advance Planning Briefing for Industry

Chart 13 of 23 as of 9/10/97

Integrated High Performance Turbine Engine Technology (IHPTET)

Provides Mission Flexibility for AAN



Mission:
Destroy 64 Enemy Tanks at 260 NM & Return to Base

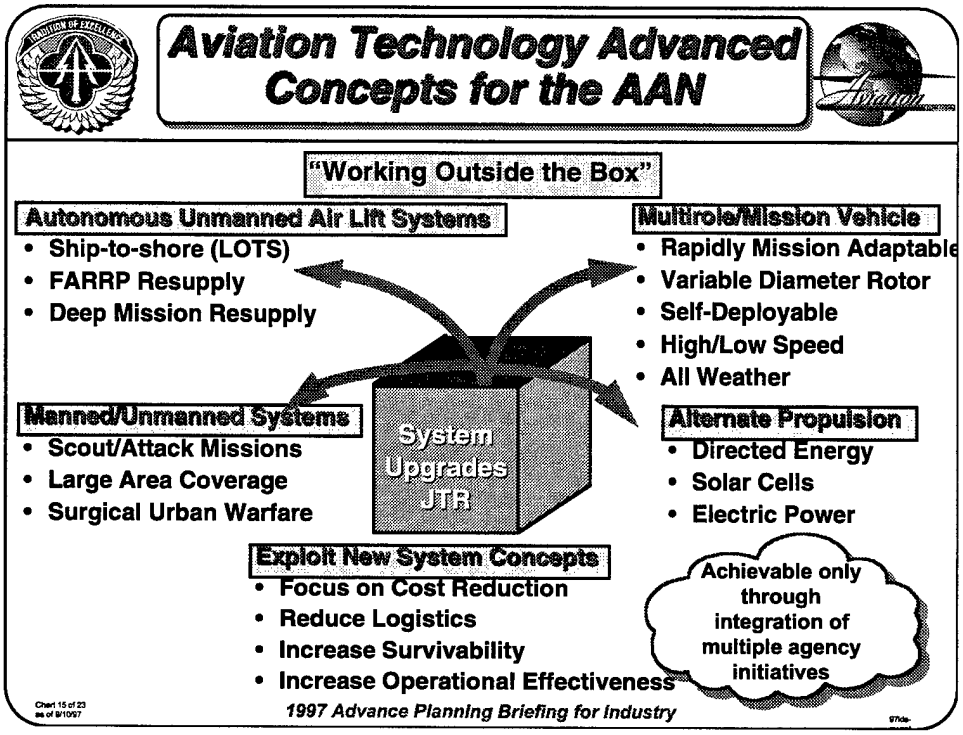
IHPTET Drivers
- High pressure ratio
- High cycle temperature
- High temperature, high strength/wt materials
- Affordable designs

IHPTET Phase III Goals
- 40% SFC reduction
- 120% power to weight increase
- 35% reduction in production and maintenenace cost

	TODAY	With IHPTET Ph III Engines Option I	With IHPTET Ph III Engines Option II
Attack Aircraft *			
FARRP Support Aircraft		CH-47D	UH-60L
Mission Fuel	9090 gal.	2250 gal.	2050 gal.
Crew Members	34	14	14

* AH-64D w/IHPTET can carry full load of 16 Hellfires vice 8 for today's AH-64A in this scenario

Chart 14 of 23 as of 9/10/97


Aviation Technology Advanced Concepts for the AAN
"Working Outside the Box"
Autonomous Unmanned Air Lift Systems
• Ship-to-shore (LOTS)
• FARRP Resupply
• Deep Mission Resupply
Multirole/Mission Vehicle
• Rapidly Mission Adaptable
• Variable Diameter Rotor
• Self-Deployable
• High/Low Speed
• All Weather
Manned/Unmanned Systems
• Scout/Attack Missions
• Large Area Coverage
• Surgical Urban Warfare
System Upgrades JTR
Alternate Propulsion
• Directed Energy
• Solar Cells
• Electric Power
Exploit New System Concepts
• Focus on Cost Reduction
• Reduce Logistics
• Increase Survivability
• Increase Operational Effectiveness
Achievable only through integration of multiple agency initiatives
Chart 15 of 23
as of 9/10/97
1997 Advance Planning Briefing for Industry

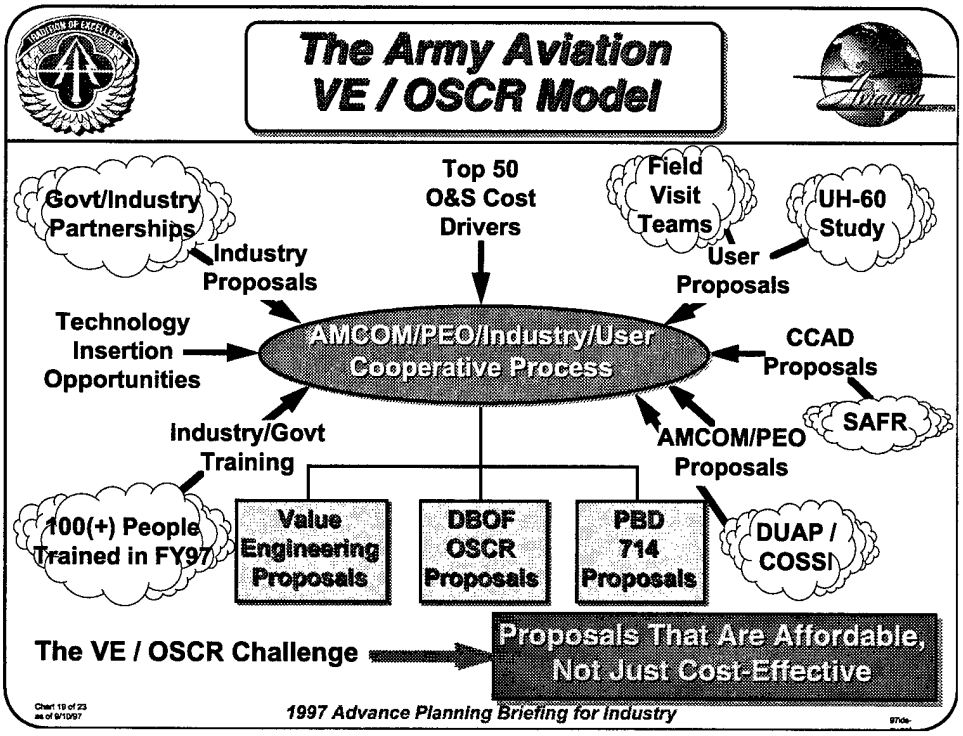
Critical Technologies for Expanded Unmanned Concepts for the AAN
— Intelligent Flight and Vehicle Management Controls
– Effective, Highly Reliable, Impervious to Threats
— Flight Path Management to Obstacle Avoidance
— Self-Healing Architectures, Robust, Fault Tolerant
— High Speed Processors for Real-Time Situational Awareness
— Smart Skins/Structures for Signature Control and Durability
— Lightweight, High Strength, Durable, Repairable Materials
— Highly Effective Prognostics
— Alternate Power Sources - More Electric, Solar, microwave
— Design Techniques for "6 Nines(+)" Reliability
With Built-In Affordabiltiy/Sustainability
Chart 16 of 23
as of 9/10/97
1997 Advance Planning Briefing for Industry

Technology Operational Payoffs Aviation Promises to AAN

- Overall Aviation Mixed Fleet (Observation, Attack, Utility, Cargo) Unit Speed Increase → 175+ kts
- Routinely Operate with Mission Radius Without FARRPs → 500 km
- Full Spectrum Threat Protection
- All Weather and Battlefield Obscurant Operations Capability – Anytime, Anywhere
- Sustained 12 Hour Day Operations with Today's TO&E
- 95% Probability for 30 Day Brigade Operations with Only ASL/PLL Support
- Operational Availability 98% with 99% Mission Reliability
- Integrated Manned/Unmanned Concepts to Reduce Cost and Support

AMCOM FY 97/98 Aviation OSCR Program Summary

SYSTEM	FY97 APPROVED INITIATIVES		FY98 PROPOSED INITIATIVES		NON-RECUR INVESTMENT	PROJ 10-YR SAVINGS
	PBD 714	AMC SMA OSCR	PBD 714	AMC SMA OSCR	$M	$M
AH-64	3	1	0	2	$1.706	$142.878
UH-60	0	1	0	2	7.416	152.062
OH-58D	1	0	0	1	3.677	171.521
CH-47	0	0	0	3	16.484	177.140
TOTAL	4	2	0	8	29.283	643.601



FY 97 OSCR Examples

INITIATIVE	PROGRAM	NON-RECUR INVESTMENT ($M)	PROJECTED 10-YR SAVINGS ($M)
AH-64 Main Rotor Blade Spar Debond Repair	AMC: SMA-OSCR	$0.504	$113.259
UH-60 T700 Engine Component Retirement for Cause	AMC: SMA-OSCR	2.961	62.647
Kiowa Mast Mounted Sight Central Power Supply	AMC: RM&S (PBD-714)	0.827	63.669
AH-64 PNVZ Azimuth Drive Actuator	AMC: RM&S (PBD-714)	0.122	0.258
AH-64 PNVS Elevation Belt Assembly	AMC: RM&S (PBD-714)	0.312	7.181
AH-64 Day Shroud Harness Modification	AMC: RM&S (PBD-714)	0.117	7.181

Chart 20 of 23
as of 9/10/97

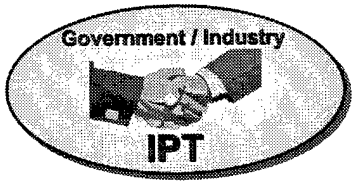
1997 Advance Planning Briefing for Industry

Re-Engineering the Aviation S&T and Engineering Processes

—How do we do business with a smaller workforce for S&T and Engineering
- More budget reductions for personnel
- QDR recommended more personnel reductions

—Continue to re-engineer our processes to work smarter

—Institute Government/Industry IPTs.
- Harness synergies and expert knowledge base
- Simplify and use best business practices



Notion For Fleet Block Improvements

—Shrinking Budgets for Modernization
- Upgrades & Technology Insertion vice New System starts
- Traditional product improvement process untimely, costly and impacts aircraft availability

—Need a Fleet-wide Block Improvement process
- Need to garner Industry & DoD support
- Package technologies/upgrades and identify critical time-frames for insertion
- Minimize MWO costs and aircraft downtime

—Use Government/Industry IPTs to coordinate and choose best approaches.
- Apache Modernization Team as the model
- Implement Series of Studies for Engineering Processes

Summary

—Army Aviation is a must for Army Vision 2010 and Army After Next (AAN).

—AVRDEC's S&T Program will facilitate the evolution of Army Aviation to meet the Army's future needs.

—OSCR / VE initiatives will create substantial savings for Army Aviation.

—Team RDEC and Industry Cooperation are essential to our success.

Missile RD&E Center Opportunities

Dr. Paul L. Jacobs
Associate Director for Technology,
Missile RD&E Center

1997 Advance Planning Briefing for Industry

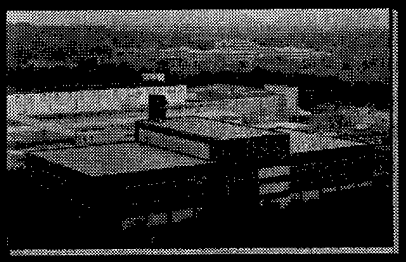
Missile Research, Development, and Engineering Center

MRDEC

"When it takes a Rocket Scientist..."

Dr. Paul L. Jacobs

Associate Director for Technology, Missile RD&E Center, USA AMCOM



TINTO-MRDEC APBI-8/97

1997 Advance Planning Briefing for Industry

Missile Research, Development, & Engineering Center

MRDEC

"When it takes a Rocket Scientist..."

Director / Mil Deputy

Associate Directors for Technology and Systems

Lab Demo

Offices

Applied Technology Integration
Test/Evaluation Management *
ASCO
Technology Integration
Systems Integration
Management of Operations & Business*
Technology Transfer

Dedicated Support

Legal
Personnel
Procurement
Facilities

Weapon Sciences

Propulsion

System Simulation and Development

System Engineering* and Production

Technical Management (Matrix)

Missile Guidance

Structures

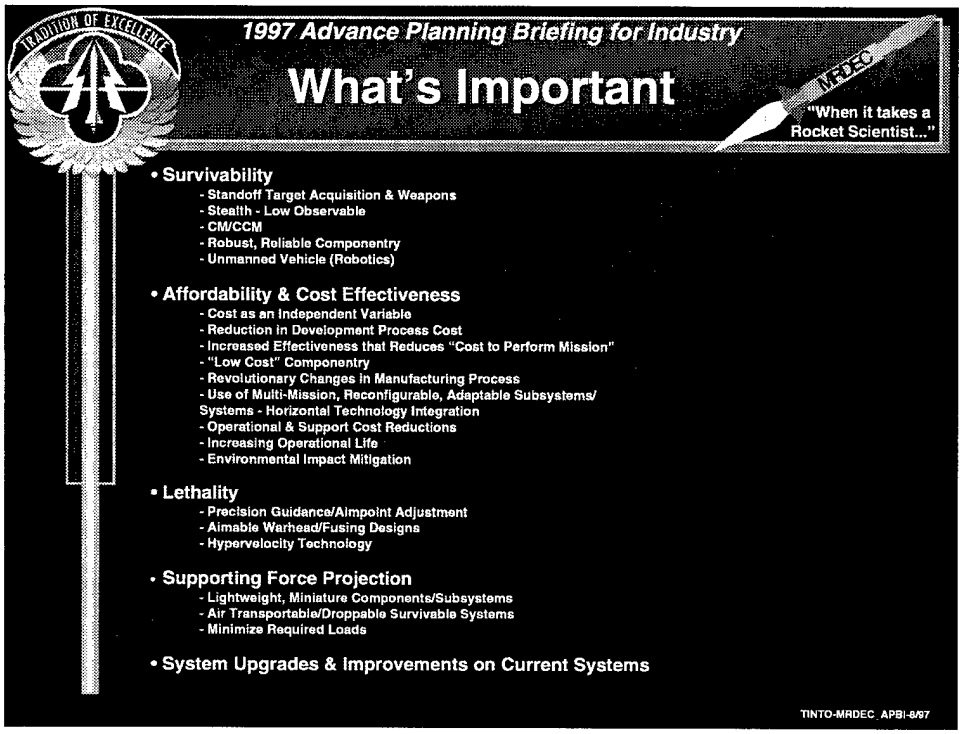
Battlefield Automation *

Product Assurance *

SYSTEMS

TECH BASE

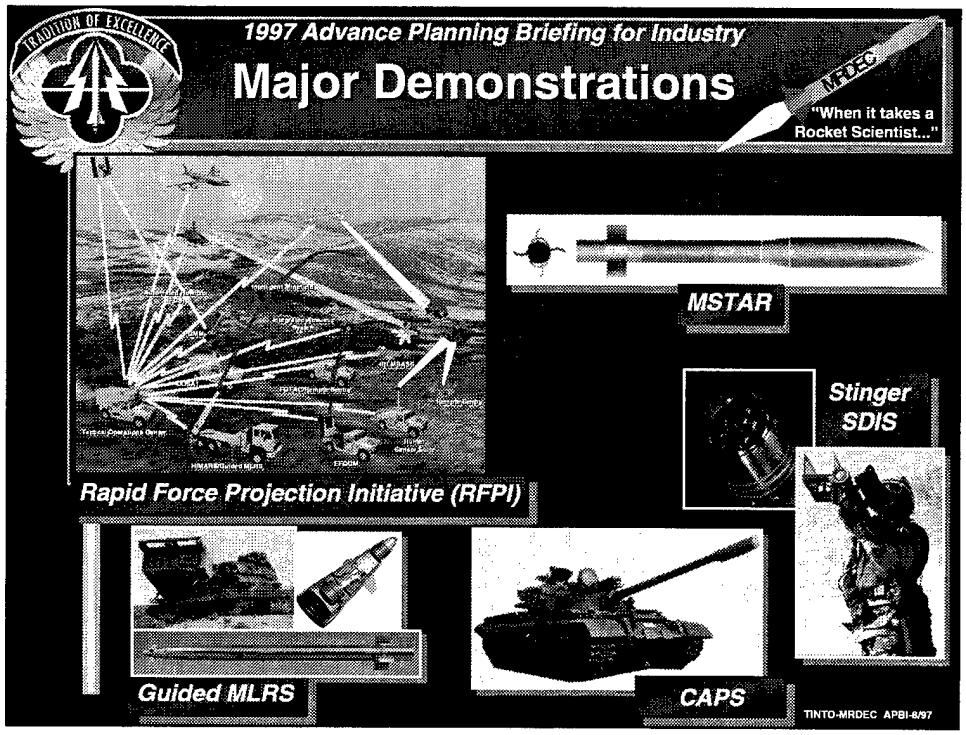
*Aviation Common Functions

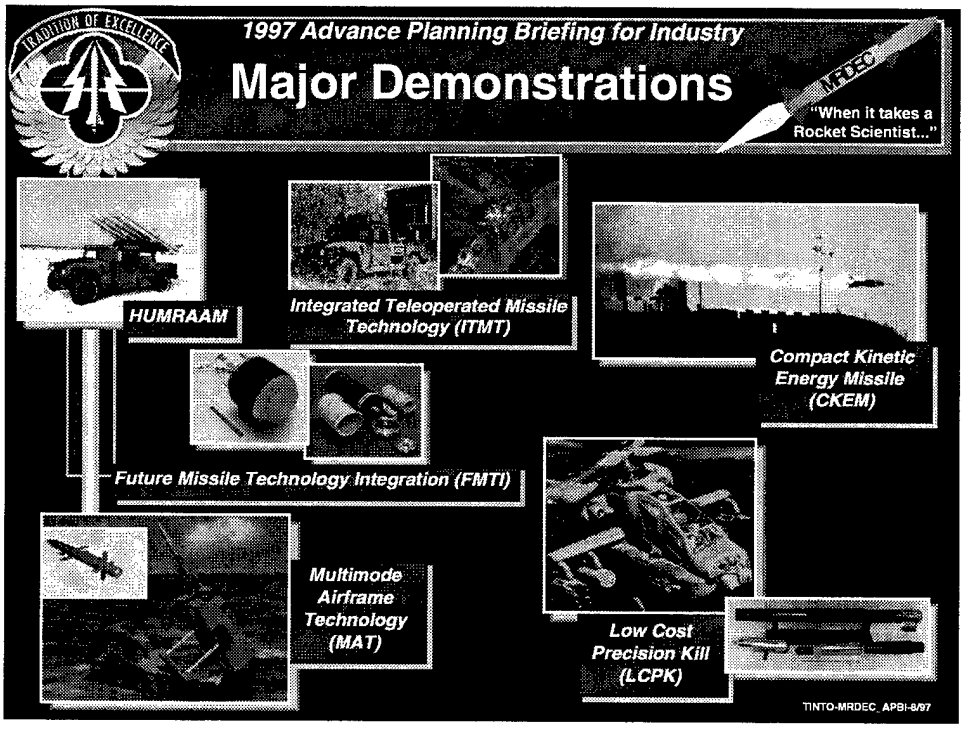

1997 Advance Planning Briefing for Industry
What's Important
MRDEC
"When it takes a Rocket Scientist..."
• Survivability
- Standoff Target Acquisition & Weapons
- Stealth - Low Observable
- CM/CCM
- Robust, Reliable Componentry
- Unmanned Vehicle (Robotics)
• Affordability & Cost Effectiveness
- Cost as an Independent Variable
- Reduction in Development Process Cost
- Increased Effectiveness that Reduces "Cost to Perform Mission"
- "Low Cost" Componentry
- Revolutionary Changes in Manufacturing Process
- Use of Multi-Mission, Reconfigurable, Adaptable Subsystems/ Systems - Horizontal Technology Integration
- Operational & Support Cost Reductions
- Increasing Operational Life
- Environmental Impact Mitigation
• Lethality
- Precision Guidance/Aimpoint Adjustment
- Aimable Warhead/Fusing Designs
- Hypervelocity Technology
• Supporting Force Projection
- Lightweight, Miniature Components/Subsystems
- Air Transportable/Droppable Survivable Systems
- Minimize Required Loads
• System Upgrades & Improvements on Current Systems
TINTO-MRDEC APBI-8/97

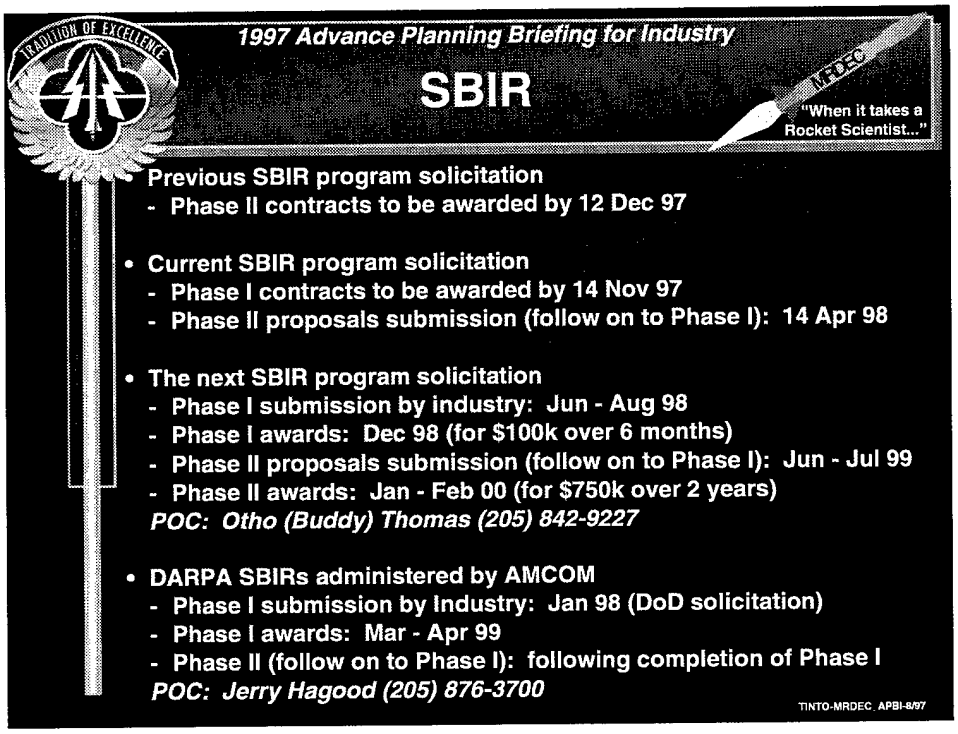
1997 Advance Planning Briefing for Industry
Technologies & Capabilities for the Future
MRDEC
"When it takes a Rocket Scientist..."
• Counter-Counter Measures (e.g. Image Tracking, CAPS)
• Autonomous / Man-Aided Target Acquisition
• Affordable Multi-mode Seekers
• Weather / CM
• Data Fusion
• Target Discrimination of Low Observables (Included in Clutter)
• Low Cost Guidance Systems
• Small Inertial Sensors
• Inexpensive
• High Dynamic Range
• Missile Guidance Radars
TINTO-MRDEC APBI-8/97

TRADITION OF EXCELLENCE
1997 Advance Planning Briefing for Industry
Technologies & Capabilities for the Future
MRDEC
"When it takes a Rocket Scientist..."
• Packaging (Missile Size and Ruggedization Constraints)
• MEMS
• Mini UAV
• Sensors
• Propulsion
• Target-Adaptive Software; Upload Prior to Launch
• Increase Range
• Warheads / Payloads
• Light Weight Composite Technology
• Demilitarization
• Predictive and Diagnostic Technology for Service Life Extension
• Affordable Software
TINTO-MRDEC_APBI-8/97

TRADITION OF EXCELLENCE
1997 Advance Planning Briefing for Industry
FY98 6.2 Program
MRDEC
"When it takes a Rocket Scientist..."
Structures
• Solid Mechanics and Materials
* Guidance Aided Fuzing
* MLRS Smart Tactical Rocket (MSTAR)
* Ducted Rocket Engine
* Compact Kinetic Energy Missile (CKEM)
* Seeker Dome for Air and missile Defense
Missile Guidance
• Fiber Optic Gyros & Low Cost Inertial Components
• Control Systems Technology
• Body Fixed Seeker Technology
• Fiber Optic Winding & Dispensers
• NCTR/MRSR
• SAR & Laser Target Acquisition
• Integrated Teleoperated Missile Technolongy (ITMT)
* ATR for Weapons
* Guidance Software Technology
* LCPK 2.75 Rocket Technology
* HIQUAMS
Weapon Sciences
• Photorefractive Materials & Optical Morphology
• Photonic Band Gap Technology
• Pulse Coupled Neural Nets
• Integrated Photonics
• Quantum Optics & Chaos Theory
* Hybrid Optical Processing for Imagery Analysis
System Simulation
• Separated Flow Aerodynamics
• Grid Fin & Dispenser Technology
• Dual Mode MMW/IR Seeker
• RF Simulation Technology
• EO/IR Simulation Technology
* Multi-Mode Airframe Technology
*STOs
Propulsion
• Gel Propulsion Technology
• Solid Propulsion - Insensitive
• Air Breathing Propulsion
• Service Life Prognostics
• Pintle Controlled Solid Propulsion
* Flexible Sustainer for Multi-Mission Weapons


1997 Advance Planning Briefing for Industry
Major Demonstrations
MRDEC
"When it takes a Rocket Scientist..."
MSTAR
Stinger SDIS
Rapid Force Projection Initiative (RFPI)
Guided MLRS
CAPS
TINTO-MRDEC APBI-8/97


1997 Advance Planning Briefing for Industry
Major Demonstrations
MRDEC
"When it takes a Rocket Scientist..."
HUMRAAM
Integrated Teleoperated Missile Technology (ITMT)
Compact Kinetic Energy Missile (CKEM)
Future Missile Technology Integration (FMTI)
Multimode Airframe Technology (MAT)
Low Cost Precision Kill (LCPK)
TINTO-MRDEC_APBI-8/97


TRADITION OF EXCELLENCE
1997 Advance Planning Briefing for Industry
SBIR
MRDEC
"When it takes a Rocket Scientist..."
• Previous SBIR program solicitation
- Phase II contracts to be awarded by 12 Dec 97
• Current SBIR program solicitation
- Phase I contracts to be awarded by 14 Nov 97
- Phase II proposals submission (follow on to Phase I): 14 Apr 98
• The next SBIR program solicitation
- Phase I submission by industry: Jun - Aug 98
- Phase I awards: Dec 98 (for $100k over 6 months)
- Phase II proposals submission (follow on to Phase I): Jun - Jul 99
- Phase II awards: Jan - Feb 00 (for $750k over 2 years)
POC: Otho (Buddy) Thomas (205) 842-9227
• DARPA SBIRs administered by AMCOM
- Phase I submission by Industry: Jan 98 (DoD solicitation)
- Phase I awards: Mar - Apr 99
- Phase II (follow on to Phase I): following completion of Phase I
POC: Jerry Hagood (205) 876-3700
TINTO-MRDEC APBI-8/97

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1997 Advance Planning Briefing for Industry
DARPA Programs Office
Weapons Sciences Directorate
MRDEC
"When it takes a Rocket Scientist..."
The DPO Can Provide Assistance in Identifying DARPA Interest Areas and Points of Contact for:
• Contracts in Basic and Applied Research.
• Programs of Joint Interest to MICOM/DARPA.
• Concept and Hardware Developments in:
- Fiber Optic and GPS Guidance Systems
- IFOG Manufacturing Techniques
- Advanced Materials
- Advanced Simulation Networks and Techniques
- Automatic Target Recognition
- Surveillance and Targeting
- Battlefield Information Systems
POC: Jerry Hagood - (205) 876-3700
TINTO-MRDEC APBI-8/97

1997 Advance Planning Briefing for Industry

AMCOM Technology Transfer

MRDEC "When it takes a Rocket Scientist..."

What is TECHNOLOGY TRANSFER(T^2)?

It is a PROCESS Where FEDERAL GOVERNMENT TECHNOLOGIES and Products Developed Are PROVIDED to Potential USERS in a Manner That Encourages and ACCELERATES THEIR COMMERCIAL APPLICATIONS

T^2 Vehicles

- Cooperative research and development agreement (CRDA)
- Patent licensing agreement (pla)
  - Consulting
  - Cooperative agreements
- Facilities use
  - Bailments

Who in AMCOM

Mr. Kelly B. McGuire
CHIEF, TECHNOLOGY TRANSFER OFFICE
PHONE: 800-Army Tip FAX: 205-876-8866
EMAIL: ORTA@redstone.Army.Mil

Why do Technology Transfer?

- Multi Faceted program to meet Industry's needs
- Provides Technical Assistance
- 32 agreements with Industry, acacemia, state& Local governments have been executed.

MARKETING FEDERAL TECHNOLOGIES

1997 Advance Planning Briefing for Industry

TACAWS / FMTI TTO

MRDEC "When it takes a Rocket Scientist..."

Goal: To promote horizontal integration of technology by transitioning government owned intellectual property from the FMTI Technology Demonstration Program to contractors in the Army Potential Contractor Program

9 Areas of Research Represented: Aerodynamics, Fire Control, Telemetry, Battlefield Simulation, Control Actuation Systems, Airframes, Imaging Infrared Seeker and Auto Tracking

118 Contractors registered in this program

For information contact Tammy Williams, Acting MRDEC TILO, 205-876-4270 williams-ts@redstone.army.mil. Listing available through http://ippd.redstone.army.mil/tacaws2.html

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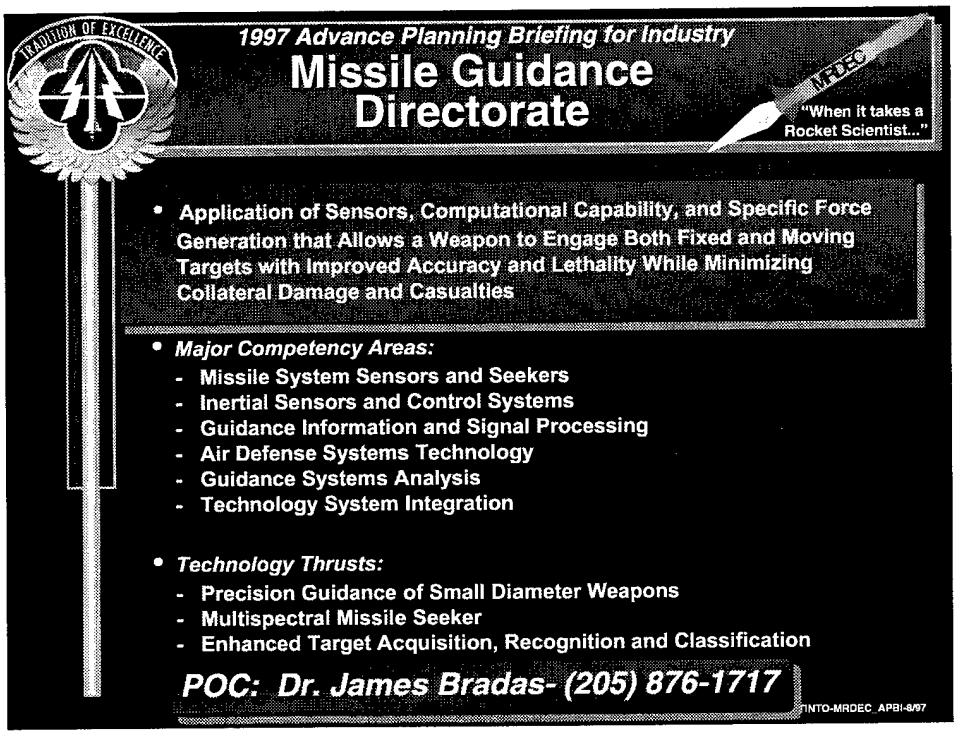
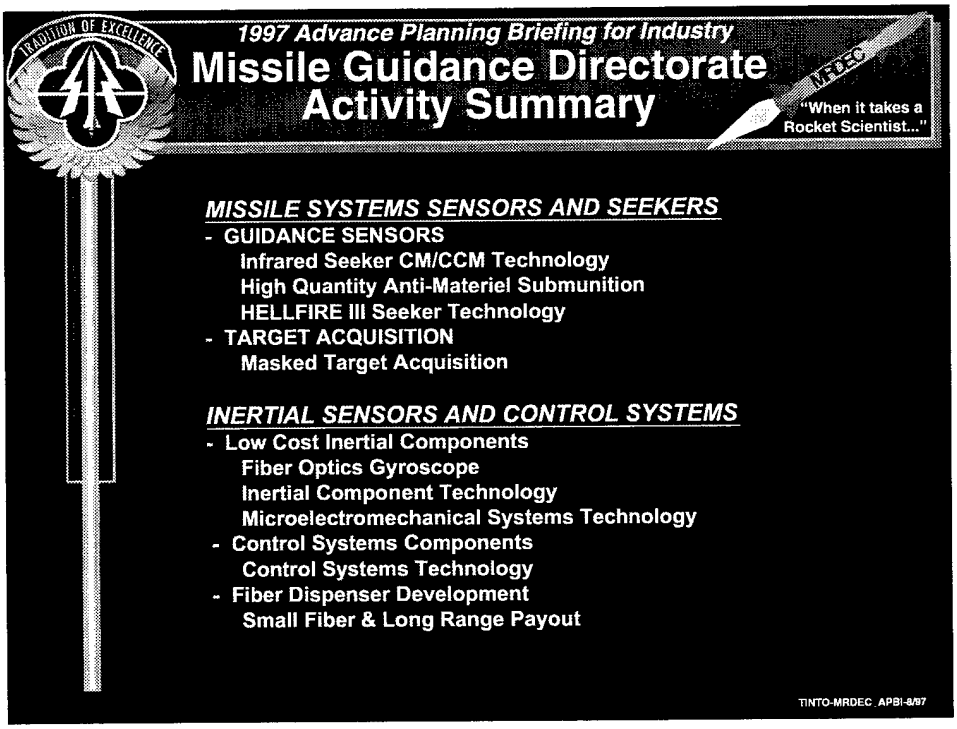

TRADITION OF EXCELLENCE
1997 Advance Planning Briefing for Industry
Missile Guidance Directorate
MRDEC
"When it takes a Rocket Scientist..."
• Application of Sensors, Computational Capability, and Specific Force Generation that Allows a Weapon to Engage Both Fixed and Moving Targets with Improved Accuracy and Lethality While Minimizing Collateral Damage and Casualties
• Major Competency Areas:
- Missile System Sensors and Seekers
- Inertial Sensors and Control Systems
- Guidance Information and Signal Processing
- Air Defense Systems Technology
- Guidance Systems Analysis
- Technology System Integration
• Technology Thrusts:
- Precision Guidance of Small Diameter Weapons
- Multispectral Missile Seeker
- Enhanced Target Acquisition, Recognition and Classification
POC: Dr. James Bradas- (205) 876-1717
TINTO-MRDEC_APBI-8/97


TRADITION OF EXCELLENCE
1997 Advance Planning Briefing for Industry
Missile Guidance Directorate Activity Summary
MRDEC
"When it takes a Rocket Scientist..."
MISSILE SYSTEMS SENSORS AND SEEKERS
- GUIDANCE SENSORS
Infrared Seeker CM/CCM Technology
High Quantity Anti-Materiel Submunition
HELLFIRE III Seeker Technology
- TARGET ACQUISITION
Masked Target Acquisition
INERTIAL SENSORS AND CONTROL SYSTEMS
- Low Cost Inertial Components
Fiber Optics Gyroscope
Inertial Component Technology
Microelectromechanical Systems Technology
- Control Systems Components
Control Systems Technology
- Fiber Dispenser Development
Small Fiber & Long Range Payout
TINTO-MRDEC_APBI-8/97

1997 Advance Planning Briefing for Industry

Missile Guidance Directorate Activity Summary

"When it takes a Rocket Scientist..."

GUIDANCE INFORMATION AND SIGNAL PROCESSING

- Automatic Target Recognition (ATR) Development
  - Non-cooperative Target Recognition
  - ATR Algorithms and Processors
- Advanced Imaging Trackers
  - Advanced Imaging Trackers
- Software Analysis Development
  - Computer Technology

LOW COST PRECISION KILL MISSILE DEMONSTRATION

INTEGRATED TELEOPERATED MISSILE TECHNOLOGY

SUPPORT SYSTEM DEMONSTRATIONS

– Guided MLRS / MAT / FMTI / RFPI / CKEM

TINTO-MRDEC_APBI-8/97

1997 Advance Planning Briefing for Industry

Propulsion Directorate

"When it takes a Rocket Scientist..."

- Conduct research, development, test, and engineering on missile propulsion systems and gas operated power systems
- Monitor all Army missile propulsion activity worldwide
- Provide technical support to all AMCOM PM/PEO activities and other Government Agencies

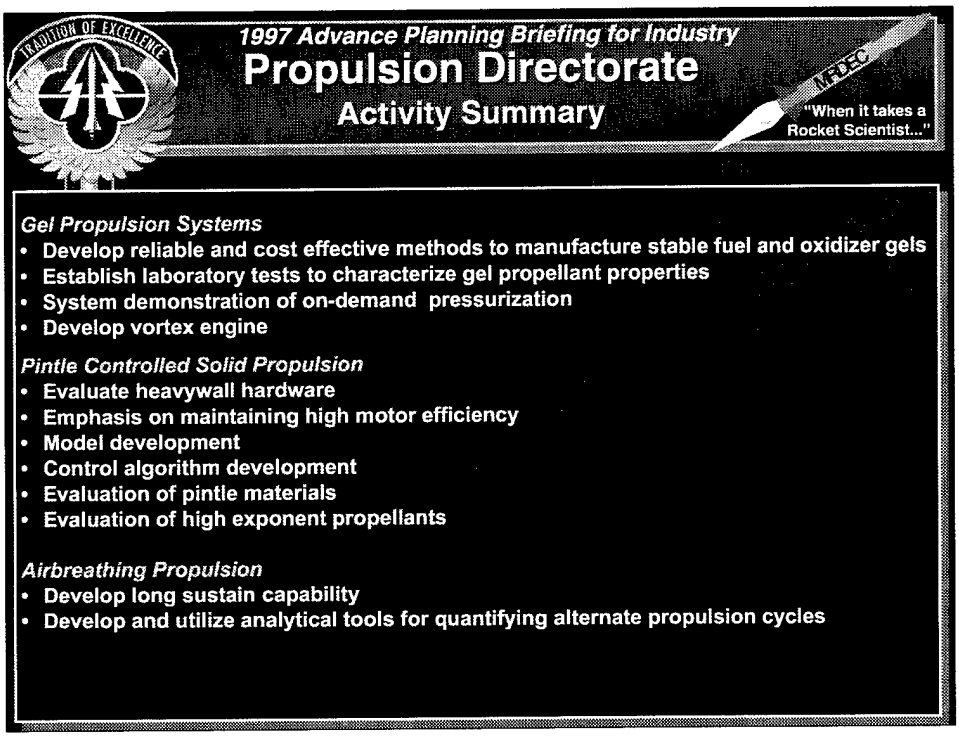
Technology

- Develop mission adaptable system
- Reduce signature
- Higher ISP
- Increase Survivability

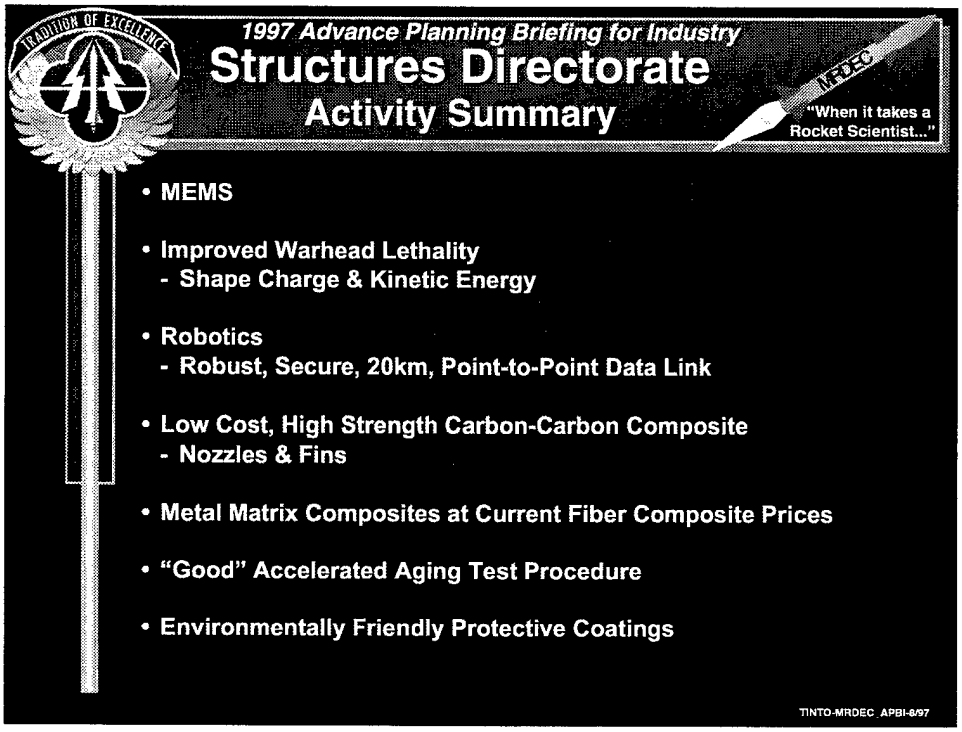
Customer Support

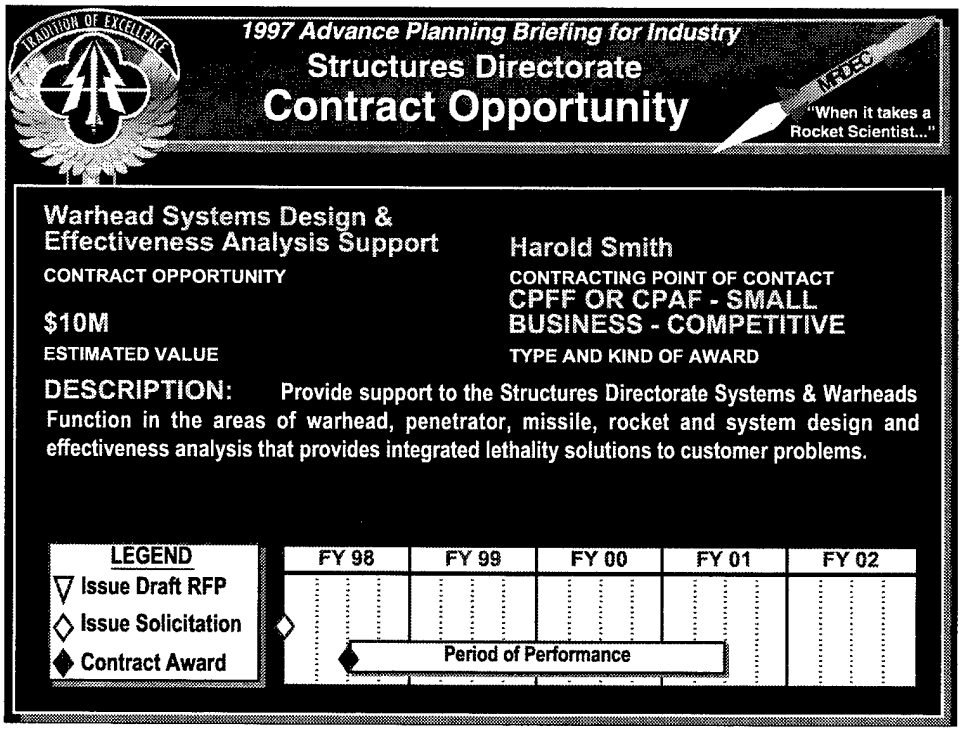
- System design and analysis
- Service Life analysis and prediction
- Demilitarization
- Failure analysis

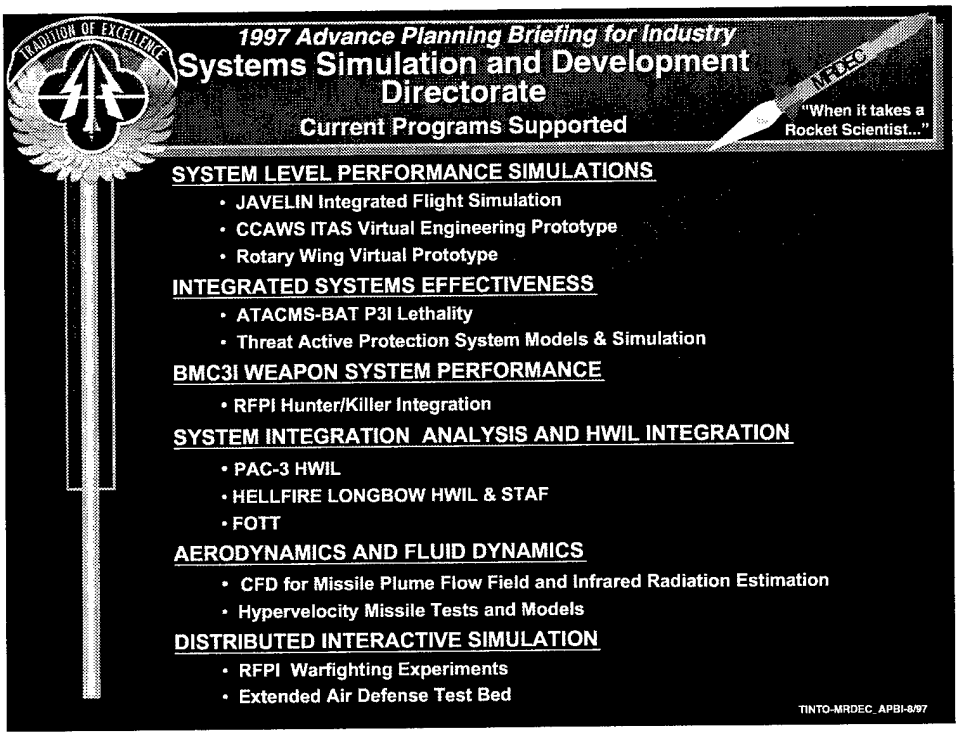
TINTO-MRDEC_APBI-8/97

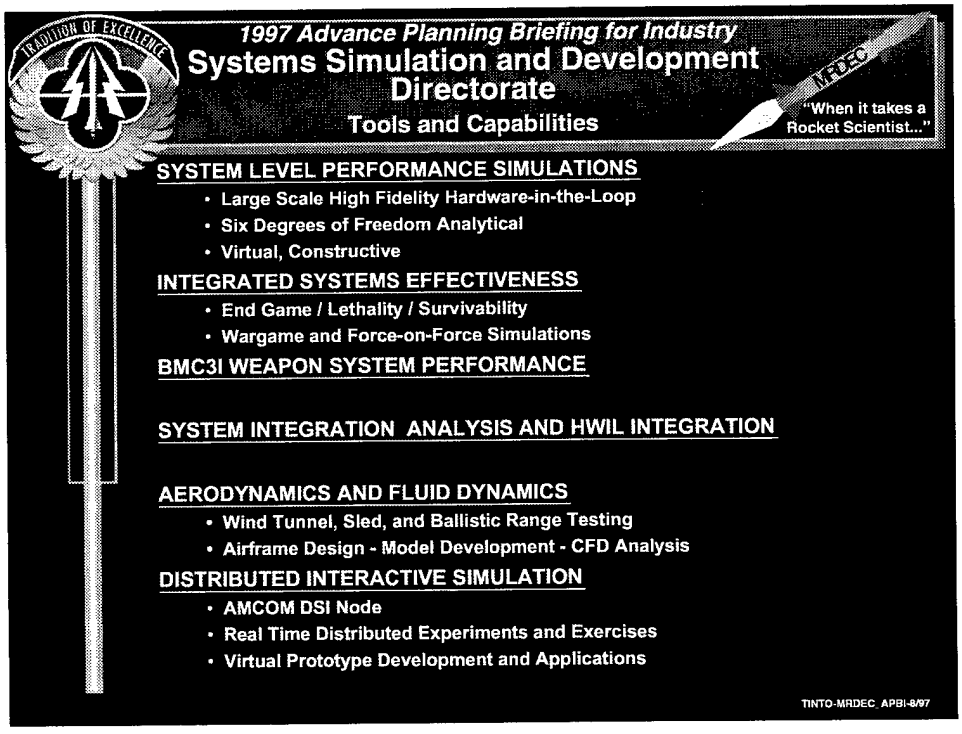

1997 Advance Planning Briefing for Industry
Propulsion Directorate
Activity Summary
"When it takes a Rocket Scientist..."
Gel Propulsion Systems
• Develop reliable and cost effective methods to manufacture stable fuel and oxidizer gels
• Establish laboratory tests to characterize gel propellant properties
• System demonstration of on-demand pressurization
• Develop vortex engine
Pintle Controlled Solid Propulsion
• Evaluate heavywall hardware
• Emphasis on maintaining high motor efficiency
• Model development
• Control algorithm development
• Evaluation of pintle materials
• Evaluation of high exponent propellants
Airbreathing Propulsion
• Develop long sustain capability
• Develop and utilize analytical tools for quantifying alternate propulsion cycles

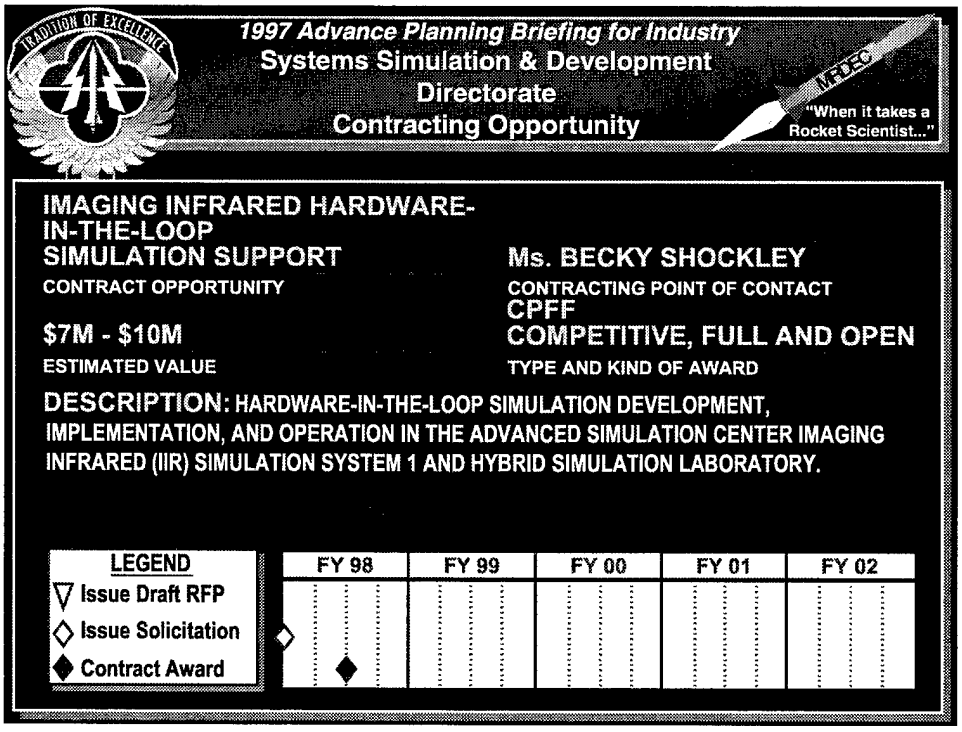
1997 Advance Planning Briefing for Industry
Structures Directorate
"When it takes a Rocket Scientist..."
• To conduct research and development in materials, warheads and fuzing, component integration of missiles launchers, shelters, unmanned vehicles and the development of prototype structures.
• Provide technical capability for structural analysis, failure analysis, material design, thermodynamics, dynamics, solid and fluid mechanics.
• Provide mission related technology to all elements of AMCOM, project managers and other government agencies.
• Fiber Reinforced Composite Design
• Mechanical & Physical Property
• Characterization
• Corrosion / Deterioration
• Prevention & Control
• Launcher / Vehicle System Integration
• Fire Control Electronics
• Aircraft Weapons Systems
• Airworthiness Flight Release
• Systems Integration
• Armor / Anti-Armor Systems
• Warheads and Fuze R&D
• Solid and Fluid Mechanics
• Dynamics Thermodynamics and Heat Transfer
• CAD / CAE
• Systems Engineering and Integration
TINTO-MRDEC, APBI-8/97

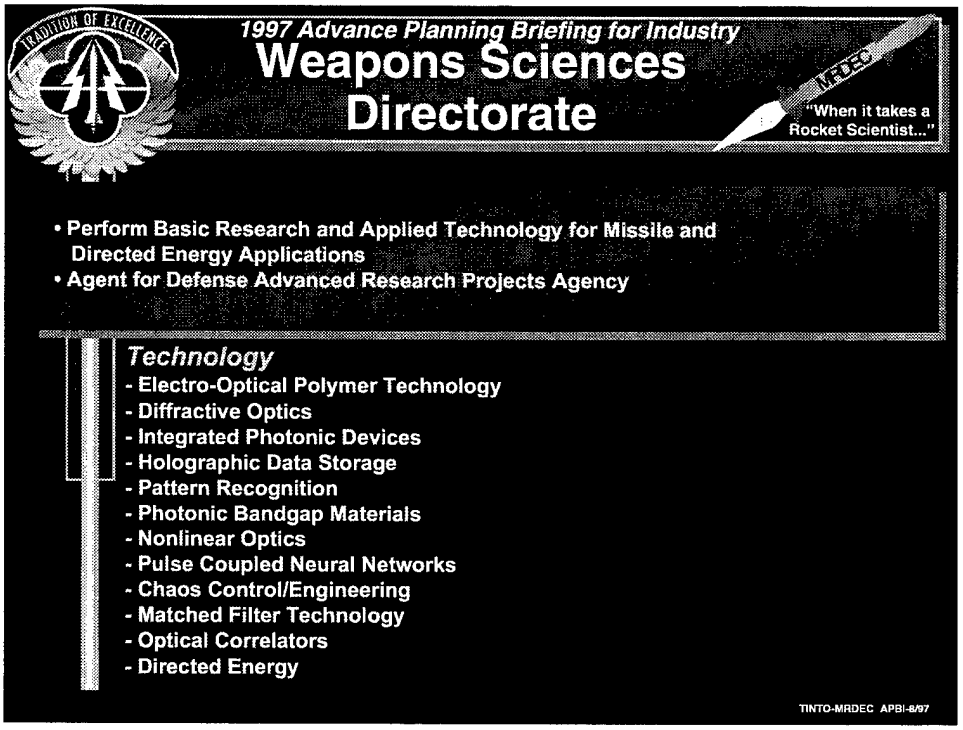

1997 Advance Planning Briefing for Industry
Structures Directorate
Activity Summary
"When it takes a Rocket Scientist..."
• MEMS
• Improved Warhead Lethality
- Shape Charge & Kinetic Energy
• Robotics
- Robust, Secure, 20km, Point-to-Point Data Link
• Low Cost, High Strength Carbon-Carbon Composite
- Nozzles & Fins
• Metal Matrix Composites at Current Fiber Composite Prices
• "Good" Accelerated Aging Test Procedure
• Environmentally Friendly Protective Coatings
TINTO-MRDEC_APBI-6/97

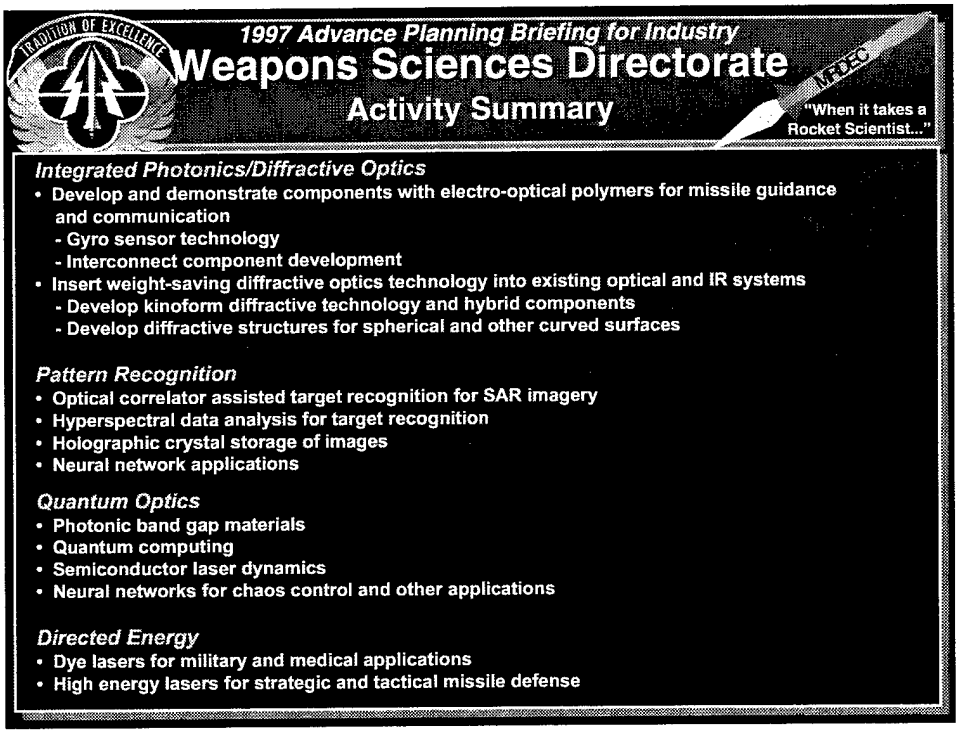

1997 Advance Planning Briefing for Industry
Structures Directorate
Contract Opportunity
"When it takes a Rocket Scientist..."
Warhead Systems Design & Effectiveness Analysis Support
CONTRACT OPPORTUNITY
Harold Smith
CONTRACTING POINT OF CONTACT
$10M
ESTIMATED VALUE
CPFF OR CPAF - SMALL BUSINESS - COMPETITIVE
TYPE AND KIND OF AWARD
DESCRIPTION: Provide support to the Structures Directorate Systems & Warheads Function in the areas of warhead, penetrator, missile, rocket and system design and effectiveness analysis that provides integrated lethality solutions to customer problems.
LEGEND
Issue Draft RFP
Issue Solicitation
Contract Award
FY 98
FY 99
FY 00
FY 01
FY 02
Period of Performance

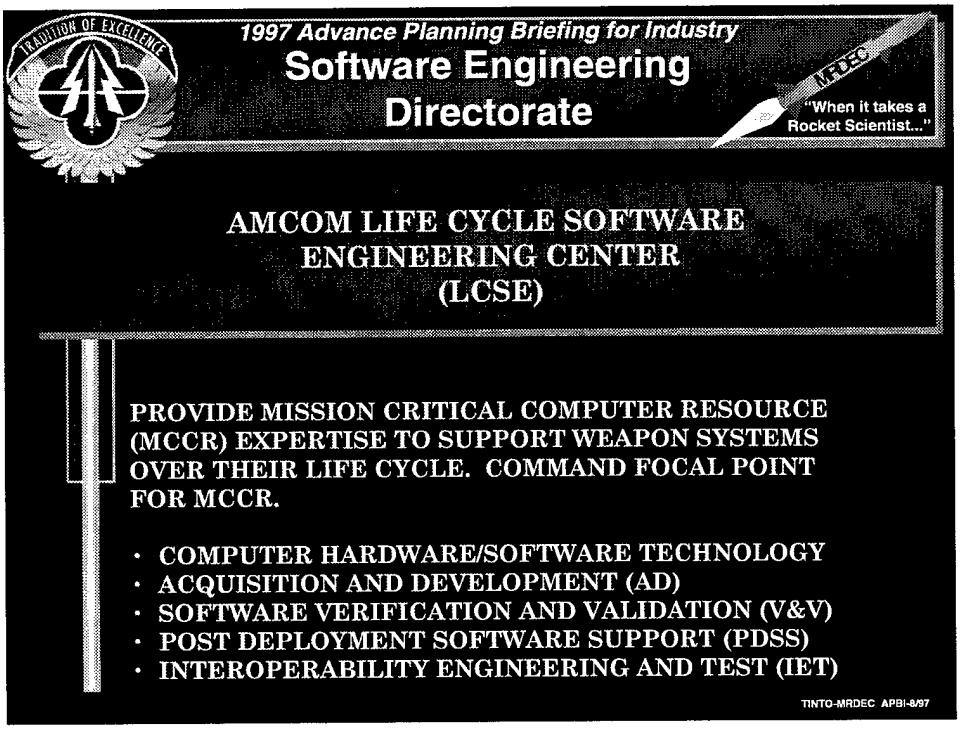

1997 Advance Planning Briefing for Industry
Systems Simulation and Development Directorate
Current Programs Supported
"When it takes a Rocket Scientist..."
SYSTEM LEVEL PERFORMANCE SIMULATIONS
• JAVELIN Integrated Flight Simulation
• CCAWS ITAS Virtual Engineering Prototype
• Rotary Wing Virtual Prototype
INTEGRATED SYSTEMS EFFECTIVENESS
• ATACMS-BAT P3I Lethality
• Threat Active Protection System Models & Simulation
BMC3I WEAPON SYSTEM PERFORMANCE
• RFPI Hunter/Killer Integration
SYSTEM INTEGRATION ANALYSIS AND HWIL INTEGRATION
• PAC-3 HWIL
• HELLFIRE LONGBOW HWIL & STAF
• FOTT
AERODYNAMICS AND FLUID DYNAMICS
• CFD for Missile Plume Flow Field and Infrared Radiation Estimation
• Hypervelocity Missile Tests and Models
DISTRIBUTED INTERACTIVE SIMULATION
• RFPI Warfighting Experiments
• Extended Air Defense Test Bed
TINTO-MRDEC_APBI-8/97


1997 Advance Planning Briefing for Industry
Systems Simulation and Development Directorate
Tools and Capabilities
"When it takes a Rocket Scientist..."
SYSTEM LEVEL PERFORMANCE SIMULATIONS
• Large Scale High Fidelity Hardware-in-the-Loop
• Six Degrees of Freedom Analytical
• Virtual, Constructive
INTEGRATED SYSTEMS EFFECTIVENESS
• End Game / Lethality / Survivability
• Wargame and Force-on-Force Simulations
BMC3I WEAPON SYSTEM PERFORMANCE
SYSTEM INTEGRATION ANALYSIS AND HWIL INTEGRATION
AERODYNAMICS AND FLUID DYNAMICS
• Wind Tunnel, Sled, and Ballistic Range Testing
• Airframe Design - Model Development - CFD Analysis
DISTRIBUTED INTERACTIVE SIMULATION
• AMCOM DSI Node
• Real Time Distributed Experiments and Exercises
• Virtual Prototype Development and Applications
TINTO-MRDEC_APBI-8/97


TRADITION OF EXCELLENCE
1997 Advance Planning Briefing for Industry
Systems Simulation & Development Directorate
Contracting Opportunity
MRDEC
"When it takes a Rocket Scientist..."
IMAGING INFRARED HARDWARE-IN-THE-LOOP SIMULATION SUPPORT
CONTRACT OPPORTUNITY
Ms. BECKY SHOCKLEY
CONTRACTING POINT OF CONTACT
$7M - $10M
ESTIMATED VALUE
CPFF
COMPETITIVE, FULL AND OPEN
TYPE AND KIND OF AWARD
DESCRIPTION: HARDWARE-IN-THE-LOOP SIMULATION DEVELOPMENT, IMPLEMENTATION, AND OPERATION IN THE ADVANCED SIMULATION CENTER IMAGING INFRARED (IIR) SIMULATION SYSTEM 1 AND HYBRID SIMULATION LABORATORY.
LEGEND
Issue Draft RFP
Issue Solicitation
Contract Award
FY 98
FY 99
FY 00
FY 01
FY 02


TRADITION OF EXCELLENCE
1997 Advance Planning Briefing for Industry
Weapons Sciences Directorate
MRDEC
"When it takes a Rocket Scientist..."
• Perform Basic Research and Applied Technology for Missile and Directed Energy Applications
• Agent for Defense Advanced Research Projects Agency
Technology
- Electro-Optical Polymer Technology
- Diffractive Optics
- Integrated Photonic Devices
- Holographic Data Storage
- Pattern Recognition
- Photonic Bandgap Materials
- Nonlinear Optics
- Pulse Coupled Neural Networks
- Chaos Control/Engineering
- Matched Filter Technology
- Optical Correlators
- Directed Energy
TINTO-MRDEC APBI-8/97


1997 Advance Planning Briefing for Industry
Weapons Sciences Directorate
Activity Summary
"When it takes a Rocket Scientist..."
Integrated Photonics/Diffractive Optics
• Develop and demonstrate components with electro-optical polymers for missile guidance and communication
- Gyro sensor technology
- Interconnect component development
• Insert weight-saving diffractive optics technology into existing optical and IR systems
- Develop kinoform diffractive technology and hybrid components
- Develop diffractive structures for spherical and other curved surfaces
Pattern Recognition
• Optical correlator assisted target recognition for SAR imagery
• Hyperspectral data analysis for target recognition
• Holographic crystal storage of images
• Neural network applications
Quantum Optics
• Photonic band gap materials
• Quantum computing
• Semiconductor laser dynamics
• Neural networks for chaos control and other applications
Directed Energy
• Dye lasers for military and medical applications
• High energy lasers for strategic and tactical missile defense


1997 Advance Planning Briefing for Industry
Software Engineering Directorate
"When it takes a Rocket Scientist..."
AMCOM LIFE CYCLE SOFTWARE ENGINEERING CENTER (LCSE)
PROVIDE MISSION CRITICAL COMPUTER RESOURCE (MCCR) EXPERTISE TO SUPPORT WEAPON SYSTEMS OVER THEIR LIFE CYCLE. COMMAND FOCAL POINT FOR MCCR.
• COMPUTER HARDWARE/SOFTWARE TECHNOLOGY
• ACQUISITION AND DEVELOPMENT (AD)
• SOFTWARE VERIFICATION AND VALIDATION (V&V)
• POST DEPLOYMENT SOFTWARE SUPPORT (PDSS)
• INTEROPERABILITY ENGINEERING AND TEST (IET)
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1997 Advance Planning Briefing for Industry
Software Engineering Directorate
MRDEC
"When it takes a Rocket Scientist..."
TECHNOLOGY AREAS OF INTEREST IN SOFTWARE ENGINEERING
• SOFTWARE ENGINEERING ARCHITECTURE
• RE-ENGINEERING OF REAL-TIME SYSTEMS
• SAFETY CRITICAL SOFTWARE DEVELOPMENT
TINTO-MRDEC_APBI-8/97

1997 Advance Planning Briefing for Industry
SED Contract Opportunity
MRDEC
"When it takes a Rocket Scientist..."
TITLE: SYSTEMS & SOFTWARE ENGINEERING SUPPORT
TYPE: COST PLUS FIXED FEE
SOLICITATION DATE: 1 MAY 98
AWARD DATE: 1 JAN 99
APPROXIMATE VALUE: $200M - $250M
KIND OF AWARD: COMPETITIVE
MAJOR AREAS OF EFFORT:
POST PRODUCTION SOFTWARE SUPPORT
SYSTEMS ENGINEERING & ANALYSIS SUPPORT
SOFTWARE FIELDING
SIMULATION/TEST BED DEVELOPMENT & SUPPORT
NON-SYSTEM SPECIFIC SOFTWARE SUPPORT OF SED
FOREIGN MILITARY SALES
SPECIAL SYSTEMS & SOFTWARE ENGINEERING ANALYSIS
FOR AVIATION AND MISSILE SOFTWARE INTENSIVE SYSTEMS
TINTO-MRDEC_APBI-8/97

1997 Advance Planning Briefing for Industry

System Engineering & Production Directorate

"When it takes a Rocket Scientist..."

MISSION and FUNCTIONS

- Management and Execution of the following AMCOM Programs:
  - Data Management
  - Production Engineering
  - Test Program Sets (TPSs)
  - Configuration Management
  - Industrial Preparedness Planning
  - Production Base Support Operations
  - Manufacturing Technology (ManTech)
  - AMCOM/DoD International Standardization

Supports

Aviation & Missile RDECs
PEO Aviation
PEO Tactical Missiles
PEO Air & Missile Defense
Deputy for Systems Acq.

- Engineering Services Support - for out-of-production systems, and spare parts procurement and TPS development/sustainment support for AMCOM managed missile systems and designated non-AMCOM managed systems
- Prototype Fabrication Facilities - for electrical / mechanical and microelectronic fabrication, assembly, and verification
- Direct activities of three regional Technical Support Offices

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1997 Advance Planning Briefing for Industry

System Engineering &Production Directorate

ManTech R&D Activity Summary

"When it takes a Rocket Scientist..."

DoD / DARPA

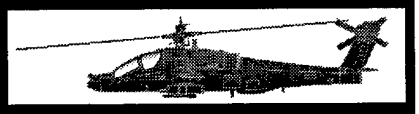
- Affordable Multi-Missile Manufacturing (AM3) ATD
- Interferometric Fiber Optic Gyro (IFOG) Flexible Manufacturing ATD

MISSILES

- Flexible Manufacturing Environment for MMW Transceivers
- ManTech for Missile Seeker Components
- Mantech for Traveling Wave Tubes
- Ultra High Modulus PAN Fibers

AIR VEHICLES

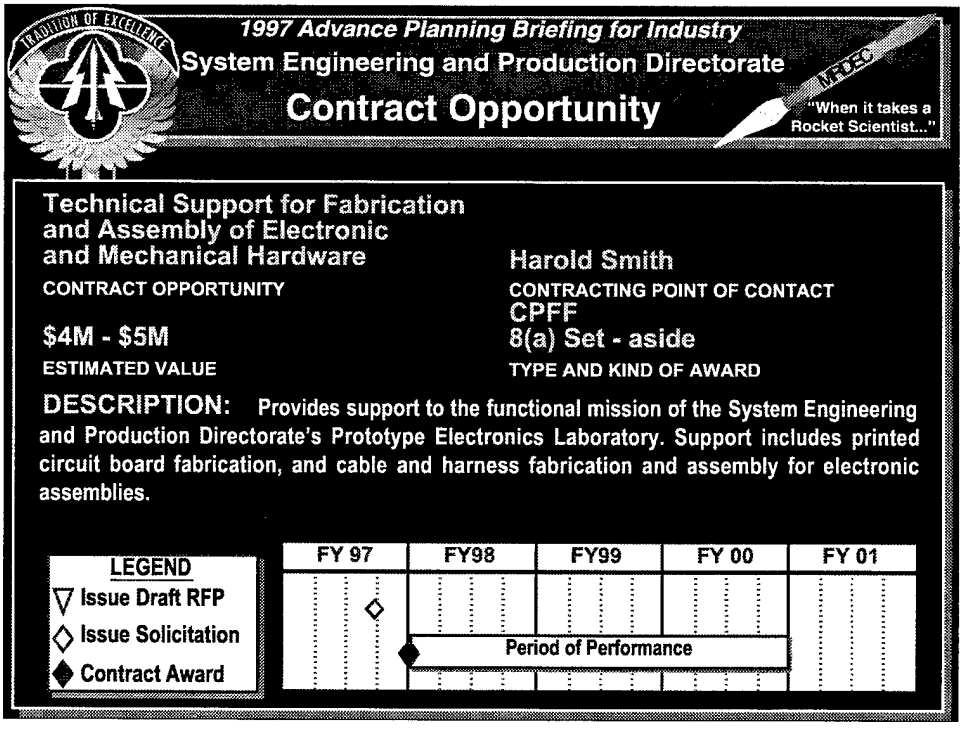
- Improved Airframe Manufacturing
- CCAD Aircraft Sustainment Program
- Integrated Composite Manufacturing
- Instrumented Factory for Gears (INFAC)
- Cast Beryllium Aluminum (BeAl) Components
- Integrated Manufacturing System for Fiber Optics
- Non-Contact Measurement of Propulsion System Components



SBIRs - Four (4) Manufacturing Related Research and Development Projects

TINTO-MRDEC_APBI-8/97

1997 Advance Planning Briefing for Industry
System Engineering and Production Directorate
Contract Opportunity
"When it takes a Rocket Scientist..."
ATE and TPS Support Services
CONTRACT OPPORTUNITY
TBD
CONTRACTING POINT OF CONTACT
$1M - $3M
ESTIMATED VALUE
Cost Plus Fixed Fee (Indefinite Delivery/Quantity) - 8(a) Set-aside
TYPE AND KIND OF AWARD
DESCRIPTION: Provide logistics support services related to Automatic Test Equipment (ATE), Test Program Sets (TPSs), and the transition of the Integrated Family of Test Equipment (IFTE) to organic support. No follow-on to this contract is planned.
LEGEND
Issue Draft RFP
Issue Solicitation
Contract Award
FY 96
FY 97
FY 98
FY 99
FY 00
Period of Performance


1997 Advance Planning Briefing for Industry
System Engineering and Production Directorate
Contract Opportunity
"When it takes a Rocket Scientist..."
Technical Support for Fabrication and Assembly of Electronic and Mechanical Hardware
CONTRACT OPPORTUNITY
Harold Smith
CONTRACTING POINT OF CONTACT
$4M - $5M
ESTIMATED VALUE
CPFF
8(a) Set - aside
TYPE AND KIND OF AWARD
DESCRIPTION: Provides support to the functional mission of the System Engineering and Production Directorate's Prototype Electronics Laboratory. Support includes printed circuit board fabrication, and cable and harness fabrication and assembly for electronic assemblies.
LEGEND
Issue Draft RFP
Issue Solicitation
Contract Award
FY 97
FY98
FY99
FY 00
FY 01
Period of Performance

1997 Advance Planning Briefing for Industry

System Engineering and Production Directorate

Contract Opportunity

"When it takes a Rocket Scientist..."

Development, Design, and Test of Electronic and Mechanical Hardware
CONTRACT OPPORTUNITY

Harold Smith
CONTRACTING POINT OF CONTACT

$3M - $4M
ESTIMATED VALUE

CPFF
8(a) Set - aside
TYPE AND KIND OF AWARD

DESCRIPTION: Provides support to the functional mission of the System Engineering and Production Directorate's Prototype Electronics Laboratory. Support includes schematic designs of concepts for printed circuit board layout; drawings of concepts of housings, chassis, fixtures, jigs, tools, and assemblies for electronic assemblies; and, acceptance testing of prototype electronic components and assemblies.

LEGEND
- ▽ Issue Draft RFP
- ◇ Issue Solicitation
- ◆ Contract Award

FY 97	FY 98	FY 99	FY 00	FY 01
◇	◆ Period of Performance			

1997 Advance Planning Briefing for Industry

System Engineering and Production Directorate

Contract Opportunity

"When it takes a Rocket Scientist..."

Advanced Missile Material Science and Engineering
CONTRACT OPPORTUNITY

Harold Smith
CONTRACTING POINT OF CONTACT

$9M - $10M
ESTIMATED VALUE

Cost Reimbursement (Indefinite Quantity) HBCU
TYPE AND KIND OF AWARD

DESCRIPTION: Provides support in the areas of manufacturing science and technology, and advanced materials development and processing. Support includes: characterization of materials and evaluation of related processes used in missile system components; evaluation of missile systems/subsystems for material and component availability; research and development of advanced high performance materials and related processes; and engineering design, modeling, and simulation of Army weapon systems and electrical, mechanical,optical, composite, and ceramic components and related manufacturing processes and systems.

LEGEND
- ▽ Issue Draft RFP
- ◇ Issue Solicitation
- ◆ Contract Award

FY 97	FY 98	FY 99	FY 00	FY 01
▽	◇ ◆ Period of Performance			

1997 Advance Planning Briefing for Industry

System Engineering and Production Directorate

Contract Opportunity

"When it takes a Rocket Scientist..."

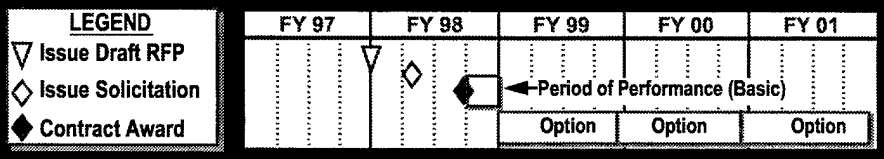
Standardization Support
CONTRACT OPPORTUNITY

Harold Smith
CONTRACTING POINT OF CONTACT

$2M - $3M
ESTIMATED VALUE

Cost Plus Fixed Fee
8(a) Set - aside
TYPE AND KIND OF AWARD

DESCRIPTION: Provides support to the functional mission of AMCOM's Standardization Office. Support includes: technical support for the Defense Specification and Standardization Program (DSP); technical engineering support for Human Factors Engineering (HFE); and technical support for the approved technical representatives.



1997 Advance Planning Briefing for Industry

System Engineering and Production Directorate

Contract Opportunity

"When it takes a Rocket Scientist..."

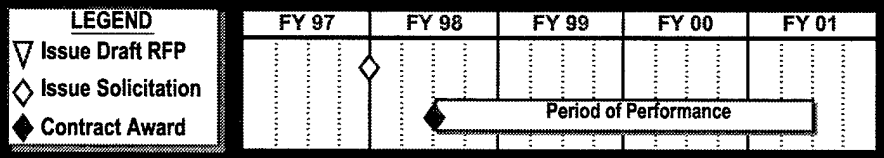
Production and Producibility Engineering
CONTRACT OPPORTUNITY

Harold Smith
CONTRACTING POINT OF CONTACT

$2M - $3M
ESTIMATED VALUE

Time and Materials
8(a) Business
TYPE AND KIND OF AWARD

DESCRIPTION: Provides functional support in the areas of production and producibility engineering. Support includes: technical support in the areas of program management, production simulation and risk assessment, production process and production line analysis, producibility analysis, production engineering, production reviews and production readiness reviews, manufacturing planning, manufacturing technology, technology transfer, requirements documents, engineering analysis, and reverse engineering.



1997 Advance Planning Briefing for Industry

System Engineering and Production Directorate

Contract Opportunity

"When it takes a Rocket Scientist..."

Devel. of Plastic Encapsulated Microcircuits (PEMs) Coating Processes for Military Applications
CONTRACT OPPORTUNITY

Harold Smith
CONTRACTING POINT OF CONTACT

$5M - $6M
ESTIMATED VALUE

Cost Shared - No Fee Competitive
TYPE AND KIND OF AWARD

DESCRIPTION: Manufacturing Technology Program effort to develop and prove out new and enhanced coating processes and equipment that will improve the reliability of plastic encapsulated microcircuits for use in military systems subjected to harsh environments and long term storage

LEGEND
- ▽ Issue Draft RFP
- ◇ Issue Solicitation
- ◆ Contract Award

FY 98	FY99	FY00	FY 01	FY 02
◇	◆ Period of Performance			

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Product Assurance Directorate

"When it takes a Rocket Scientist..."

- Assure that Quality, Reliability, and Maintainability are Emphasized in Every Phase of the Product Life Cycle
- Assure that MICOM Products Conform to Correctly Defined Technical Requirements
- Perform Research in Technology and Methodology for Improving the Quality of Weapon Systems

Technology
- Requirements Generation - R&M and Quality - Prediction, Modeling, Simulation
- Software Quality Assurance
- Statistical Process Control - Variability Reduction
- Parts - Physics of Failure, Long Term Reliability, Screening/Testing

Engineering/Testing
- Stockpile Reliability/Shelf Life
- Special Inspection Equipment - Design Requirements, Suitability & Validation
- Cost Effective Manufacturing
- Fly-to-Buy - Missile Firing Tests
- R&M Test Data Scoring/Assessments
- First Article/Quality Verification Testing

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Product Assurance Directorate

Activity Summary

"When it takes a Rocket Scientist..."

SMARTS - Self-Monitoring Advanced Remote Technology System

- A Technology Reinvestment Program (TRP) Focusing on Microelectromechanical Applications
- Includes Military Missiles and Commercial Bridge Project
- Consortium Includes Auburn University, Analog Devices, Northrop Grumman, System Excelerator, Thomas Equipment, Weld Star Technologies, U.S. Army Aviation and Missile Command, and Florida Department of Transportation
- Enables the Development of More Accurate Reliability Modeling and Asset Tracking
- Real Time System Operates in Both Interrogate and Alarm Mode
- Reduces Cost by Reducing Field Surveillance and Facilitating Conditioned Based Maintenance

PEMS - Plastic Encapsulated Microcircuits

- Cooperative Research and Development Agreement (CRDA) with Northrop Grumman, Honeywell, and Lucent
- Joint DoD/Doe Munitions Technology Development Program - Sandia and PAD
- Analyzes Reliability Characteristics of PEMs when Placed in Dormant Storage
- Identification of Failure Mechanisms
- Development of Predictive Models for PEMs
- Develop Acquisition Guidelines for PEMs

RRAPDS - Remote Readiness Assessment Prognostics/Diagnostics System

- RRAPDS is envisioned as the next generation remote monitoring and failure prognostics/ diagnostics system
- An Advanced Technology Demonstration (ATD) is currently being proposed

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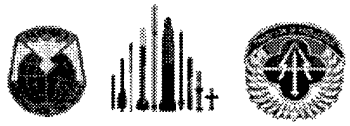
For More Information...

"When it takes a Rocket Scientist..."

Missile Research, Development and Engineering Center



...Access www.mrdec.redstone.army.mil

TINTO-MRDEC_APBI-8/97

Aviation RD&E Center Contract Opportunities

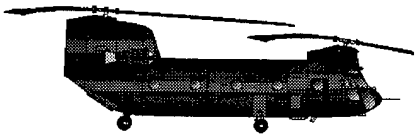
Mr. Robert V. Kennedy
Associate Director for Technology,
Aviation RD&E Center

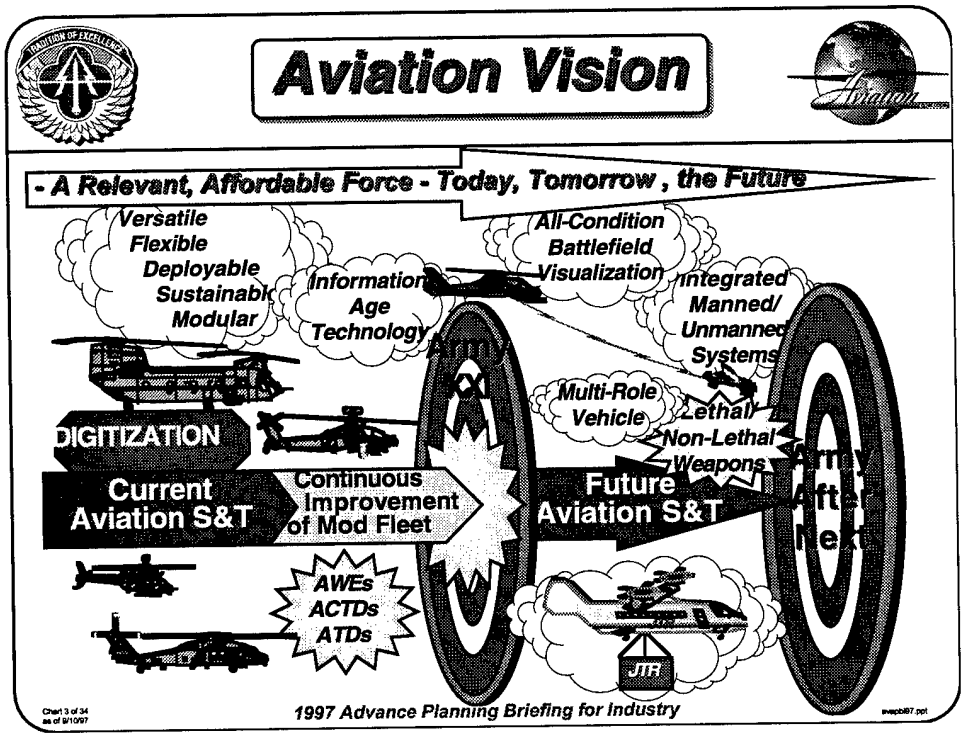
Aviation Vision and Science & Technology

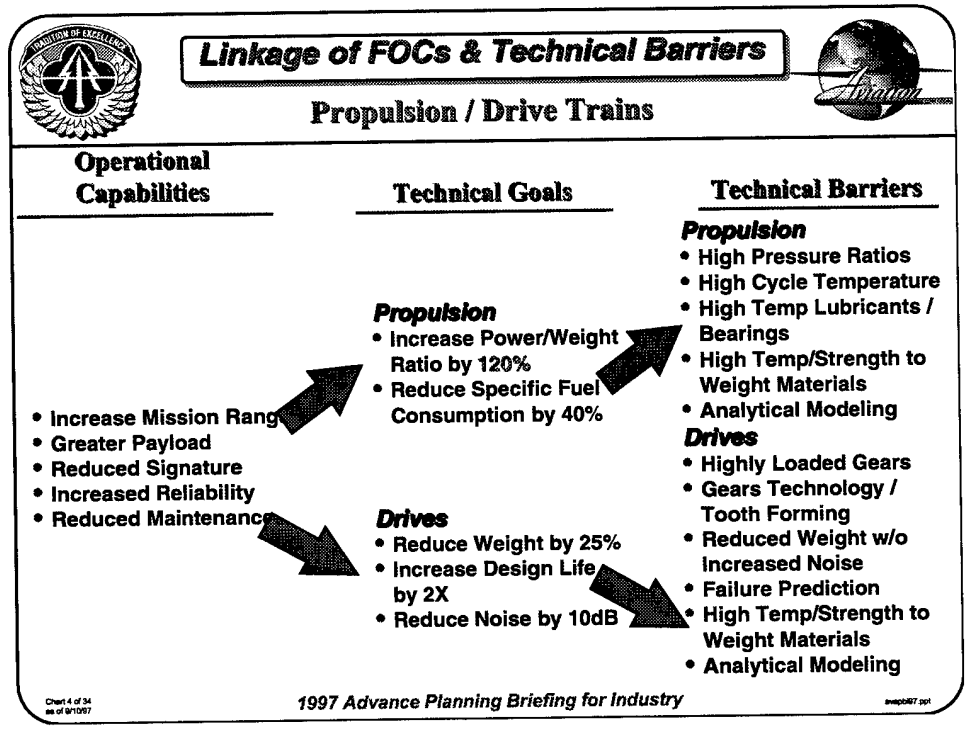
Advance Planning Briefing for Industry
Huntsville, AL
21-22 Oct 97
Mr. Robert V. Kennedy
Associate Director for Technology

Force XXI Objectives

- ★ Dominate Maneuver
- ★ Protect the Force
- ★ Win the Information War
- ★ Conduct Precision Strike
- ★ Project and Sustain the Force




Aviation Vision
- A Relevant, Affordable Force - Today, Tomorrow, the Future
Versatile
Flexible
Deployable
Sustainable
Modular
Information Age Technology
All-Condition Battlefield Visualization
Integrated Manned/ Unmanned Systems
Multi-Role Vehicle
Lethal/ Non-Lethal Weapons
DIGITIZATION
Current Aviation S&T
Continuous Improvement of Mod Fleet
Future Aviation S&T
AWEs
ACTDs
ATDs
JTR
Chart 3 of 34
as of 9/10/97
1997 Advance Planning Briefing for Industry
swapb97.ppt


Linkage of FOCs & Technical Barriers
Propulsion / Drive Trains
Operational Capabilities
Technical Goals
Technical Barriers
• Increase Mission Range
• Greater Payload
• Reduced Signature
• Increased Reliability
• Reduced Maintenance
Propulsion
• Increase Power/Weight Ratio by 120%
• Reduce Specific Fuel Consumption by 40%
Drives
• Reduce Weight by 25%
• Increase Design Life by 2X
• Reduce Noise by 10dB
Propulsion
• High Pressure Ratios
• High Cycle Temperature
• High Temp Lubricants / Bearings
• High Temp/Strength to Weight Materials
• Analytical Modeling
Drives
• Highly Loaded Gears
• Gears Technology / Tooth Forming
• Reduced Weight w/o Increased Noise
• Failure Prediction
• High Temp/Strength to Weight Materials
• Analytical Modeling
Chart 4 of 34
as of 9/10/97
1997 Advance Planning Briefing for Industry
swapb97.ppt

Overcoming Technical Barriers

Propulsion / Drive Trains

Technology Barriers	S&T Thrusts	Technology Demos
Propulsion	***Propulsion***	
• High Pressure Ratios	• Compressors	
• High Cycle Temperature	• Combustors	
• High Temp Lubricants / Bearings	• Turbines	
• High Temp/Strength to Weight Materials	• Shafting / Bearings	→ JTAGG
• Analytical Modeling	• Tribology	Joint Turbine Advanced Gas Generator
	• Ceramics	
	• High Temperature Metals	
	• Analytical Modeling & Design	
Drives	***Drives***	
• Highly Loaded Gears	• Lightweight, Corrosion Resistant Housings	Advanced Rotorcraft Transmissions
• Gears Technology / Tooth Forming	• Advanced Gear Technology	→ ART II
• Reduced Weight w/o Increased Noise	• High Temp Bearings	
• Failure Prediction	• Diagnostics	
• High Temp/Strength to Weight Materials	• Analytical Modeling & Design	
• Analytical Modeling		

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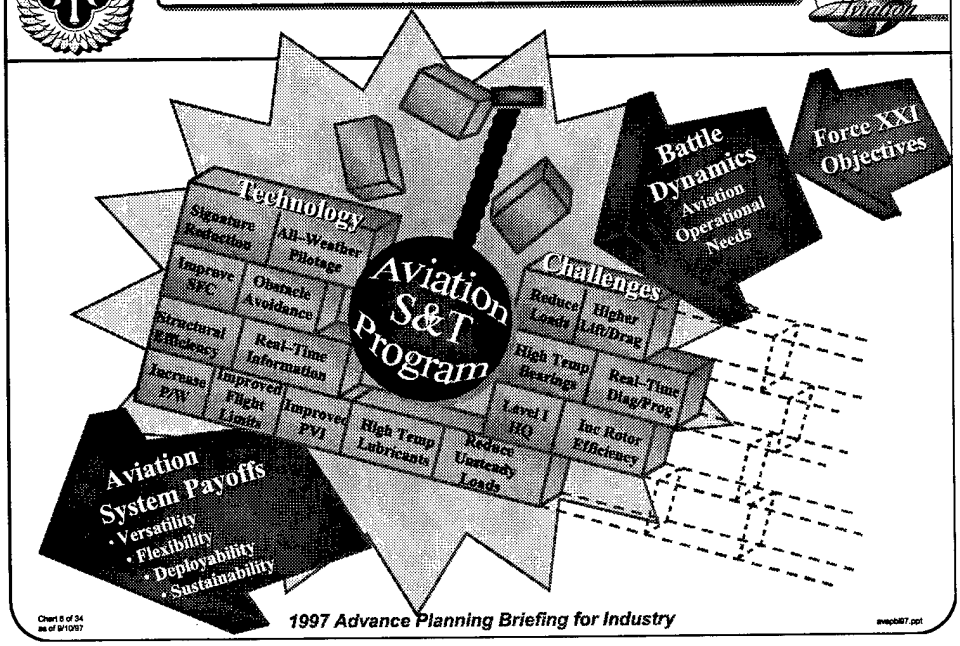
Overcoming the Technology Challenges



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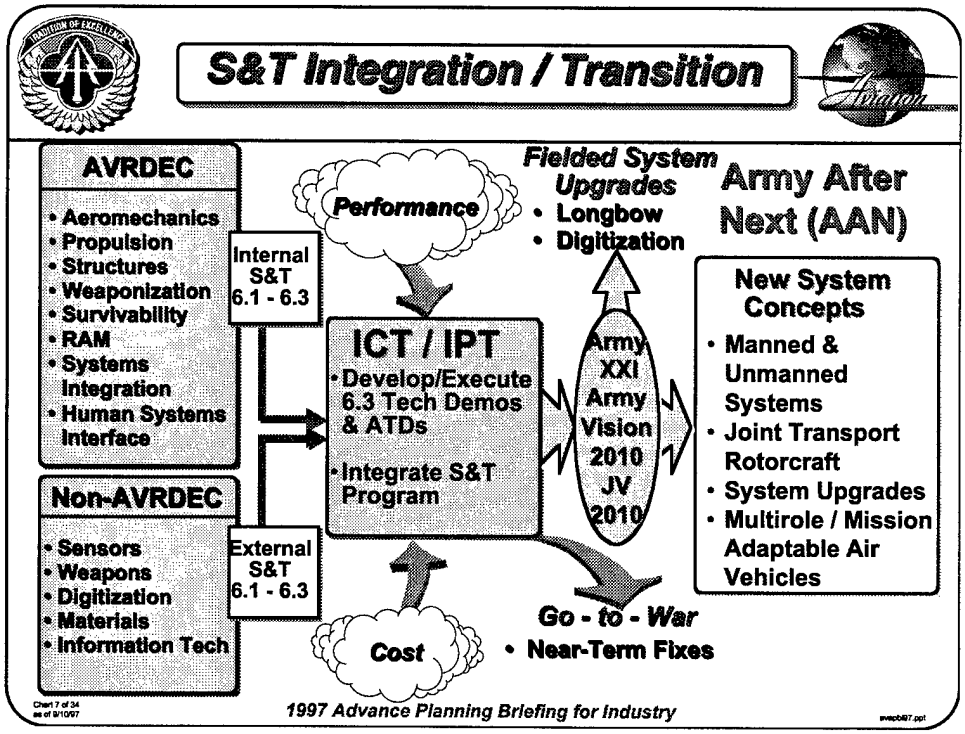
S&T Integration / Transition
AVRDEC
• Aeromechanics
• Propulsion
• Structures
• Weaponization
• Survivability
• RAM
• Systems Integration
• Human Systems Interface
Non-AVRDEC
• Sensors
• Weapons
• Digitization
• Materials
• Information Tech
Internal S&T 6.1 - 6.3
External S&T 6.1 - 6.3
Performance
Cost
ICT / IPT
• Develop/Execute 6.3 Tech Demos & ATDs
• Integrate S&T Program
Army XXI Army Vision 2010 JV 2010
Fielded System Upgrades
• Longbow
• Digitization
Go - to - War
• Near-Term Fixes
Army After Next (AAN)
New System Concepts
• Manned & Unmanned Systems
• Joint Transport Rotorcraft
• System Upgrades
• Multirole / Mission Adaptable Air Vehicles
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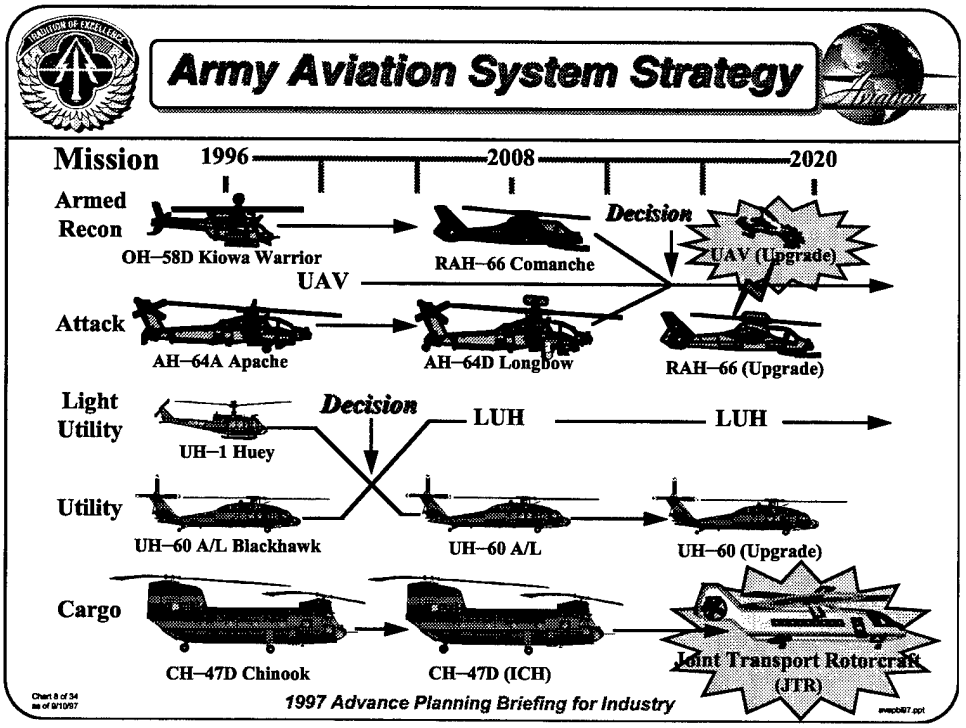
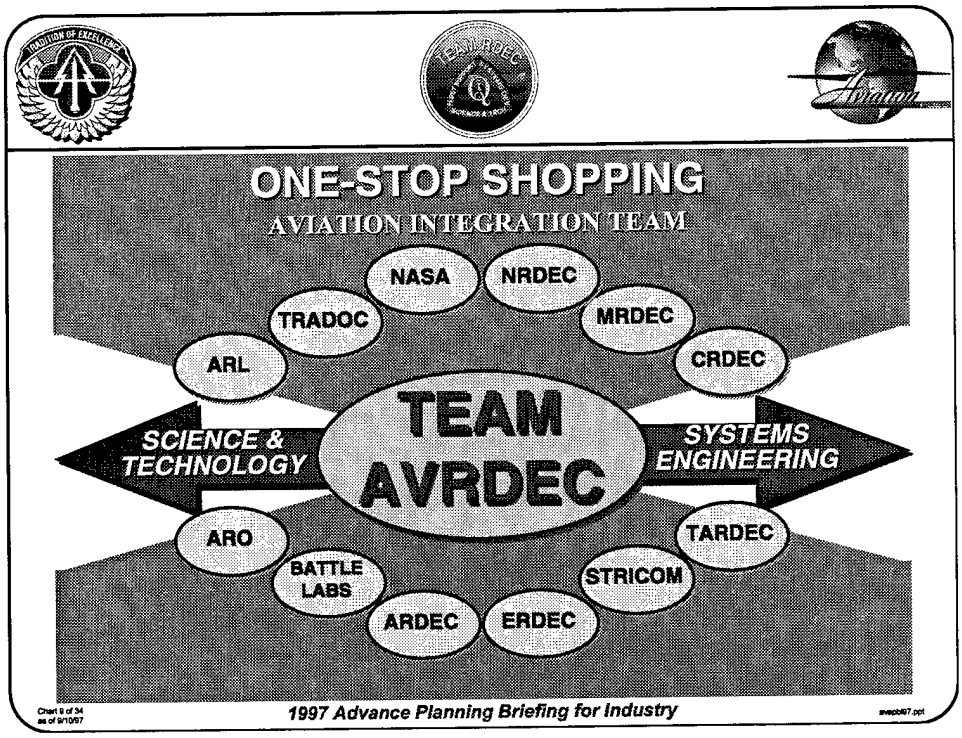

Army Aviation System Strategy
Mission
1996
2008
2020
Armed Recon
OH–58D Kiowa Warrior
RAH–66 Comanche
Decision
UAV (Upgrade)
UAV
Attack
AH–64A Apache
AH–64D Longbow
RAH–66 (Upgrade)
Light Utility
UH–1 Huey
Decision
LUH
LUH
Utility
UH–60 A/L Blackhawk
UH–60 A/L
UH–60 (Upgrade)
Cargo
CH–47D Chinook
CH–47D (ICH)
Joint Transport Rotorcraft (JTR)
1997 Advance Planning Briefing for Industry


ONE-STOP SHOPPING
AVIATION INTEGRATION TEAM
NASA
NRDEC
TRADOC
MRDEC
ARL
CRDEC
TEAM AVRDEC
SCIENCE & TECHNOLOGY
SYSTEMS ENGINEERING
ARO
TARDEC
BATTLE LABS
STRICOM
ARDEC
ERDEC
Chart 9 of 34 as of 9/10/97
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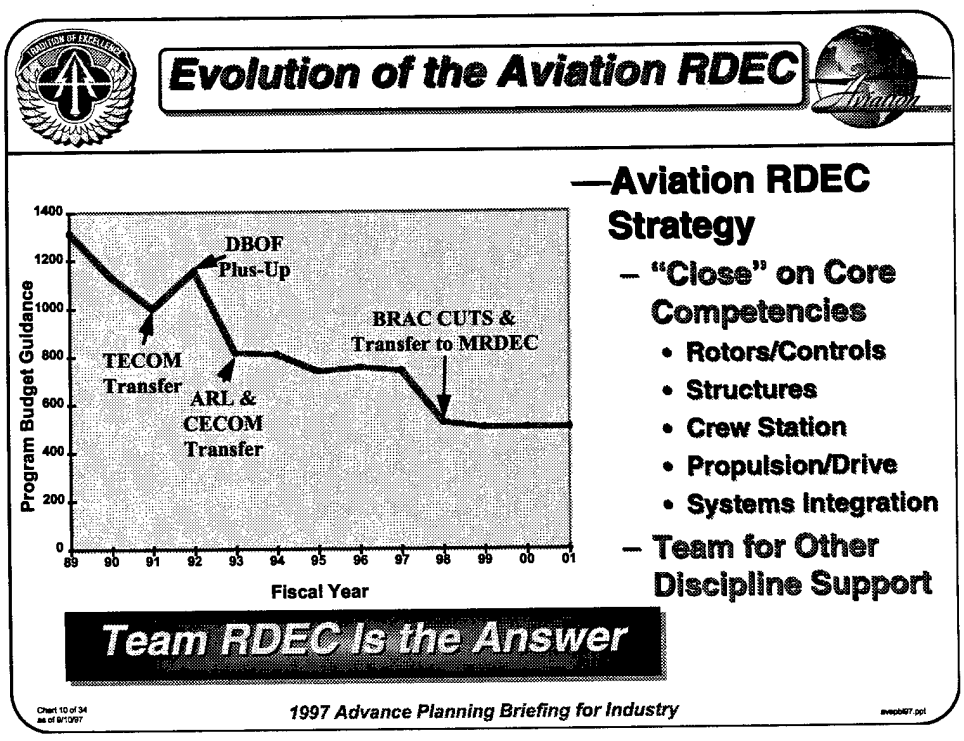
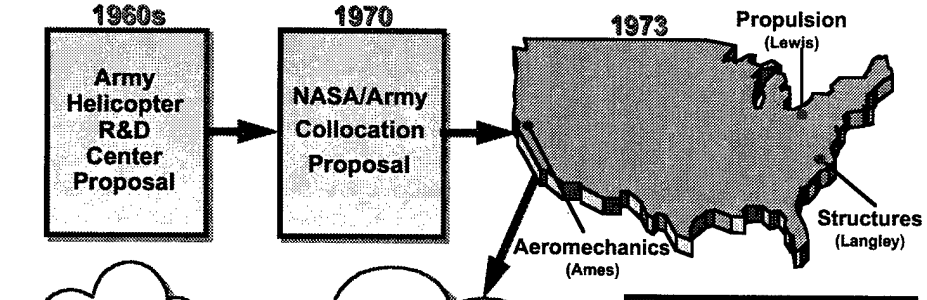

Evolution of the Aviation RDEC
1400
1200
1000
800
600
400
200
0
Program Budget Guidance
89 90 91 92 93 94 95 96 97 98 99 00 01
Fiscal Year
DBOF Plus-Up
TECOM Transfer
ARL & CECOM Transfer
BRAC CUTS & Transfer to MRDEC
—Aviation RDEC Strategy
– "Close" on Core Competencies
• Rotors/Controls
• Structures
• Crew Station
• Propulsion/Drive
• Systems Integration
– Team for Other Discipline Support
Team RDEC Is the Answer
Chart 10 of 34 as of 9/10/97
1997 Advance Planning Briefing for Industry

The Army/NASA Agreement for Rotorcraft S&T



- $60-100M Facility Investment
- 200(+) Personnel Increase

- Essential Zero Facilities Cost
- Only 100(+) Personnel Increase
- Fully Operational in 3 Years

CONCEPT CHARACTERISTICS

- Seamless Activity Between Agencies
- Joint Planning of S&T
- Army Augmentation of Support Personnel Pays the Bill

Success of ARMY/NASA Agreement

— **Leverages $5-10M per year of both agencies rotorcraft S&T budget**

— **Prioritizes availability of critical national assets for Army R&D support**

- Every Army helicopter development since 1972 has required dedicated, extensive wind tunnel and simulator support
- NASA's engineers continuously support Army IPTs

- *AH-64D Rotor/Body Interferance*
- *AH-64D Crew Station*
- *Comanche Rotor*

— **$100M(+) NASA rotorcraft facilities expansion/adaptation over past 25 years due to Army presence**

— **Nation's small turboshaft engine program totally depends on Army's presence at NASA Lewis**

BOTTOM LINE: Army/NASA Agreement is the Prototype for Achieving True Joint Agency Cooperative Programs

Army (DOD)/Civil Helicopter Operator Interests*

Area	Army	Civil	Comment
Payload & Range	●	◑	Most civil operations are short–haul.
Speed	●	◑	
Support Systems	●	●	Big problem for both users.
Fuel Consumption & Price	●	●	Can make or break civil operations.
Reliability / Durability / Dependability (Dispatch Reliability)	●	●	Public has concerns over helicopter safety.
Noise – Internal & External	◑	●	Restricts civil operations in many cities.
Day, Night, All–Weather Operations	●	●	Essential to expanded utilization by both.
Crew Station – Workload	●	●	Pilot workload reduction
Aircrew Safety	●	●	Crew / Public Safety
Affordability	●	●	Obvious

Chart 13 of 34 as of 9/10/97

* Excluding peculiar military requirements, e.g., survivability, lethality, et al.

National Rotorcraft Technology Center -- Organization and Participants --

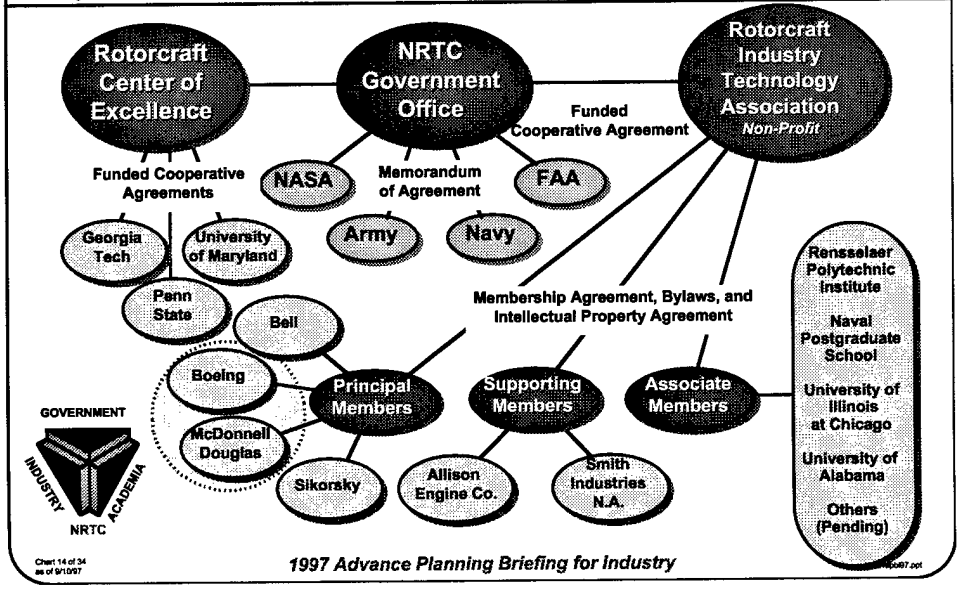
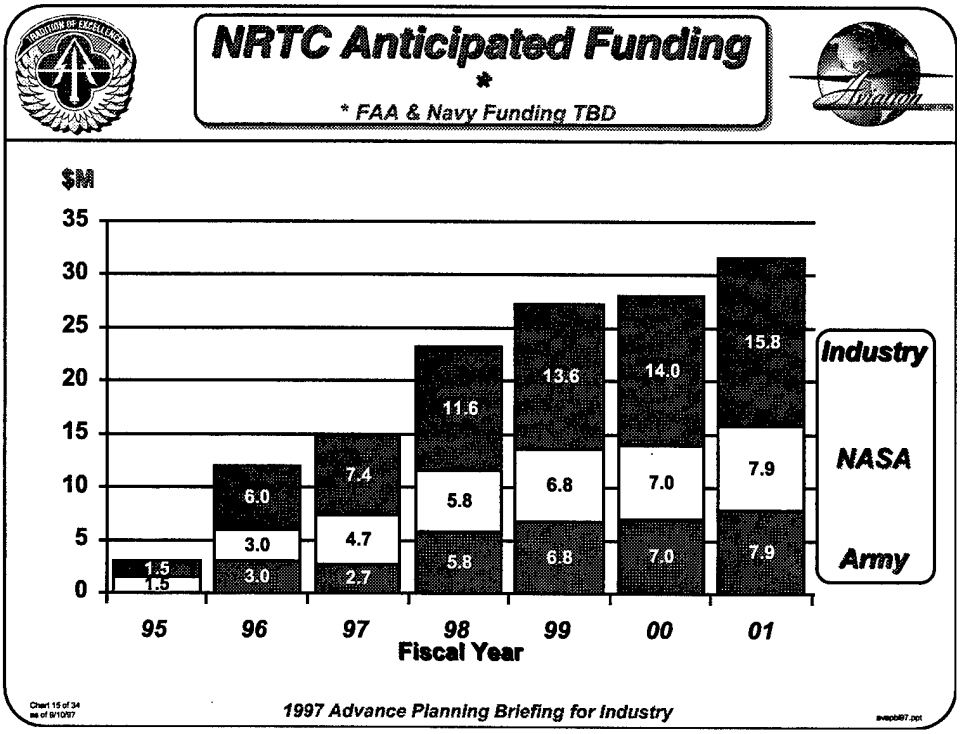


Chart 14 of 34 as of 9/10/97

1997 Advance Planning Briefing for Industry


NRTC Anticipated Funding
*
* FAA & Navy Funding TBD
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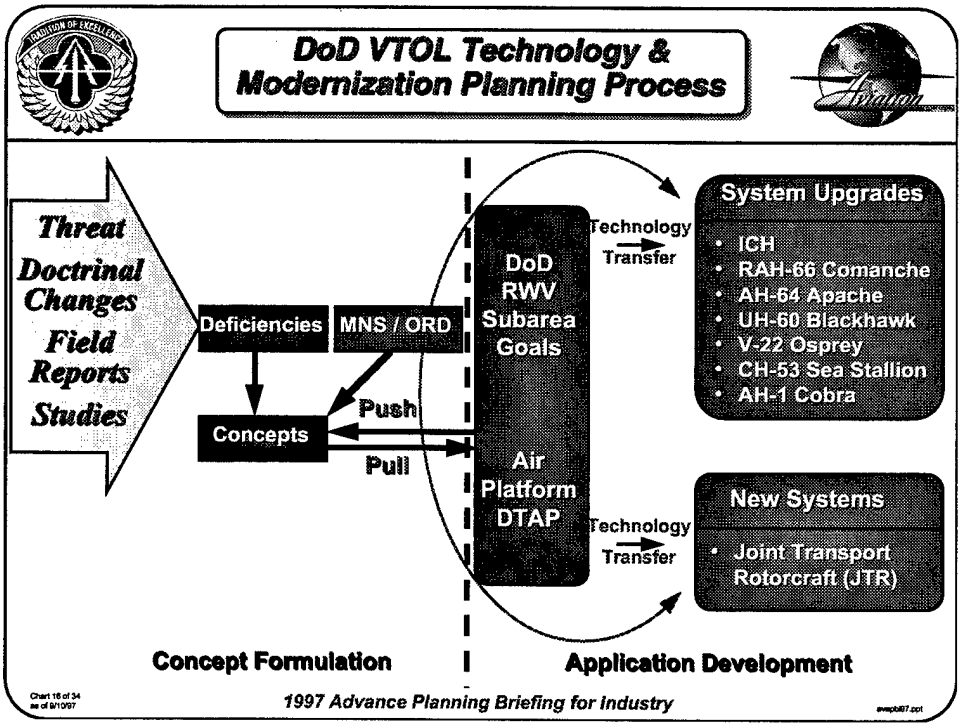
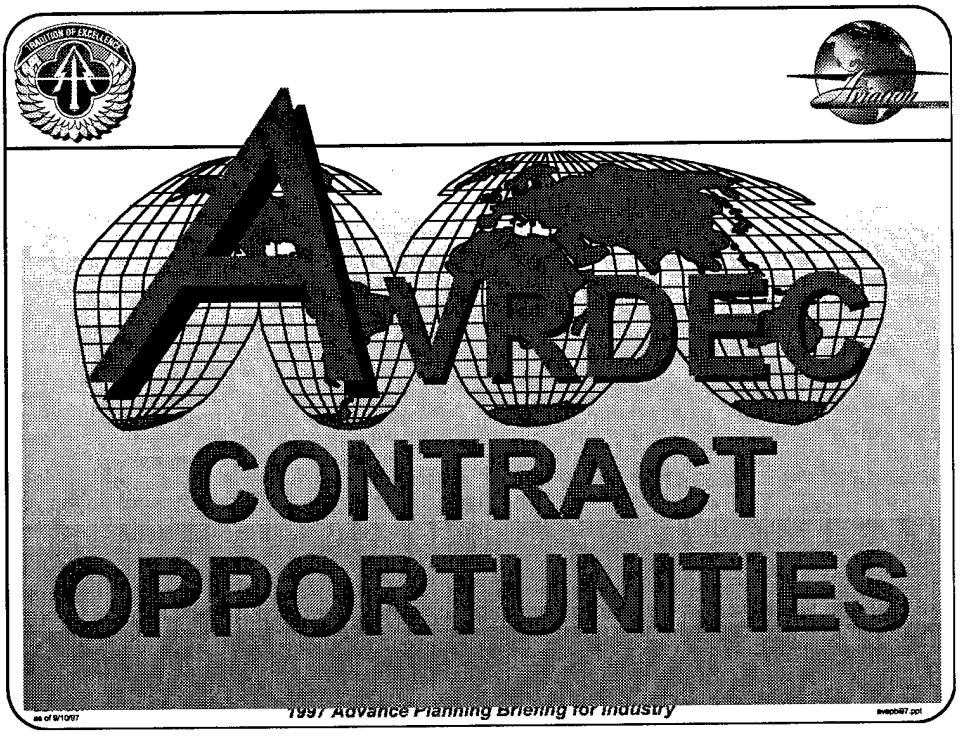
Fiscal Year
Chart 15 of 34
as of 9/10/97
1997 Advance Planning Briefing for Industry


DoD VTOL Technology & Modernization Planning Process
Threat
Doctrinal Changes
Field Reports
Studies
Deficiencies
MNS / ORD
Concepts
Push
Pull
DoD RWV Subarea Goals
Air Platform DTAP
Technology Transfer
Technology Transfer
System Upgrades
• ICH
• RAH-66 Comanche
• AH-64 Apache
• UH-60 Blackhawk
• V-22 Osprey
• CH-53 Sea Stallion
• AH-1 Cobra
New Systems
• Joint Transport Rotorcraft (JTR)
Concept Formulation
Application Development
Chart 16 of 34
as of 9/10/97
1997 Advance Planning Briefing for Industry

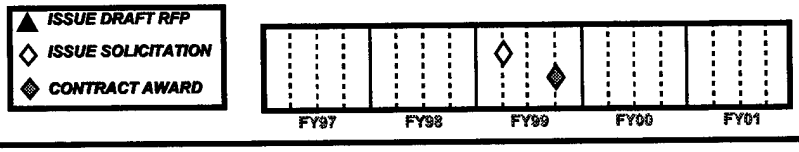


CONTRACTING OPPORTUNITY (U)

Advanced Combusters CONTRACTING OPPORTUNITY	Lauren A. Sebring (757) 878-4828 CONTRACTS POINT OF CONTACT
$1.2-1.3M ESTIMATED VALUE	Cooperative Agreement 50/50 Share CONTRACT TYPE
	Competitive KIND OF AWARD

PROGRAM DESCRIPTION:

Conduct design, fabrication, and rig test of advanced high temperature combuster for a turboshaft engine (3000 SHP class). Major emphasis will be placed on durability (life), pattern factor, cost, weight, and operability. Issues for operability include improved ignition capability, stability (lean blow out), and fuel nozzle plugging.

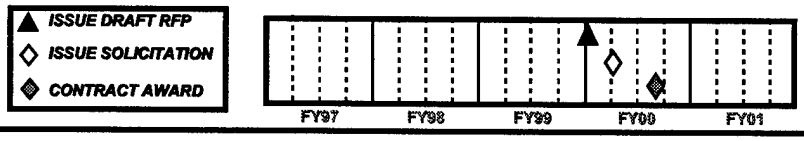


CONTRACTING OPPORTUNITY (U)

Airborne Manned/Unmanned System Technology (AMUST) Program	Lauren Sebring (757) 878-4828
CONTRACTING OPPORTUNITY	CONTRACTS POINT OF CONTACT
$12-$14 M	Cost Reimbursable
ESTIMATED VALUE	CONTRACT TYPE
	Competitive
	KIND OF AWARD

PROGRAM DESCRIPTION:

The AMUST program will identify, develop, integrate and test technologies necessary for airborne manned and unmanned vehicles to operate as a team in support of the maneuver commander. This effort will explore the application of UAV's as members of the combat aviation team. Technology areas to be explored include: cognitive decision aiding for the unmanned team member, advanced pilot vehicle interfaces, linking of commands and guidance, robust data and control, passive collision avoidance, information sharing, data processing and linkage into the intelligence network.

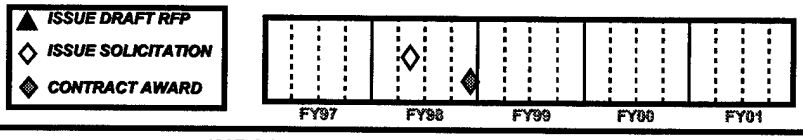


CONTRACTING OPPORTUNITY (U)

Helicopter Active Controls Technology (HACT) Program	Lauren Sebring (757) 878-4828
CONTRACTING OPPORTUNITY	CONTRACTS POINT OF CONTACT
$22-25M	Cost Reimbursable
ESTIMATED VALUE	CONTRACT TYPE
	Competitive
	KIND OF AWARD

PROGRAM DESCRIPTION:

Apply inclusive flight control design methodologies and demonstrate cost effective design processes for flight critical systems. Design, develop and flight demonstrate carefree maneuvering for rotorcraft "heads-up - eyes out of the cockpit" vehicle operations and fault tolerant flight critical control systems. The HACT goals include 30% increase in maneuverability and agility, 60% improvement in vehicle pointing and flight path accuracy, and 50% improvement in handling qualities during NOE operations in degraded visual environments.

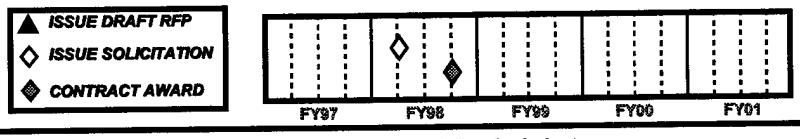


CONTRACTING OPPORTUNITY (U)

Digital Gear Strut CONTRACTING OPPORTUNITY	Lauren A. Sebring (757) 878-4828 CONTRACTS POINT OF CONTACT
$650-750K ESTIMATED VALUE	Cost Reimbursable CONTRACT TYPE
	Competitive KIND OF AWARD

PROGRAM DESCRIPTION:

Develop and demonstrate a high efficiency, digitally controlled landing gear strut which will increase landing gear energy absorption capability in Army helicopters by 40%. This will be achieved through improved load-deflection properties by direct control of the crash hydraulic orifice strut-mounted accelerometers and possibly a microprocessor. Full-scale drop tests will be performed to demonstrate the concept.

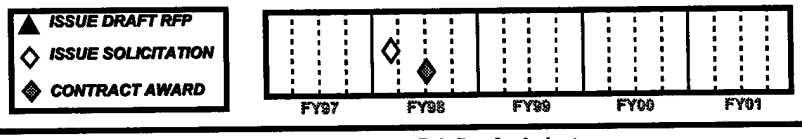


CONTRACTING OPPORTUNITY (U)

Multi-spectral Coatings CONTRACTING OPPORTUNITY	Lauren A. Sebring (757) 878-4828 CONTRACTS POINT OF CONTACT
$800-900K ESTIMATED VALUE	Cost Reimbursable CONTRACT TYPE
	Competitive KIND OF AWARD

PROGRAM DESCRIPTION:

Develop and demonstrate advanced coatings and/or appliqués that provide improved control of thermal emissions in the mid-IR and far-IR bands, coloration and glint control for low visual contrast against terrain backgrounds, and high transmission in the RF bands for compatibility with RAM/RAS materials. The coating system will be CARC capable. Material performance will be demonstrated on laboratory coupons.

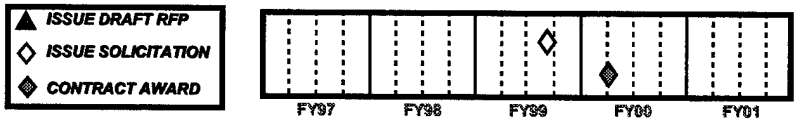


CONTRACTING OPPORTUNITY (U)

Digital Advanced Adaptive Controls & Diagnostics (DAACAD) Program CONTRACTING OPPORTUNITY	Lauren A. Sebring (757) 878-4828 CONTRACTS POINT OF CONTACT
$1.6-1.8M ESTIMATED VALUE	Cooperative Agreement 50/50 Cost Share CONTRACT TYPE
	Competitive KIND OF AWARD

PROGRAM DESCRIPTION:

Develop full authority digital controls (FADEC) with full "adaptive" capability for turboshaft engines and integrating this 3rd generation technology with the next step in engine diagnostics which are compatible with the current Army Advanced Turbine Engine Diagnostics System (TEDS). The over-arching concept is to synthesize/ integrate several advancements in the areas of engine controls and advanced diagnostics.

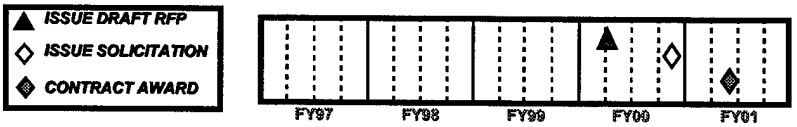


CONTRACTING OPPORTUNITY (U)

Rotorcraft Air Combat Enhancement (RACE) Demonstration CONTRACTING OPPORTUNITY	Lauren A. Sebring (757) 878-4828 CONTRACTS POINT OF CONTACT
$10-13M ESTIMATED VALUE	Cost Reimbursable CONTRACT TYPE
	Competitive KIND OF AWARD

PROGRAM DESCRIPTION:

The RACE Technology Demonstration will develop, integrate, and flight demonstrate the technologies necessary for the Army's existing and future helicopter fleet to meet the Mission Need Statement (MNS). This MNS is for an Air-to-Air (ATA) capability for Army aviation to defeat the threat and protect itself and friendly forces. Technology candidates include improvements to gun, rocket, missile, target acquisition and fire control systems and other systems integration technology necessary to achieve an ATA combat solution.

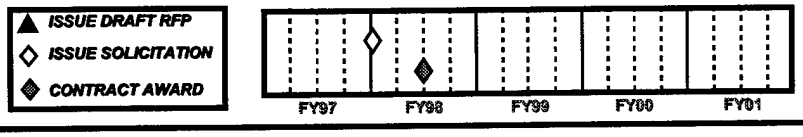


CONTRACTING OPPORTUNITY (U)

Rotary Wing Structures Technology (RWST) Demonstration CONTRACTING OPPORTUNITY	Lauren A. Sebring (757) 878-4828 CONTRACTS POINT OF CONTACT
$15-20M ESTIMATED VALUE	Cooperative Agreement with Cost Sharing CONTRACT TYPE
	Limited Competition KIND OF AWARD

PROGRAM DESCRIPTION:

Conduct preliminary design, detail design, and manufacturing demonstration tasks to re-engineer a 1994 military helicopter structural technology baseline. Use IPPD tools, knowledge base systems, automated analysis methods, and solid modeling supporting a virtual prototype. Use manufacturing simulation to establish process capabilities. Demonstrate technology that compared to the baseline will reduce Unit 1 recurring manufacturing labor by at least 25% and reduce structural weight by 15% through increased structural efficiency.

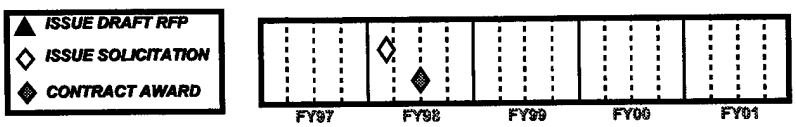


CONTRACTING OPPORTUNITY (U)

Composite Main Rotor Controls CONTRACTING OPPORTUNITY	Lauren A. Sebring (757) 878-4828 CONTRACTS POINT OF CONTACT
$450-550K ESTIMATED VALUE	Cost Reimbursable CONTRACT TYPE
	Competitive KIND OF AWARD

PROGRAM DESCRIPTION:

Design a fatigue limited main rotor control component for composite construction with improved life with respect to the baseline design. Conduct fatigue testing of a full scale component to demonstrate increased life and adequate static strength.

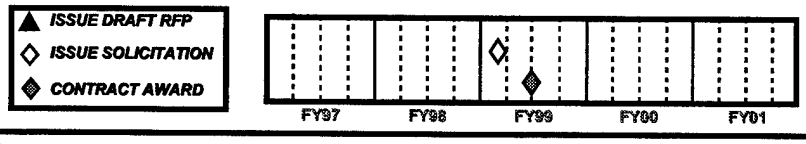


CONTRACTING OPPORTUNITY (U)

Ballistic Tolerant Stiffeners CONTRACTING OPPORTUNITY	Lauren A. Sebring (757) 878-4828 CONTRACTS POINT OF CONTACT
$500-600K ESTIMATED VALUE	Cost Reimbursable CONTRACT TYPE
	Competitive KIND OF AWARD

PROGRAM DESCRIPTION:

Design and fabricate helicopter primary structure both with and without transverse laminate pin reinforcement. Conduct stiffness, static, and ballistic testing on both specimens and compare results.



What is a Cooperative Research and Development Agreement (CRDA)?

- **A Formal Agreement Between a Government Lab and a Partner in Industry or Academia to Conduct Joint Research.**
- **Government Provides Technical Personnel, Services, Facilities, Equipment, and Other Resources, But No Funds.**
- **The Partner Provides Technical Personnel, Services, Facilities, Equipment, and Other Resources and Can be requested to Provide Funds.**
- **The Agreement Defines he Sharing of Intellectual Property.**
- **The Purpose is to Provide Mutual Benefit to Government and Private Sector to Enhance U.S. Global Competitiveness.**

Advantages To A CRDA

- Participants are able to Leverage Resources: Manpower, Facilities, and Funding
- Technical problems can be solved more effectively by a Team Effort.
- Technology base is increased by both organizations.
- Provides Special considerations for small businesses.
- Intellectual property protected.

Small Business Innovative Research (SBIR) Program Objectives

- Stimulate Technological Innovation
- Increase Small Business Participation in Federal R&D
- Increase Private Sector Commercialization of Technology Developed through Federal R&D; Document Return on Investment
- Foster and Encourage Participation by Woman-owned and Socially and Economically Disadvantaged Small Businesses

FY96 SBIR

• FY96 DA Extramural R&D Program	$ 4 Billion
• SBIR Tax (2%)	$79.94 Million
• AVRDEC SBIR Program	$ 9.0 Million
• Number of DA Phase I	266
• AVRDEC PHASE I	23
• Number of DA Phase II	99
• AVRDEC PHASE II	13

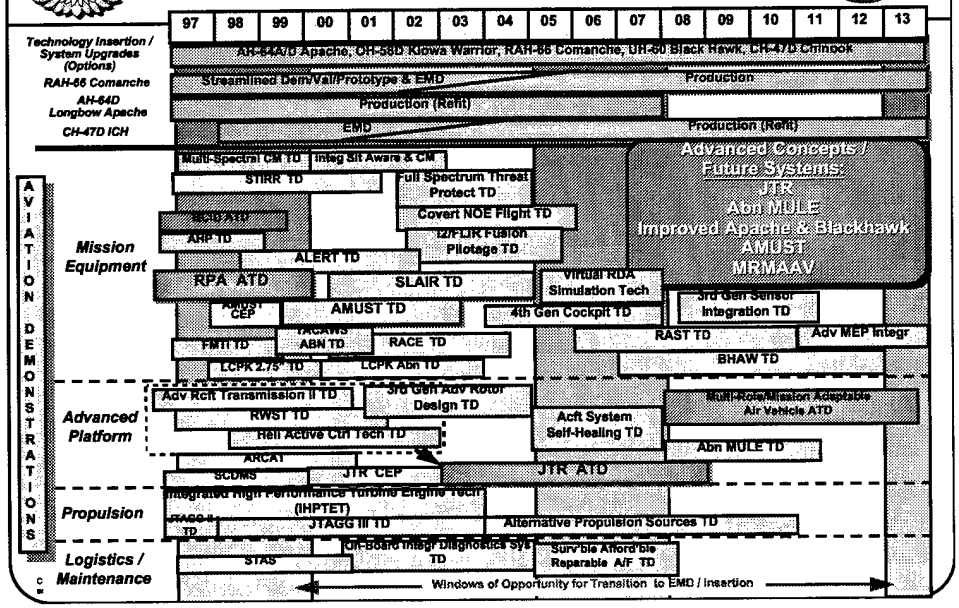
Milestones for DA SBIR Program

• Solicitation Opens	May
• Solicitation Closes	July
• Phase I Evaluations Completed	October
• Phase I Contract Awards	November
• Phase II Letters of Invitation	May
• Phase II Proposals Due	June
• Phase II Evaluations Completed	July
• Phase II Contract Awards	December

SBIR Provides Opportunities For Large Companies Too!

- **Large Companies can be a Subcontractor on Phase II Programs.**
- **"Mentoring" Relationship of Large Company to Small Company under "Fast Track" Matching Funds.**
- **Small Companies Retain the Patent Right to any Invention.**
- **Opportunities exist for Large Companies, as well as Small Companies, through Teaming.**

Army Aviation S&T Strategy



Integrated Materiel Management Center (IMMC)
Mr. John R. Chapman
Deputy Director, IMMC

Aviation & Missile Contracting Opportunities

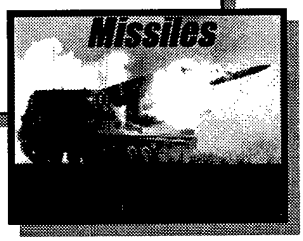
Presented by:

John R. Chapman

Integrated Materiel Management Center (IMMC)

U.S. Army Aviation and Missile Command

Telephone:
(205) 876-3108



1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

Aviation & Missile Contracting Opportunities

I am John Chapman, Deputy Director of the Integrated Materiel Management Center (IMMC) here at AMCOM. We are very appreciative of the opportunity to once again participate in the APBI and tell you about the Center and our role in the support and sustainment of AMCOM managed aviation and missile systems.

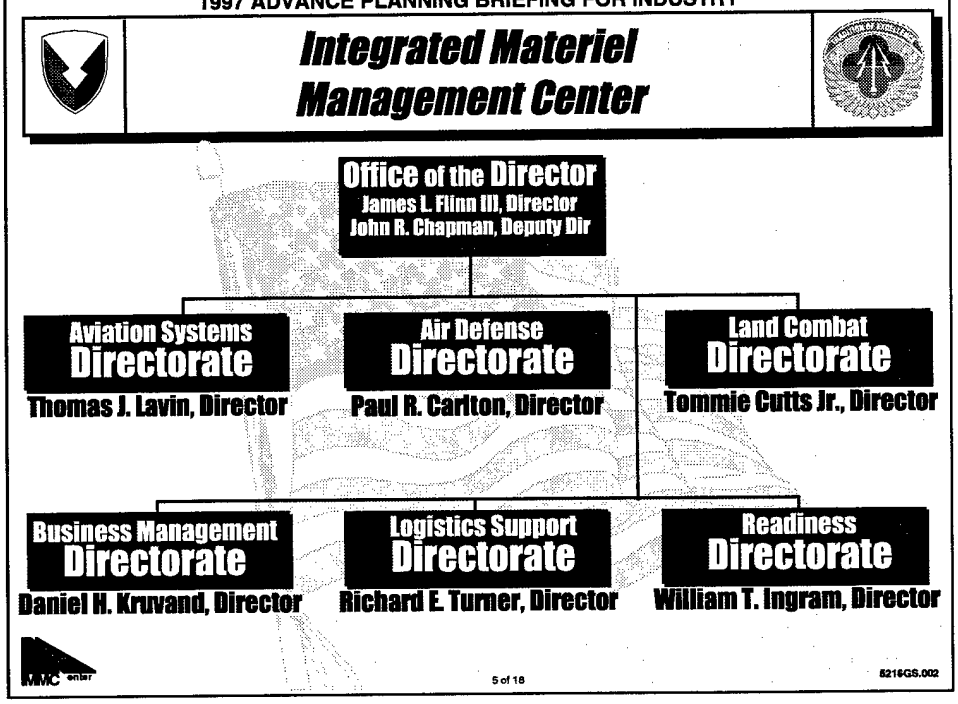
IMMC Mission

- Centralized Integrated Materiel Management
- National Maintenance Management
- National Inventory Control Management
- Ammunition Management
- AMCOM ILS and Manprint Policies & Procedures
- AMCOM Aviation and Missile Readiness Program

1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

IMMC Mission

The mission of the IMMC is to provide centralized integrated materiel management for assigned systems and equipment. We accomplish this through National Maintenance Management and National Inventory Control Management for aviation and missile systems. We establish worldwide maintenance policies and procedures and insure that spares and repair parts are available to support a high level of readiness throughout the life cycle of the various aviation and missile systems that we manage. In addition, we serve as the focal point for explosive and ammunition expertise associated with all Army missilery. We also provide manpower and Integrated Logistics Support policies and procedures for assigned equipment and ensure that the Army's aviation and missile readiness is maintained to accomplish rapid, concise victory in the event of a war.



1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

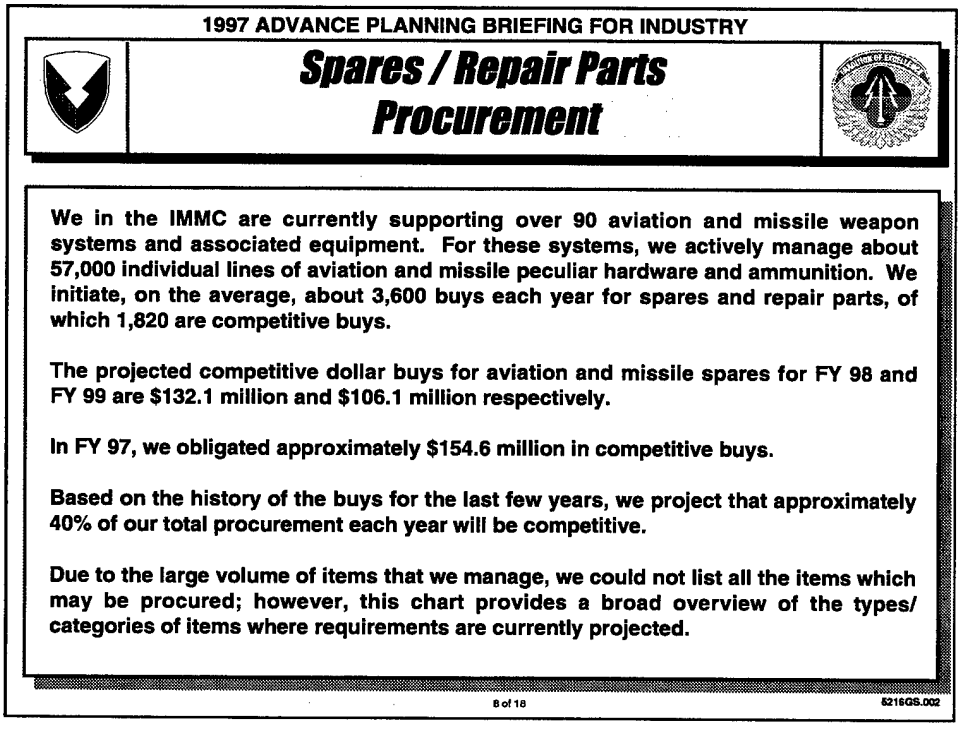
This chart depicts the IMMC structure under the new command which became effective in July of this year. The AVIATION SYSTEMS DIRECTORATE has the mission and functions for the support and sustainment of all AMCOM managed aviation systems. The AIR DEFENSE DIRECTORATE has the mission and functions for the support and sustainment of all air defense systems. The LAND COMBAT DIRECTORATE has the mission and functions for the support and sustainment of tactical missiles and land combat systems. These three directorates provide centralized integrated materiel inventory management for assigned systems and equipment. They establish logistics support priorities and determine logistics support requirements. These will be the main offices that initiate requirements for spare/repair parts procurements. We will be talking to you more about contracting opportunities for spare/repair parts later in the briefing.

The BUSINESS MANAGEMENT DIRECTORATE and the LOGISTICS SUPPORT DIRECTORATE serve as enablers to the three hardware directorates by providing policy, budgeting, administrative, and subject matter expert support.

The READINESS DIRECTORATE provides support in the areas of world-wide logistics assistance; analysis and sustainment and other customer support; materiel fielding and new equipment training.

Back-up charts, depicting the structure of the Directorates within IMMC under the new command, are provided for your information.

1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY
Spares / Repair Parts Procurement
• 57,000 ITEMS MANAGED
• 3,600 BUYS PER YEAR
• 1,820 COMPETITIVE BUYS
• PROJECTED OPPORTUNITIES ARE:
FY98 $132.1M
FY99 $106.1M
• FY97: $154.6 Competitive
APPROXIMATELY 40% OF OUR PROCUREMENT IS COMPETITIVE
SPARES CATEGORIES FOR COMPETITIVE AWARD
CABLE ASSEMBLIES
CASE ASSEMBLIES
HEAT EXCHANGERS
MODULE HAND CARRIER
SUPPORT ASSEMBLIES
ELEVATORS
ALTITUDE ASSEMBLIES
ACCESS COVERS
PUSH ROD ASSYS
SHROUDS
BALL BEARINGS
CONNECTING LINKS
LANDING STRUTS & WHEELS
POWER SUPPLIES
CONTROL PANELS
COWLINGS
HOSE ASSEMBLIES
NOSE CONES
TAIL CONES
VALVES
WIRING HARNESSES
FAIRINGS
NOZZLES
INDICATORS
BOLTS
GEARSHAFTS
SPECIAL REUSABLE CONTAINERS
AVIATION GROUND SUPPORT EQUIPMENT
WINDOW PANELS & WINDSCREENS
IMMC enter
7 of 18
6216GS.002


1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY
Spares / Repair Parts Procurement
We in the IMMC are currently supporting over 90 aviation and missile weapon systems and associated equipment. For these systems, we actively manage about 57,000 individual lines of aviation and missile peculiar hardware and ammunition. We initiate, on the average, about 3,600 buys each year for spares and repair parts, of which 1,820 are competitive buys.
The projected competitive dollar buys for aviation and missile spares for FY 98 and FY 99 are $132.1 million and $106.1 million respectively.
In FY 97, we obligated approximately $154.6 million in competitive buys.
Based on the history of the buys for the last few years, we project that approximately 40% of our total procurement each year will be competitive.
Due to the large volume of items that we manage, we could not list all the items which may be procured; however, this chart provides a broad overview of the types/ categories of items where requirements are currently projected.
8 of 18
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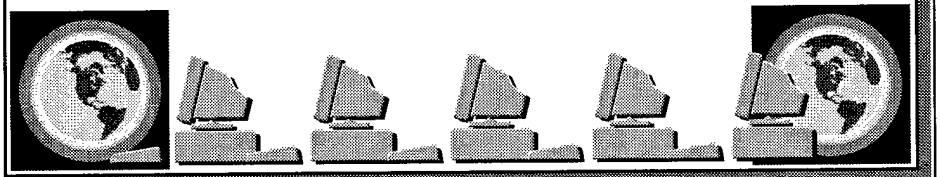
1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

Missile SPARES Projections Through APAI

- Advanced Planning Acquisition Information (APAI)
  - SPARES Requirement Projections for Three Years
  - Accessible Through Acquisition Bulletin Board System (BBS) - Contact Small Business Office
  - Accessible Through Internet @ http://michp 753. redstone. army.mil/procbbs/



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1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

Missile SPARES Projections Through APAI

The Advanced Planning Acquisition Information (APAI) is the primary mechanism for communicating spare/repair parts requirements to industry and is available to all U.S. industries upon request or through automated systems.

The APAI provides spares requirement projections for three years and can be accessed through the Acquisition Bulletin Board System (BBS). It should be noted that the aviation projections are not included in this database at the present time; however, they will be incorporated in the future. Information not on the bulletin board can be obtained from the AMCOM Small Business Office.

The APAI and Bulletin Board System can also be accessed through the Internet at the following address: http://michp753.redstone.army.mil/procbbs/.

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1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

Engineering and Technical Services (ETS) Support

Purpose	To provide logistical support services for the Integrated Materiel Management Center in support of AMCOM weapon systems and associated equipment.
Type of Contract	Multi-Award Contract with Basic plus 9 options.
Areas of Coverage	Aviation and Missile Weapon Systems and Support Equipment

Anticipated Skill Requirements

- Project Leader
- Logistics Analyst
- Engineer
- Maint Mgmt Spt
- Mat Mgmt Spt
- Packaging/Traffic Mgmt Spt
- Provisioning/Item Introduction Spt
- Technical Writer/Editor
- Technical Illustrator
- Gen Supply Spt
- Inv Supply Tech
- Equip Maint Aide
- Clerk/Typist

Projected Dollar Estimates

$65M - 85M
Over Five Years

Key Dates (estimates)		
	RFP Release	First Week In February 98
	Award Date	September 98

IMMC enter POC: Melvin Waters, (205) 876-4156
EMail: watersm@redstone.army.mil

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1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

Engineering and Technical Services (ETS) Support

Another private sector initiative within IMMC is the outsourcing of selected logistical functions. This initiative procures logistical services from the private sector which assists IMMC in providing sustainment support for the AMCOM weapon systems and support equipment. While we are still working under the former ATCOM and/or MICOM support contract vehicle, action has been initiated to develop a single AMCOM logistical Engineering and Technical Service contract.

The contract itself will be a five-year contract for logistical support of aviation and missile weapon systems and their support equipment. We are looking at a multi-award contract much like the Programmatic and Technical Support (PATs) contracts of the former ATCOM. This means support will be provided by a team of contractors.

We estimate there will be around thirteen skill requirements (depicted on chart) with a dollar value between $65 to $85 million dollars over the five year period.

Right now we are shooting for the first week in February 98 for the release of the request for proposal (RFP) to the private sector with an award date around September 98.

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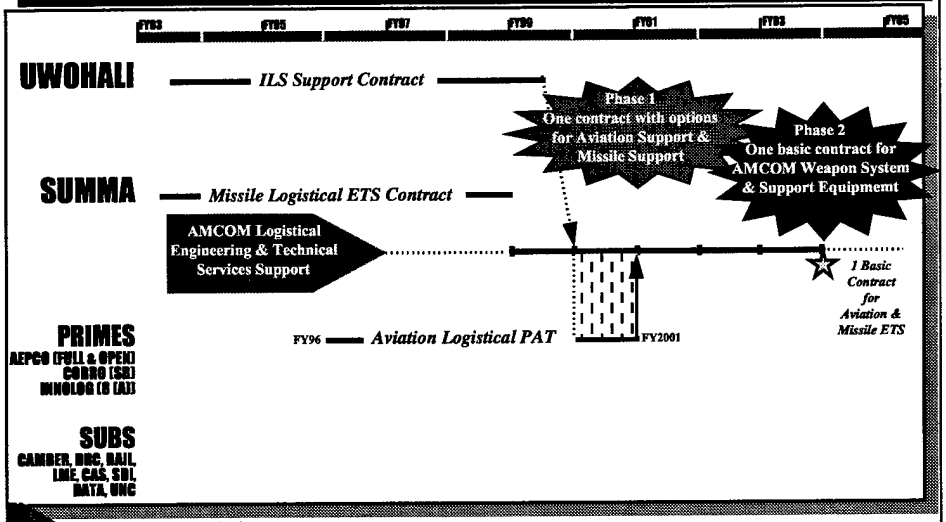
1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

ETS Planning Schedule



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EMail: watersm@redstone.army.mil

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1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

ETS Planning Schedule

To help both our present support contractors and our future support contractors understand how we are going to get to an AMCOM contract, let us take a look at IMMC's planning schedule.

Currently, we have three primary logistics service contracts that we will honor; the ILS support contract with UWOHALI, the Missile Logistical ETS contract with SUMMA, and the aviation logistical PAT contract that has three primes and eight subcontractors. We will continue to use these contracting vehicles until they expire. Since they do not all expire at the same time we are looking at a two-phase approach to establish a single AMCOM logistics Engineering and Technical Service contract.

Within the first phase we plan to implement a five year contract with options for both ILS, missile, and aviation support. The options will only be executed when the existing contract with similar services expires. This will allow us to honor our current contracts while providing continuous coverage for all logistical functions without implementing individual one to two-year contracts. In fiscal year 2004 we will implement Phase 2 which will establish a single contract with standard options over five years to support AMCOM weapon systems and support equipment.

Through this plan we will honor our current contracts, continue our efforts to outsource selected logistics functions, maintain continuous contractor logistical support coverage, minimize contracting overhead actions, and work towards the goal of a single logistics ETS contract for AMCOM.

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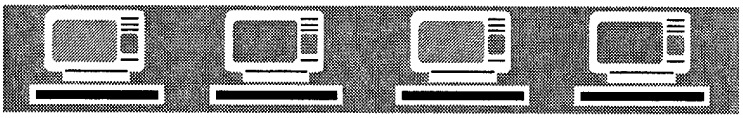
Modernization Through SPARES

Modernization Through SPARES:

- Eliminates buying spare parts on outdated specifications and technical data packages.
- Bases the procurement on new designs and manufacturing technologies.
- Modernizes, but incrementally enhances the performance and reliability of end items.



Benefits of using MTS:

- Reduces long-term sustainability or operating and support (O&S) costs which constitutes at least 60 percent of a system's life cycle costs.
- Upgrades system capability.
- Introduces new technology which significantly improves reliability.
- Integrates the military and commercial industrial bases.

POC: John Smith, (205) 876-1802
EMail: jvsmith@redstone.army.mil

5218GS.002

1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

Modernization Through SPARES

Modernization Through Spares (MTS) is a spares improvement program where, through the implementation of the 90's acquisition reform policies, present day technologies are inserted into future spares procurement. Through MTS, the entire system is improved.

In Jan 96, because of constraints in current and future funding to modernize major weapon systems, the Program Executive Offices and the Major Subordinate Commands were tasked by the Assistant Secretary of the Army and the Commanding General, AMC, to devise and pursue a modernization through spares initiative.

What does it do? It eliminates buying spare parts on outdated specifications and technical data packages. It bases the procurement on new designs and manufacturing technologies. It modernizes, but incrementally enhances the performance and reliability of end items.

Some of the benefits of using MTS are that it reduces long-term sustainability or operating and support (O & S) costs which constitutes at least 60 percent of a system's life cycle cost. It upgrades system capability, and introduces new technology which significantly improves reliability. It also integrates the military and commercial industrial bases.

The MTS is a shared effort among AMCOM elements. The IMMC has the responsibility for the programmatic and logistics function; the SEPD, RDEC provides the technical expertise; and the Acquisition Center manages the acquisition for the program. The AMCOM LogLab, which is located in the IMMC, is developing a methodology for MTS which can be used across the full range of AMCOM spares procurement. A draft implementation plan has been submitted and coordinated for review and comments. When MTS is implemented, it has the potential for significantly reducing the cost of modernizing major weapon systems.

5218GS.002

Integrated Materiel Management Center

- *Provide World Class Logistics Support to our Customers*
- *Ensure Weapons Systems Readiness, and Sustainment Support for Tomorrow's Quality Army*
- *Continuously Improve Logistics Processes*

Integrated Materiel Management Center

The IMMC is committed to:

- **Providing world class logistics support to our customers.**
- **Ensuring weapon systems readiness and sustainment support for tomorrow's quality army.**
- **Continuously improving logistics processes.**

In conclusion, we thank you for your attention and hope that we have given you a better understanding of the IMMC's role in the support and sustainment of AMCOM-managed systems. We trust that our broad overview of the types of items that will be procured in the next two years will assist you in your near term planning for spare/repair parts contracting opportunities.

Redstone Technical Test Center (RTTC)
Test and Evaluation Command
Ms. Sharron A. Mueller-Myers
Contracts Specialist, RTTC

1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

Redstone Technical Test Center

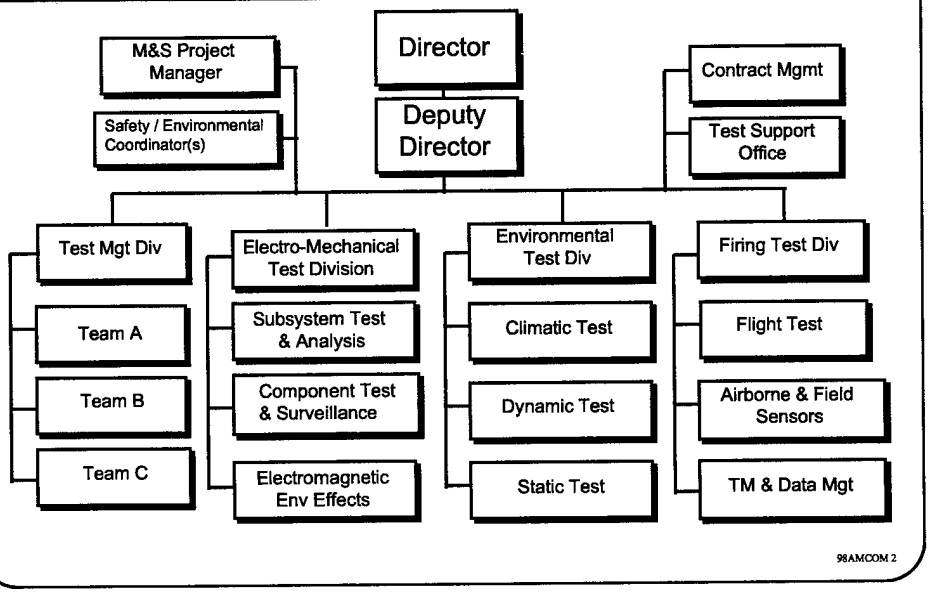
Sharon Mueller-Myers
TILO, RTTC
(205) 876-5642

U.S. ARMY TEST AND EVALUATION COMMAND

98AMCOM 1

1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

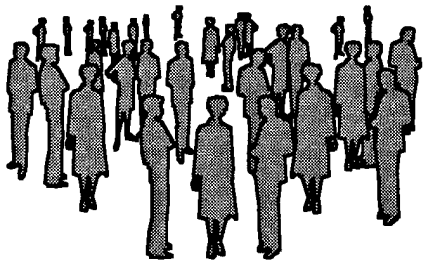
REDSTONE TECHNICAL TEST CENTER



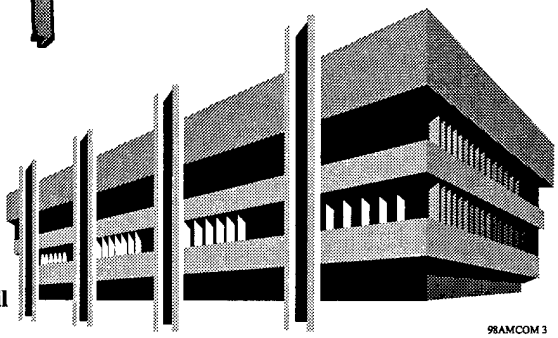
98AMCOM 2

1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

REDSTONE TECHNICAL TEST CENTER CHARACTERISTICS FY97



153 Civilian
339 Contractors
492 Total



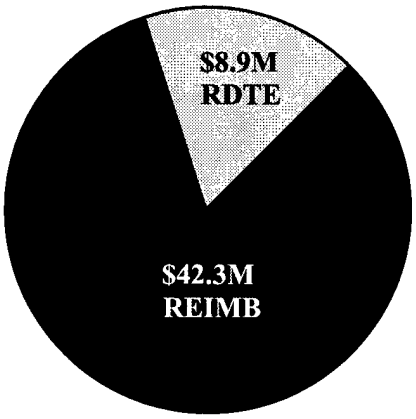
14,000 Acres
646,000 Building Sq. Ft.
*$300 Million Investment

*Excludes Land Valued at $104 Mil

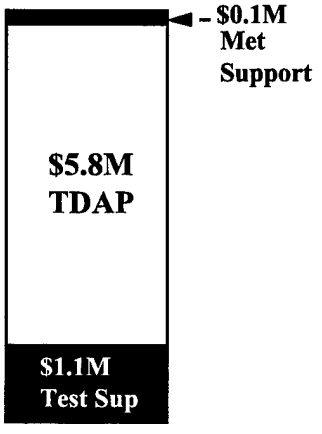
98AMCOM 3

1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

FY 98 - PROJECTED RTTC BUDGET



$49.3 Million



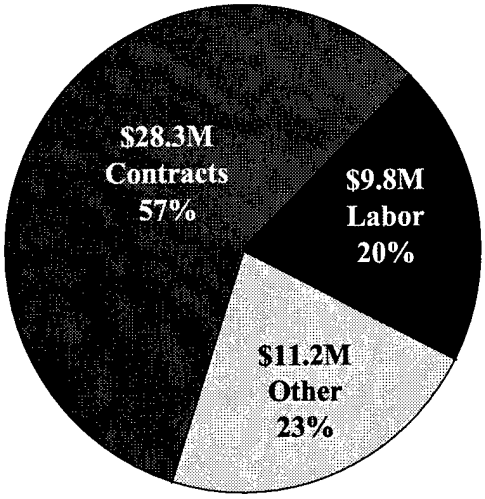
RDTE

98AMCOM 4

1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

FY 98 PROJECTED BUDGET BY OPERATING ACCOUNT

$ IN MILLIONS



$49.3Million

98AMCOM 5

1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

CONTRACT OPPORTUNITIES

- General Support Contracts (CPFF)
  - Seven each - renewed on repetitive basis
  - Small Business (Two 8A Set Aside)
- Test Instrumentation (FFP)
  - 11 Actions ($100K - $3 M)
- Contracting Officer
  - Ray Shores (205) 876-3432
  - AMCOM Acquisition Center

98AMCOM 6

1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

GENERAL SUPPORT CONTRACTS

DESCRIPTION	EXPIRES	Est. Value in $ Mil
Support - Electro-Mech Test	Nov 1997	39.8
Support - Static Test (*)	Jul 1999	31.9
Support - Mech Component & Vibration Test	Oct 1999	32.0
Support - Test Planning, Eval & Documentation (*)	Jan 2000	28.3
Support - Airborne & Field Sensors	Jan 2001	22.4
Support - Climatic	Feb 2002	16.2
Support - Ordnance	Jul 2002	30.2

(*) - 8A Set Aside

98AMCOM 7

1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

ACOUSTIC FLIGHT VIBRATION SIMULATION FACILITY

- OBJECTIVE: CONVERT EXISTING STRUCTURE INTO A VIBRO-ACOUSTIC FLIGHT SIMULATION FACILITY. BASIC - SYSTEM DESIGN, FACILITY MODIFICATIONS, PROCURE ACOUSTIC MODELING WORKSTATION. OPT I - INSTRUMENTATION AND INSTALLATION. OPT II - INSTRUMENTATION, SYSTEM INTEGRATION, TRAINING. CONTRACT TYPE: FFP
- EST. COST: LESS THAN $850K
- EST. RFP RELEASE: FY 98
- EST. AWARD DATE: FY 98

98AMCOM 8

1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

ELECTROMAGNETIC RADIATION SUSTAINMENT

- OBJECTIVE: PROCURE AND INSTALL POWER SUPPLIES, TRAVELING WAVE TUBE AMPLIFIERS, ANTENNAS, DRIVERS, ETC. TO UPGRADE RTTC'S EMR ENVIRONMENT GENERATION SYSTEM. CONTRACT TYPE: FFP
- EST. COST: LESS THAN $300K, MULTIPLE OPTIONS TO TOTAL LESS THAN $2.5M
- EST. RFP RELEASE: 1ST QTR FY 98
- EST. AWARD DATE: 2ND QTR FY 98, OPTIONS SPREAD OVER 4 - 6 YRS

98AMCOM 9

1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

HIGH DENSITY DATA RECORDERS

- OBJECTIVE: PROCURE FOUR HIGH DENSITY DATA RECORDERS CAPABLE OF ACCEPTING TWO 20Mb DATA CHANNELS ALONG WITH VOICE ANNOTATION AND IRIG A AND B TIME CODE. THE RECORDERS MUST HAVE INDIVIDUAL LEVEL ADJUSTMENT FOR EACH CHANNEL AND A RECORD TIME OF AT LEAST 90 MINUTES. CONTRACT TYPE: FFP
- EST. COST: LESS THAN $200K, OPTION - LESS THAN $200K
- EST. RFP RELEASE: 1ST QTR FY 99
- EST. AWARD DATE: 2ND QTR FY 99, OPT - FY 00

98AMCOM 10

1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

HIGH BANDWIDTH TELEMETRY RECEIVERS AND COMBINERS

- OBJECTIVE: PROCURE FOUR EACH MICROPROCESSOR-CONTROLLED WIDEBAND TELEMETRY RECEIVERS AND TWO WIDEWAND TM COMBINERS WITH FRONT PANEL PLUG-IN RF TUNERS, WIDEBAND DEMODULATORS, AND SECOND IF FILTERS. THE RF TUNERS MUST PROVIDE COVERAGE IN THE S-BAND (2200 - 2300 MHz). THE WIDEBAND IF FILTER BANDWIDTH WILL BE FRONT PANEL SELECTABLE FOR BOTH 10 AND 20 MHz. CONTRACT TYPE: FFP
- EST. COST: LESS THAN $175K, OPTION - LESS THAN $175K
- EST. RFP RELEASE: 1ST QTR FY 99
- EST. AWARD DATE: 2ND QTR FY 99, OPT - FY 00

98AMCOM 11

1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

FIBER OPTIC INTERFACE EQUIPMENT

- OBJECTIVE: PROCURE AND INSTALL ELECTRONIC END ITEMS FOR RTTC FIBER OPTIC NETWORK CONTRACT TYPE: FFP
- EST. COST: LESS THAN $400K, OPTION LESS THAN $400K
- EST. RFP RELEASE: 1ST QTR FY 98, OPT FY 99
- EST. AWARD DATE: 2ND QTR FY 99, OPT FY 99

98AMCOM 12

1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

MULTIPLE DEGREE OF FREEDOM SIMULATOR

- OBJECTIVE: PROCURE TWO WIDE BAND (300 Hz) GENERAL PURPOSE MDOF MOTION SIMULTORS AND CORRESPONDING CONTROL SYSTEMS. CONTRACT TYPE: FFP
- EST. COST: LESS THAN $400K, OPTION LESS THAN $400k
- EST. RFP RELEASE: 1ST QTR FY 99
- EST. AWARD DATE: 2ND QTR FY 99, OPTION FY 00

98AMCOM 13

1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

MILLIMETER WAVE INSTRUMENTATION RADAR

- OBJECTIVE: IN-BAND TERRAIN MAPPING FOR DEVELOPMENT OF VIRTUAL RANGE TERRAIN MODEL CONTRACT TYPE: FFP
- EST. COST: LESS THAN $3MIL
- EST. RFP RELEASE: FY 00
- EST AWARD DATE: FY 00

98AMCOM 14

1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

CRANE

- OBJECTIVE: PROCURE A 15 TON, ROUGH TERRAIN CRANE WITH 80 FOOT BOOM AND HYDRAULIC CONTROLS CONTRACT TYPE: FFP
- EST. COST: LESS THAN $200K
- EST. RFP RELEASE: 1ST QTR FY 00
- EST. AWARD DATE: 2ND QTR FY 00

98AMCOM 15

1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

SHOCK TESTING (HORIZONTAL)

- OBJECTIVE: PROCURE A SHOCK MACHINE CAPABLE OF PERFORMING SHOCK TESTS ON PAYLOADS RANGING IN SIZE UP TO 2000 LBS IN THE HORIZONTAL DIRECTION. CONTRACT TYPE: FFP
- EST. COST: LESS THAN $550K
- EST. RFP RELEASE: FY 00
- EST. AWARD DATE: FY 00

98AMCOM 16

1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

FLIGHT RANGE MATERIAL HANDLING EQUIPMENT

- OBJECTIVE: REPLACE EXISTING ALL TERRAIN 10,000 LB CAPACITY FORKLIFT. CONTRACT TYPE: FFP
- EST. COST: LESS THAN $150K
- EST. RFP RELEASE: FY 00
- EST. AWARD DATE: FY 00

98AMCOM 17

1997 ADVANCE PLANNING BRIEFING FOR INDUSTRY

DIGITAL VIDEO DATA COLLECTION

- OBJECTIVE: PROCURE HIGH SPEED, HIGH RESOLUTION VIDEO CAMERAS TO REPLACE HIGH SPEED FILM CAMERAS. VIDEO CAPABILITY WILL PROVIDE NEAR REAL TIME POST FLIGHT DATA REDUCTION AND MISSION PERFORMANCE EVALUATION. CONTRACT TYPE: FFP
- EST. COST: LESS THAN $350K
- EST. RFP RELEASE: FY 00
- EST. AWARD DATE: FY 00

98AMCOM 18

U.S. ARMY
REDSTONE TECHNICAL
TEST CENTER

RTTC Technical Industrial Liaison Officer:

Sharon Mueller-Myers

(205) 876-5642

Mailing Address:

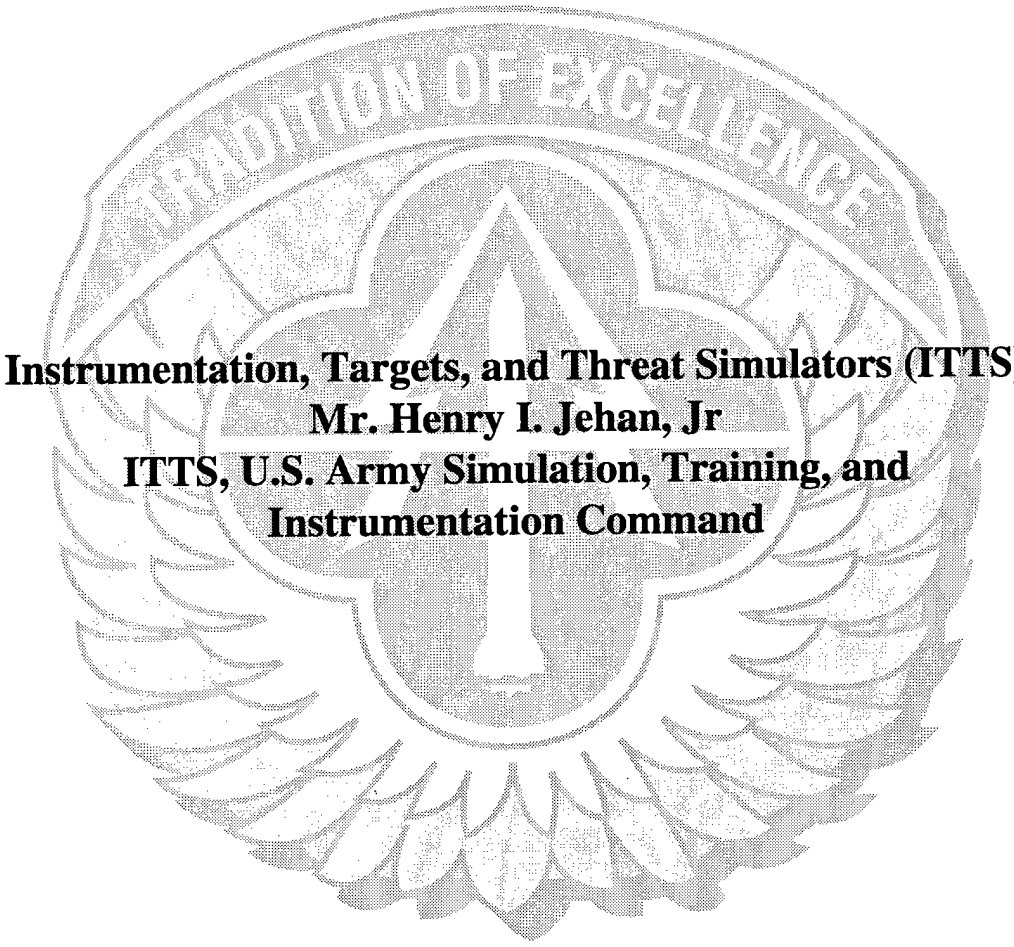
Director

Redstone Technical Test Center

ATTN: STERT-TE-S (S. Mueller-Myers)

Redstone Arsenal, AL 35898-8052

98AMCOM 19



Instrumentation, Targets, and Threat Simulators (ITTS)

Mr. Henry I. Jehan, Jr
ITTS, U.S. Army Simulation, Training, and Instrumentation Command

UNCLASSIFIED
ADVANCE PLANNING BRIEFING FOR INDUSTRY

PM ITTS

Advance Planning Briefing for Industry (APBI) 1997

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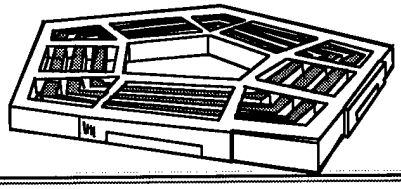
ADVANCE PLANNING BRIEFING FOR INDUSTRY

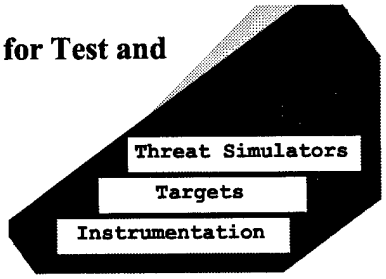
MISSION

- **Manage the Research, Development, Design, Acquisition, Fielding, Modification and Capability Accounting of Targets, Threat Simulators and Major Instrumentation Required for Technical and Operational Test and Evaluation for the U.S. Army.**

U.S. ARMY T&E

- **Operate and Maintain Targets for Test and Training.**





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ADVANCE PLANNING BRIEFING FOR INDUSTRY

PM ITTS

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tuttenm@stricom.army.mil

Visit our Website at http://www.stricom.army.mil

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ADVANCE PLANNING BRIEFING FOR INDUSTRY

CONTRACTS

- **PM ITTS contracts through several procurement agencies**
  - **STRICOM/NAWC - Instrumentation**
  - **AMCOM - Targets and Threat Simulators**
  - **TECOM Test Centers - Range facilities and Instrumentation**

UNCLASSIFIED
ADVANCE PLANNING BRIEFING FOR INDUSTRY

MAJOR TECHNOLOGY THRUSTS

- Embedded Instrumentation
  - Hardened Subminiature Telemetry and Sensors
  - Conformal Instrumentation Packaging
- Emerging Technology Instrumentation
  - Future Armor Concepts
  - Liquid Propellants
  - Electric Drive Vehicles
  - Advanced Sensors

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ADVANCE PLANNING BRIEFING FOR INDUSTRY

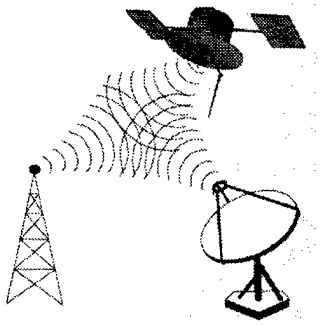
MAJOR TECHNOLOGY THRUSTS

- Test Environment
- Virtual Targets and Threat Simulators
- Interface between Live, Virtual, and Constructive Environments
- RF Injection for Open Air Testing

UNCLASSIFIED
ADVANCE PLANNING BRIEFING FOR INDUSTRY

Instrumentation Management Office

- **Develops Major Instrumentation**
- **Instrumentation Characteristics**
  - **Direct and Remote Sensing**
  - **Detect, Measure, Record, Telemeter, Process and Analyze**
  - **Used for Technical or Operational Testing**



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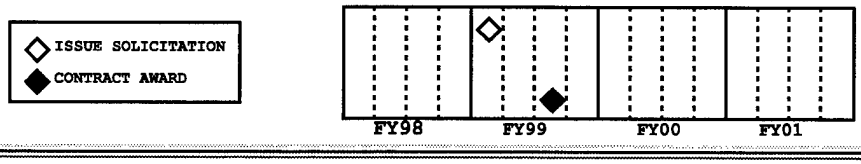
ADVANCE PLANNING BRIEFING FOR INDUSTRY

CONTRACTING OPPORTUNITY (U)

High Speed Massive Memory/Electronic Film Capability (HSMM/EFC)	**TBD**
CONTRACTING OPPORTUNITY	CONTRACTS POINT OF CONTACT
$5.0M - $10.0M	**Negotiated Best Value**
ESTIMATED VALUE	CONTRACT TYPE
	Competitive
	KIND OF AWARD

PROGRAM DESCRIPTION:

Develop and deliver stand-alone high density, high frame rate IR and VIS focal plane staring arrays based on Smart Munition Test Suite (SMTS) test prototypes. Includes massive memory devices (20 GB Dynamic RAM with 800 MB/sec data rates). Includes an automated data reduction station for processing digital image data files for multi-service use.



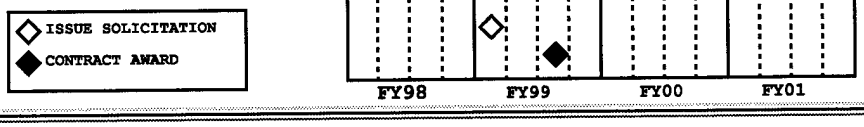
UNCLASSIFIED
ADVANCE PLANNING BRIEFING FOR INDUSTRY

CONTRACTING OPPORTUNITY (U)

Virtual Test and Training Range (VTTR)	TBD
CONTRACTING OPPORTUNITY	CONTRACTS POINT OF CONTACT
<$20.0M	TBD
ESTIMATED VALUE	CONTRACT TYPE
	Competitive
	KIND OF AWARD

PROGRAM DESCRIPTION:

Develop a concept and provide a demonstration of the techniques for creating a virtual test range environment. The project will explore the extension of the concept to interface with and support training.



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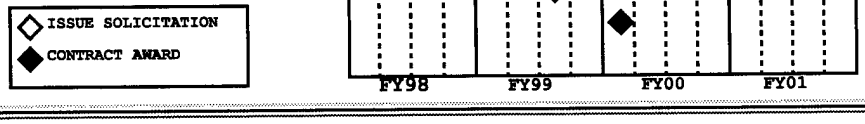
ADVANCE PLANNING BRIEFING FOR INDUSTRY

CONTRACTING OPPORTUNITY (U)

Advanced Multiple Object Acquisition System (AMOAS)	TBD
CONTRACTING OPPORTUNITY	CONTRACTS POINT OF CONTACT
$5.0 - 20.0M	Negotiated Best Value
ESTIMATED VALUE	CONTRACT TYPE
	Competitive
	KIND OF AWARD

PROGRAM DESCRIPTION:

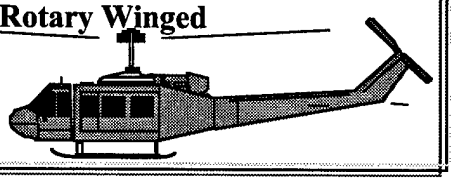
Develop and deliver a very wide field of view, high resolution, multiple-object tracking instrumentation system with global shared-memory data base manager for the command and control of AMOAS for multi-service use. Includes very high speed control and data transfer links.



UNCLASSIFIED
ADVANCE PLANNING BRIEFING FOR INDUSTRY

Targets Management Office

- **Develops, Fields, Operates, and Supports Ground and Airborne Target Vehicles**
- **Target Characteristics:**
  - **Supports Testing and Training**
  - **Economical and Expendable**
  - **Remotely Controlled or Stationary**
  - **Often Destroyed in Use**
- **DOD Lead for Ground and Rotary Winged Targets**



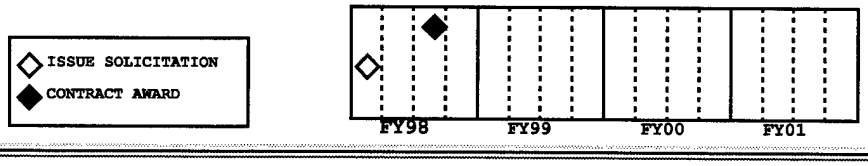
UNCLASSIFIED
ADVANCE PLANNING BRIEFING FOR INDUSTRY

CONTRACTING OPPORTUNITY (U)

Military Operations on Urbanized Terrain (MOUT) Interactive Targetry System	**Kathryn Engle (205) 842-0381**
CONTRACTING OPPORTUNITY	CONTRACTS POINT OF CONTACT
< $5.0M	**FFP**
ESTIMATED VALUE	CONTRACT TYPE
	Competitive
	KIND OF AWARD

PROGRAM DESCRIPTION:

One of five subsystems of the Joint Readiness Training Center (JRTC) MOUT Instrumentation System (IS). Targetry (3-D) is required to interactively link with the JRTC IS to collect and display computer assisted exercise simulation and live-fire data. Targetry must also function in stand-alone mode, independent of the JRTC-IS.



UNCLASSIFIED
ADVANCE PLANNING BRIEFING FOR INDUSTRY

CONTRACTING OPPORTUNITY (U)

Towed Target Engineering Services
CONTRACTING OPPORTUNITY

<$5.0M (<$1.0M/YR)
ESTIMATED VALUE

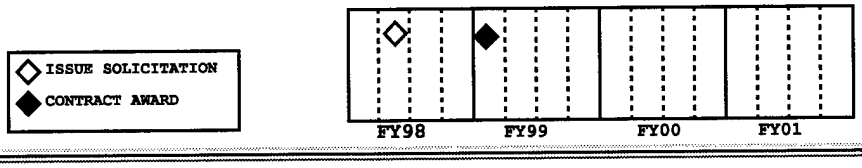
Kathryn Engle (205) 842-0381
CONTRACTS POINT OF CONTACT

CPFF
CONTRACT TYPE

Competitive
KIND OF AWARD

PROGRAM DESCRIPTION:

Engineering services required in support of the TMO Towed Target and Infrared Devices Programs.



UNCLASSIFIED
ADVANCE PLANNING BRIEFING FOR INDUSTRY

CONTRACTING OPPORTUNITY (U)

PATRIOT Omni-Directional (Radar Cross Section) Training Aerial TOW Target (POTA-TOW)
CONTRACTING OPPORTUNITY

< $1.25M
ESTIMATED VALUE

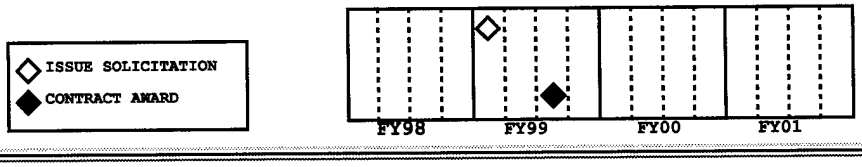
Kathryn Engle (205) 842-0381
CONTRACTS POINT OF CONTACT

FFP
CONTRACT TYPE

Competitive
KIND OF AWARD

PROGRAM DESCRIPTION:

Production of an inexpensive tow target that possesses radar cross section adequate to support PATRIOT live-fire engagements.



UNCLASSIFIED
ADVANCE PLANNING BRIEFING FOR INDUSTRY

CONTRACTING OPPORTUNITY (U)

New Generation Army Targetry System (NGATS)

CONTRACTING OPPORTUNITY

< 4.0M

ESTIMATED VALUE

Kathryn Engle (205) 842-0381

CONTRACTS POINT OF CONTACT

FFP

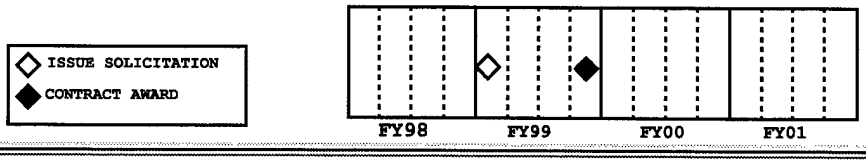
CONTRACT TYPE

Competitive

KIND OF AWARD

PROGRAM DESCRIPTION:

Develop a new generation of targetry to support current/future combined arms weapons systems (extended ranges, smart weapons, scenarios) and Army battle initiatives. Targetry must be mobile/transportable/deployable worldwide, be compatible with the STOW environment, replicate battle audio/visual stimuli (signatures), support live/dry fire scenarios and operate in real, constructive and virtual environments.



UNCLASSIFIED
ADVANCE PLANNING BRIEFING FOR INDUSTRY

CONTRACTING OPPORTUNITY (U)

MQM-107 Production and Engineering Services

CONTRACTING OPPORTUNITY

< $30.0M

ESTIMATED VALUE

Kathryn Engle (205) 842-0381

CONTRACTS POINT OF CONTACT

FFP (Airframes)/CPFF (Engineering Services)

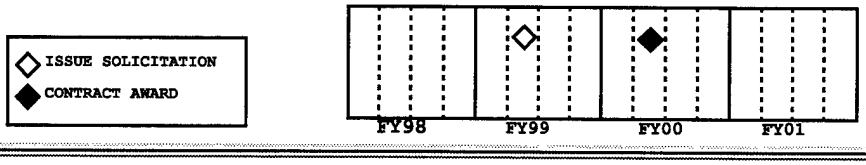
CONTRACT TYPE

Competitive

KIND OF AWARD

PROGRAM DESCRIPTION:

Manufacture and integration of MQM-107 airframes plus engineering services. Separate contracts for engines, target group sets and recovery systems.



UNCLASSIFIED
ADVANCE PLANNING BRIEFING FOR INDUSTRY

CONTRACTING OPPORTUNITY (U)

Aerial Target Flight Services
CONTRACTING OPPORTUNITY

$15.0M - $20.0M
ESTIMATED VALUE

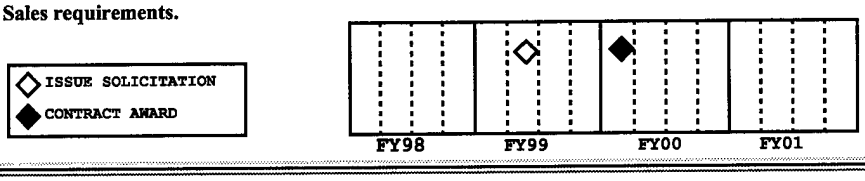
Kathryn Engle (205) 842-0381
CONTRACTS POINT OF CONTACT

FFP
CONTRACT TYPE

Competitive
KIND OF AWARD

PROGRAM DESCRIPTION:

Operation and maintenance contract for MQM-107/MQM-34 subscale fixed wing targets, QH-50 subscale helicopter targets, QUH-1 and AH-1/HOKUM-X full scale rotary wing targets, and the LANCE target missile system. Targets are flown at numerous CONUS/ OCONUS ranges to support ADA training, RDT&E for the Tri-Services and Foreign Military Sales requirements.



UNCLASSIFIED
ADVANCE PLANNING BRIEFING FOR INDUSTRY

CONTRACTING OPPORTUNITY (U)

Target Tracking Control System (TTCS) Engineering Services
CONTRACTING OPPORTUNITY

< $1.75M
ESTIMATED VALUE

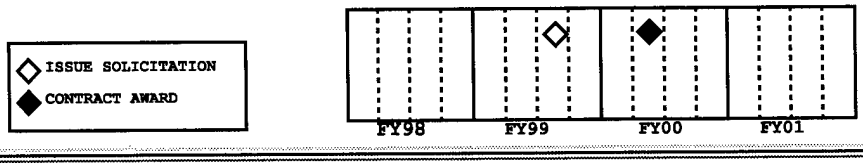
Kathryn Engle (205) 842-0381
CONTRACTS POINT OF CONTACT

CPFF
CONTRACT TYPE

Competitive
KIND OF AWARD

PROGRAM DESCRIPTION:

Engineering services in support of the Target Tracking Control System used for command and control of the Army's subscale and full-scale target fleets.



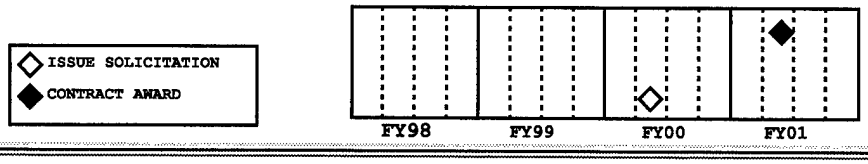
UNCLASSIFIED
ADVANCE PLANNING BRIEFING FOR INDUSTRY

CONTRACTING OPPORTUNITY (U)

HOKUM-X	Kathryn Engle (205) 842-0381
CONTRACTING OPPORTUNITY	CONTRACTS POINT OF CONTACT
<$10.0M	FFP
ESTIMATED VALUE	CONTRACT TYPE
	Competitive
	KIND OF AWARD

PROGRAM DESCRIPTION:

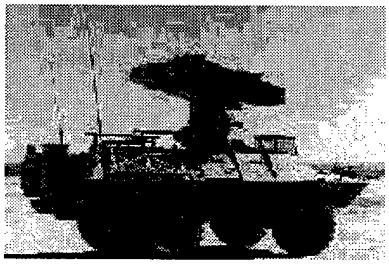
Production of a full scale aerial target which emulates the Russian Ka-50 helicopter, and can be configured to provide multiple RF and IR signatures. It will support major weapon system test and evaluation.

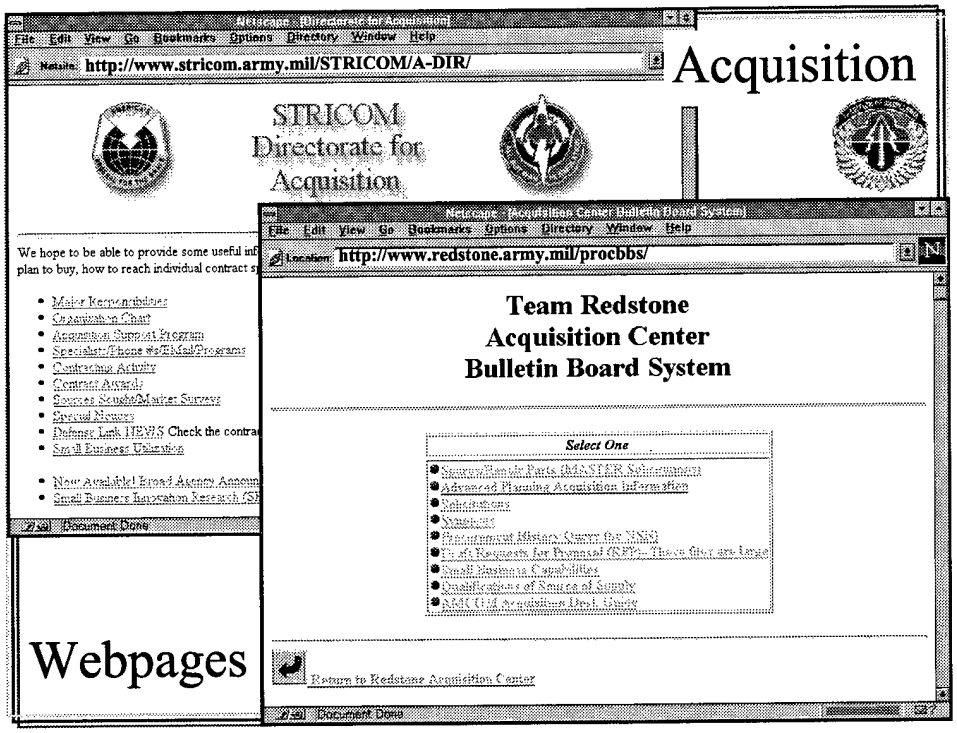


UNCLASSIFIED
ADVANCE PLANNING BRIEFING FOR INDUSTRY

THREAT SIMULATORS MANAGEMENT OFFICE

- **Develops and Fields Representative Threat Systems**
- **Threat Simulator Characteristics:**
  - **Provides Appearance of Actual Threat**
  - **Prescribed Degree of Fidelity**
  - **Used for Testing and Training**
  - **Small Numbers / Not Destroyed in Use**





Visit Us On The Web:
Acquisition Webpages

- http://www.stricom.army.mil/STRICOM/A-DIR/

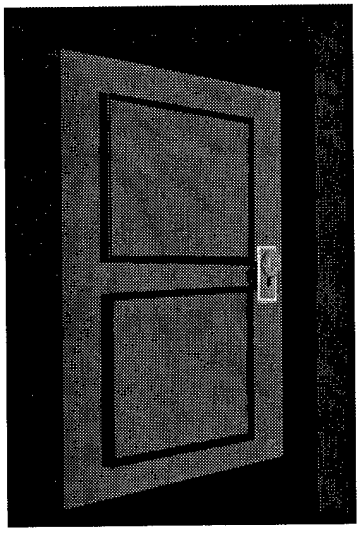
- http://redstone.army.mil/procbbs/

Redstone Arsenal Support Activity (RASA)
COL Duane E. Brandt
Commander, RASA

AMCOM ADVANCE PLANNING BRIEFING FOR INDUSTRY

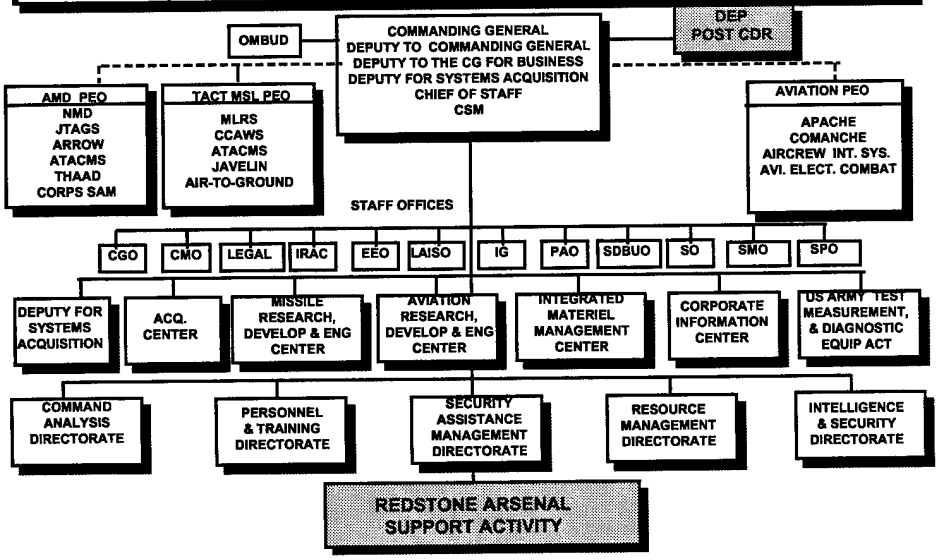
REDSTONE ARSENAL SUPPORT ACTIVITY

DUANE E. BRANDT
COLONEL, OD
COMMANDER, RASA



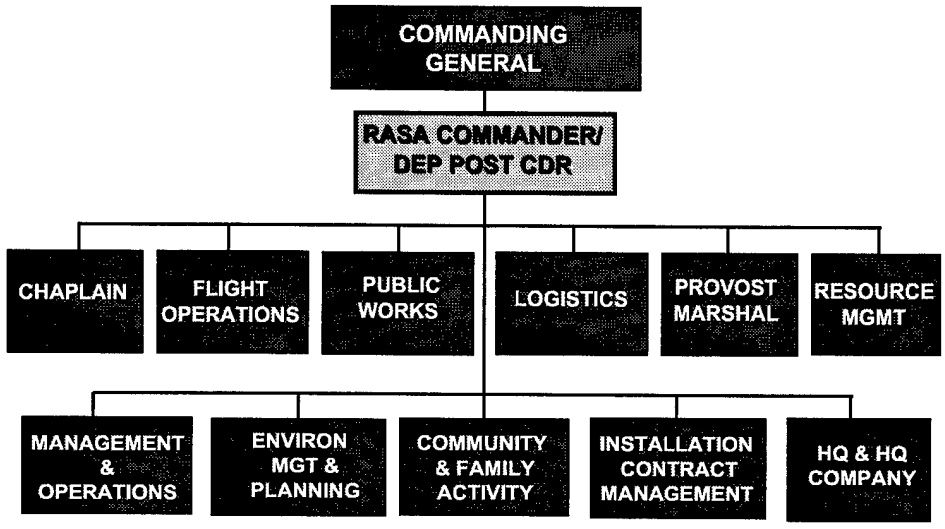
AMCOM ADVANCE PLANNING BRIEFING FOR INDUSTRY

U.S. ARMY AVIATION AND MISSILE COMMAND



AMCOM ADVANCE PLANNING BRIEFING FOR INDUSTRY

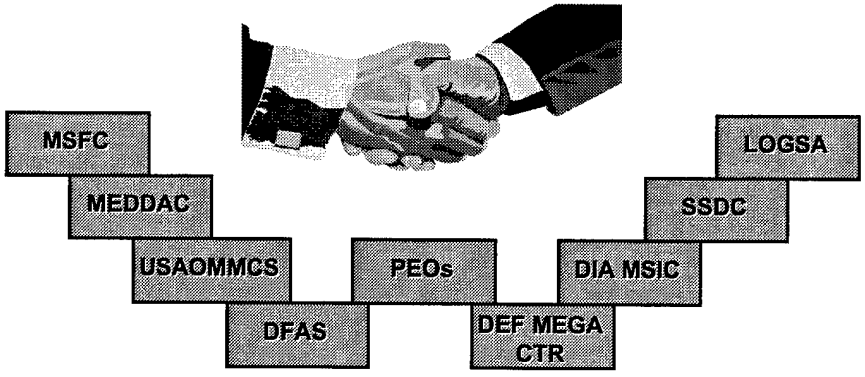
REDSTONE ARSENAL SUPPORT ACTIVITY



AMCOM ADVANCE PLANNING BRIEFING FOR INDUSTRY

RASA MISSION AND FUNCTIONS

TO PROVIDE BASE OPERATIONS SUPPORT AND SERVICES

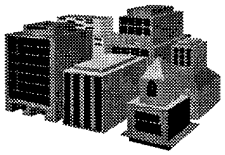


SERVICES PROVIDED BY RASA

IN-HOUSE SERVICES *

*(Excluding services shown on the next chart currently being studied)

Troop Activities
Admin Services
Law Enforcement



Master Planning
Physical Security
Religious Activities
Environmental Mgmt
Resource Management

CONTRACTED SERVICES

Engineering
Oper, M&R of Utility Plants & Systems
Motor Pool, Supply Ops and Transportation
Vehicle and Equipment Maintenance
Administrative Services
M&R Real Property
Laundry/Dry Cleaning
Religious Services
Sports Officials
Custodial
Food Services
Packing/Crating/Local Drayage
Security Alarms
Fire Protection
Grounds Maintenance
Vector & Pest Control
Refuse Collection
ATC Equipment Maint
Operation of Swimming Pools

AMCOM ADVANCE PLANNING BRIEFING FOR INDUSTRY

SERVICES PROVIDED BY RASA (CONTINUED)

COMMERCIAL ACTIVITIES STUDIES

CURRENT STUDIES → Child Development Services, Missile Maintenance

APPROVED FOR STUDY (UMBRELLA)

	POC
• Directorate of Community & Family Activities	Mr. Jim Mullen 955-7400
- Community Recreation	
- Family Support	
• Directorate of Public Works	Dr. David Branham 876-3516
- Engineering Technical Services	
- Housing Management	
• Directorate of Logistics	Mr. Darrell Brewer 876-5990
- Property Book	
- Property Accountability	
• Provost Marshal	Maj. Harry Smith 842-2434
- Badging & Identification	
• Directorate of Flight Operations	Maj. Richard Young 876-2186
- Supply & Maintenance	
- Tower Operations	

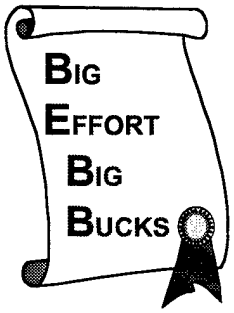
AMCOM ADVANCE PLANNING BRIEFING FOR INDUSTRY

INSTALLATION SUPPORT SERVICES UMBRELLA

	CONTRACT VALUE	SOLICITATION DATE	SOLICITATION/ CONTRACT TYPE	TECHNICAL POC
Services Contract Installation Support (Period of Performance - Base Year & 4 - One Year Options)	$124.5M	FY 99	F&O/CPAF	Ms. Jones 842-2988

→ Northrop-Grumman, Lawton, Oklahoma

Contract Effort



- Engineering
- Operation, Maintenance and Repair of Utility Plants and Sys.
- Maintenance and Repair of Real Property and Equipment
- Motor Pool, Transportation and Supply Operations
- Vehicle and Equipment Maintenance
- Administrative Services

AMCOM ADVANCE PLANNING BRIEFING FOR INDUSTRY

CONTRACT OPPORTUNITIES RECURRING SERVICES

	ANNUAL VALUE	SOLICITATION DATE	SOLICITATION/ CONTRACT TYPE	TECHNICAL POC
Custodial (Janitorial Service)	$ 4.0M	FY 99	SDBSA/FP	Mr. Hernandez 955-8136
Food Services (Troop Dining Facility)	1.5M	FY 97	SDBSA/FP	Mr. Weatherman 876-3067
Packing/Crating/ Local Drayage	.5M	FY 98	SBSA/FP	Ms. Wallace 876-1718
Security Alarms (M&R, Installation)	.9M	FY 99	SBSA/FP	Mr. Cates 955-6124
Fire Protection Systems (M&R)	.9M	FY 99	SBSA/FP	Mr. Hernandez 955-8136

AMCOM ADVANCE PLANNING BRIEFING FOR INDUSTRY

CONTRACT OPPORTUNITIES RECURRING SERVICES
(CONTINUED)

	ANNUAL VALUE	SOLICITATION DATE	SOLICITATION/ CONTRACT TYPE	TECHNICAL POC
Vector & Pest Control	$ .25M	FY 98	SBSA/FP	Mr. Manis 876-0885
Grounds Maintenance	1.5M	FY 99	SBSA/FP	Ms. Johnson 876-4245
Laundry/Dry Cleaning	.4M	FY 01	F&O/FP	Ms. Pugh 842-9831
Refuse Collection	.75M	FY 99	F&O/FP	Mr. Kellum 842-0033
ATC Equipment Maintenance	.125M	FY 00	F&O/FP	Mr. York 876-1573

AMCOM ADVANCE PLANNING BRIEFING FOR INDUSTRY

CONTRACT OPPORTUNITIES RECURRING SERVICES
(CONTINUED)

	ANNUAL VALUE	SOLICITATION DATE	SOLICITATION/ CONTRACT TYPE	TECHNICAL POC
Religious Services	$.11M	FY00	F&O/FP	CH Vicalvi 876-2964
Operation of Swimming Pools	.16M	FY01	SBSA/FP	Mr. Chemsak 876-2315
Sports Officials	.07M	FY98	SBSA/FP	Mr. Compoc 842-2574

CONTRACT SUMMARY

CONTRACT TYPE	DOLLAR VALUE
FULL & OPEN COMPETITION (Includes $25M for Installation Support Services Umbrella Contract with Northrop Grumman)	$30.00M
JOB ORDER CONTRACTS	$ 6.00M
SMALL BUSINESS SET ASIDE	$ 5.60M
SMALL DISADVANTAGED BUSINESS SET ASIDE	$ 5.50M
8A CONTRACTS	$ 2.94M
TOTAL CONTRACT EFFORT	**$50.04M**

Resource Management Directorate
Mr. William Matthews
Director, Resource Management Directorate

HEADQUARTERS
U.S. ARMY AVIATION & MISSILE COMMAND

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RESOURCE MANAGEMENT DIRECTORATE

MR. WILLIAM G. MATTHEWS
Deputy Director

POC: Ms. Kay Patton
876-4450

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U.S. ARMY AVIATION & MISSILE COMMAND
FUNDING OUTLOOK

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OVERVIEW

- DIRECT AND CUSTOMER FUNDS
  - FY 98
  - FY 99
- CONTRACTOR VERSUS IN-HOUSE
- TOTAL AMCOM DIRECT ARMY FUNDING PROFILE
- RDTE - FY 98-03
- PROCUREMENT - FY 98-03

Figure 1 (U)

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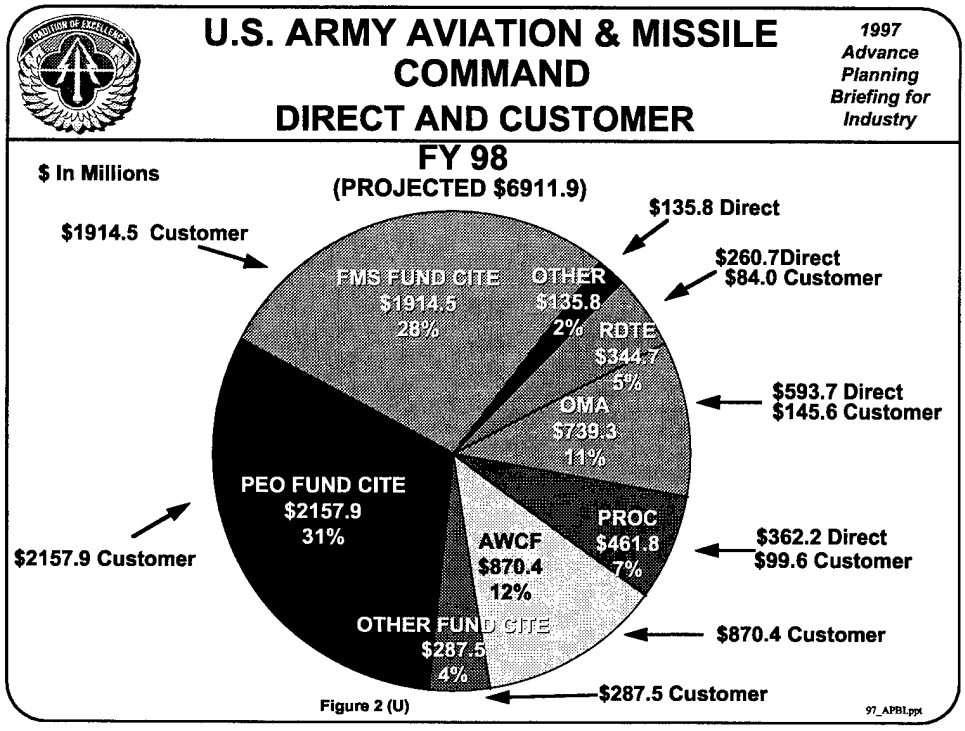
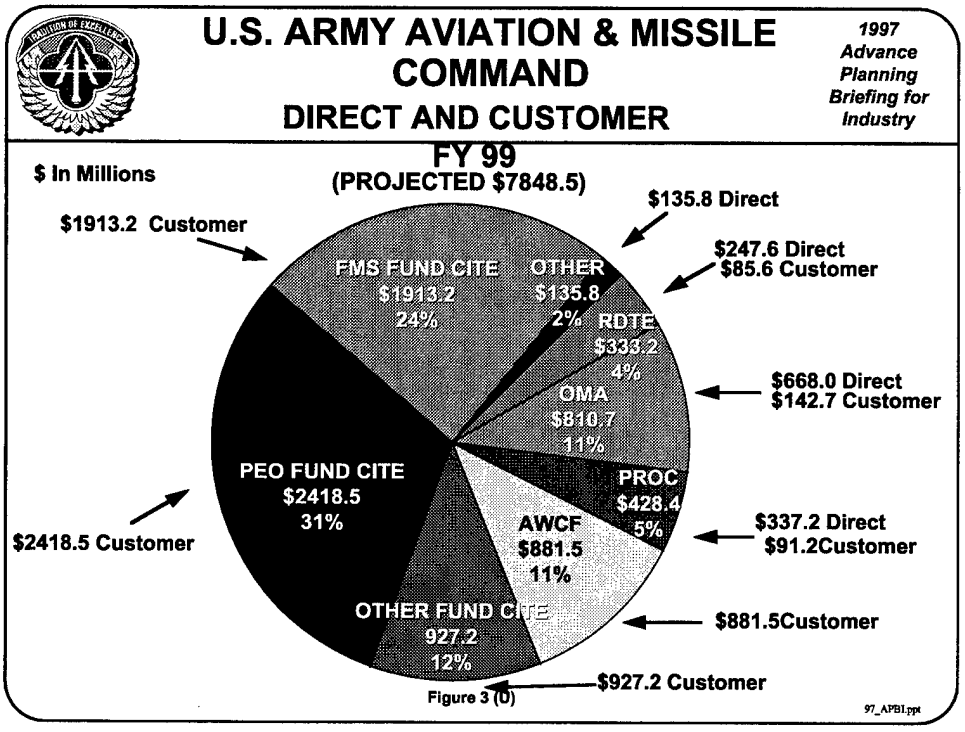

U.S. ARMY AVIATION & MISSILE COMMAND
DIRECT AND CUSTOMER
1997 Advance Planning Briefing for Industry
FY 98
(PROJECTED $6911.9)
$ In Millions
$1914.5 Customer
$135.8 Direct
$260.7Direct
$84.0 Customer
$593.7 Direct
$145.6 Customer
$362.2 Direct
$99.6 Customer
$870.4 Customer
$287.5 Customer
$2157.9 Customer
FMS FUND CITE $1914.5 28%
OTHER $135.8 2%
RDTE $344.7 5%
OMA $739.3 11%
PROC $461.8 7%
AWCF $870.4 12%
OTHER FUND CITE $287.5 4%
PEO FUND CITE $2157.9 31%
Figure 2 (U)
97_APBI.ppt


U.S. ARMY AVIATION & MISSILE COMMAND
DIRECT AND CUSTOMER
1997 Advance Planning Briefing for Industry
FY 99
(PROJECTED $7848.5)
$ In Millions
$1913.2 Customer
$135.8 Direct
$247.6 Direct
$85.6 Customer
$668.0 Direct
$142.7 Customer
$337.2 Direct
$91.2Customer
$881.5Customer
$927.2 Customer
$2418.5 Customer
FMS FUND CITE $1913.2 24%
OTHER $135.8 2%
RDTE $333.2 4%
OMA $810.7 11%
PROC $428.4 5%
AWCF $881.5 11%
OTHER FUND CITE 927.2 12%
PEO FUND CITE $2418.5 31%
Figure 3 (U)
97_APBI.ppt

U.S. ARMY AVIATION & MISSILE COMMAND
CONTRACTOR VS IN-HOUSE

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$ In Millions

FY 98	OMA	PROC	RDTE	AWCF	FMS FUND CITE	PEO FUND CITE	OTHER FUND CITE	OTHER
IN-HOUSE	295.8	120.1	139.8	227.1	16.1			15.5
CONTRACT	443.5	341.7	204.9	643.3	1898.4	2157.9	287.5	120.3
FY 99								
IN-HOUSE	284.8	111.6	132.3	419.6	14.8			15.5
CONTRACT	525.9	316.8	200.9	461.9	1898.4	2418.5	927.2	120.3

Figure 4 (U)

97_APBI.ppt

U.S. ARMY AVIATION & MISSILE COMMAND
DIRECT ARMY FUNDING PROFILE

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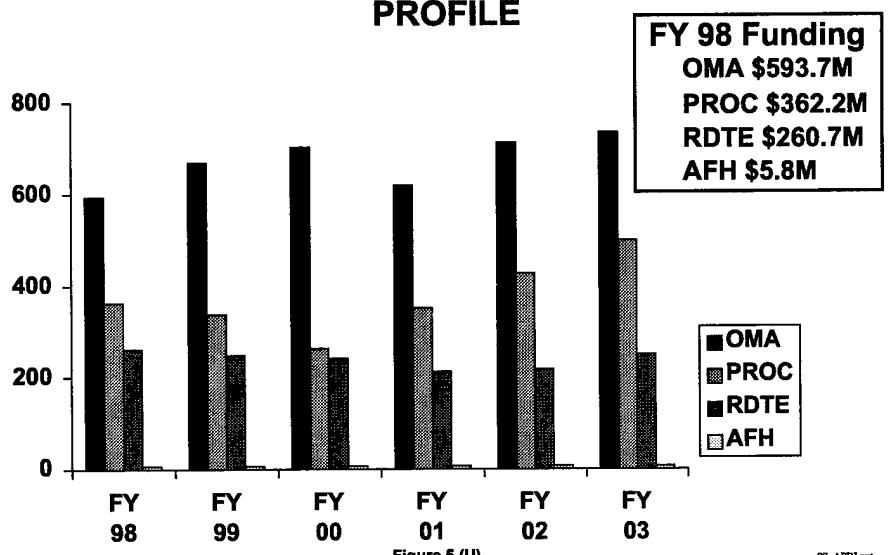

Figure 5 (U)

97_APBI.ppt

U.S. ARMY AVIATION & MISSILE COMMAND

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RESEARCH, DEVELOPMENT, TEST, & EVALUATION

RESEARCH AND DEVELOPMENT PROGRAM BUDGET ACTIVITIES

1 - BASIC RESEARCH

2 - EXPLORATORY DEVELOPMENT

3 - ADVANCED DEVELOPMENT

4 - DEMONSTRATION & VALIDATION

5 - ENGINEERING & MANUFACTURING DEVELOPMENT

6 - RDT&E MANAGEMENT SUPPORT

7 - OPERATIONAL SYSTEMS DEVELOPMENT

Figure 6 (U)

97_APBI.ppt

U.S. ARMY AVIATION & MISSILE COMMAND

1997 Advance Planning Briefing for Industry

RDTE PROGRAM

BUDGET ACTIVITY 1 - BASIC RESEARCH

$ In Millions

Project #	Title	FY 98
A91A	In-House Lab Ind Rsch	2.552
AH45	Air Mobility	2.191
AH59	Univ Centers of Excel	2.000
	TOTAL	6.743

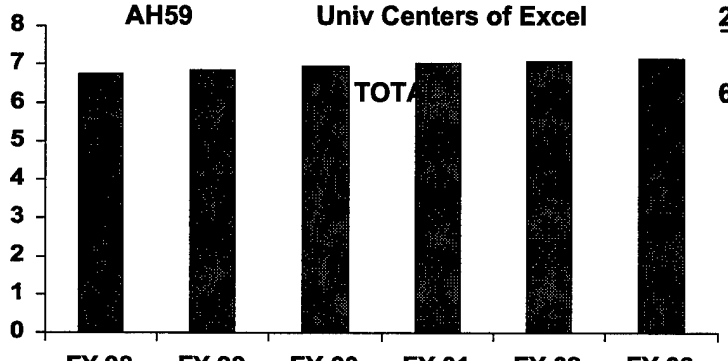

Figure 7 (U)

97_APBI.ppt

U.S. ARMY AVIATION & MISSILE COMMAND

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RDTE PROGRAM

$ In Millions

BUDGET ACTIVITY 2 - EXPLORATORY DEVELOPMENT

Project #	Title	FY 98
A214	Missile Technology	22.335
A47A	Aeron & Aircraft Wpns Tech	24.410
	TOTAL	46.745

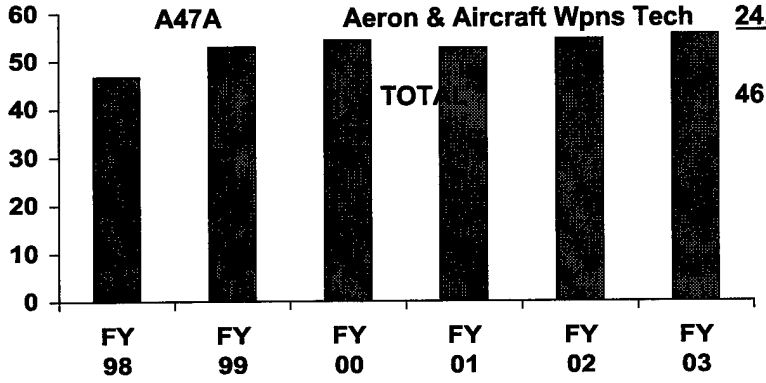

Figure 8 (U)

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U.S. ARMY AVIATION & MISSILE COMMAND

1997 Advance Planning Briefing for Industry

RDTE PROGRAM

$ In Millions

BUDGET ACTIVITY 3 - ADVANCED DEVELOPMENT

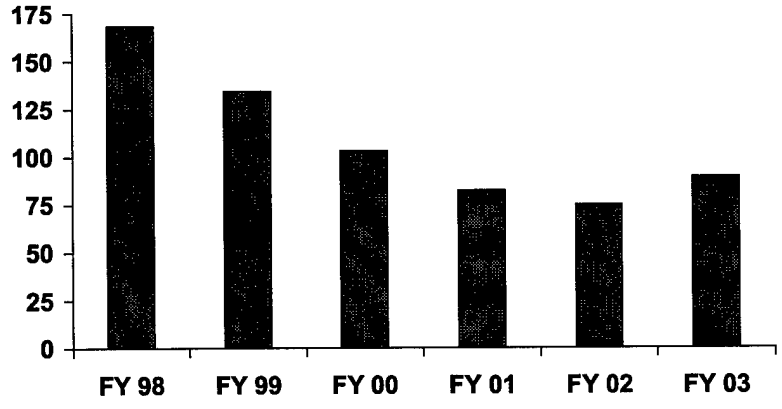

Figure 9 (U)

97_APBI.ppt

BUDGET ACTIVITY 3
ADVANCED DEVELOPMENT
FY 98 PROJECTS

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$ In Millions

Project #	Title	FY 98
DB18	TRACTOR HIKE	14.350
AB69	TRACTOR RED	5.572
D206	MISSILE SIMULATION	3.013
D263	TACAWS DEMO	1.043
D380	MULTI-PLATFORM LAUNCHER	12.431
D486	RAPID FORCE PROJ SIM	8.390
D493	RAPID FORCE PROJ DEMO	29.682
D550	COUNTER ACTIVE PROTECTION	1.941
D313	ADV ROTARYWING VEH TECH	6.013
D391	TRACTOR WILL	.973
D549	2.75" ANTI-AIR TECH DEMO	2.905
D496	ENHANCED FOG-M	57.734
D436	ROTARYWING MEP INTEG	17.366
D447	AIRCRAFT DEMO ENGINES	6.580
DB97	AIRCRAFT AVIONICS EQUIPMENT	.398
TOTAL		168.391

Figure 10 (U)

97_APBI.ppt

U.S. ARMY AVIATION & MISSILE COMMAND
RDTE PROGRAM
BUDGET ACTIVITY 4 - DEMONSTRATION & VALIDATION

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$ In Millions

Project #	Title	FY 98
D691	NATO Rsch & Dev	1.000
DB32	Adv Maint Concepts/EQ	2.656
DB33	Cargo Handling & Mission Spt	1.931
TOTAL		5.587

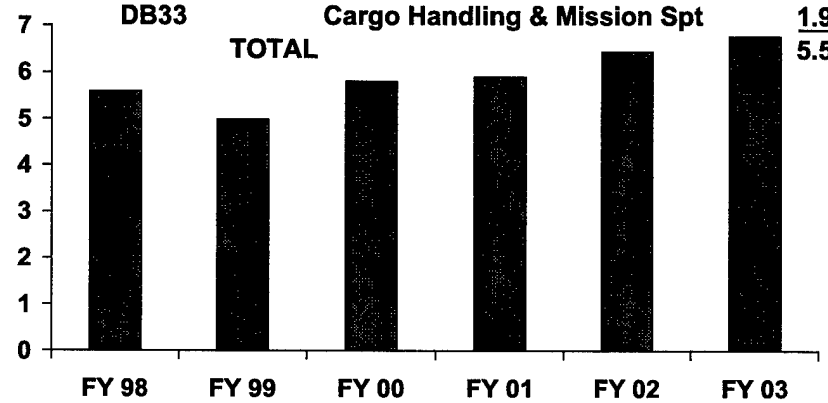

Figure 11 (U)

97_APBI.ppt

U.S. ARMY AVIATION & MISSILE COMMAND

BUDGET ACTIVITY 5 - ENGINEERING & MANUFACTURING DEVELOPMENT

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$ In Millions

Project #	Title	FY 98
DL59	Diag/Expert Sys Dev	2.582
DE47	Tactical Unmanned Grd Veh	2.687
D586	Air Traffic Control	1.705
D284	Multi-Purpose Ind Mun	2.922
	TOTAL	9.896

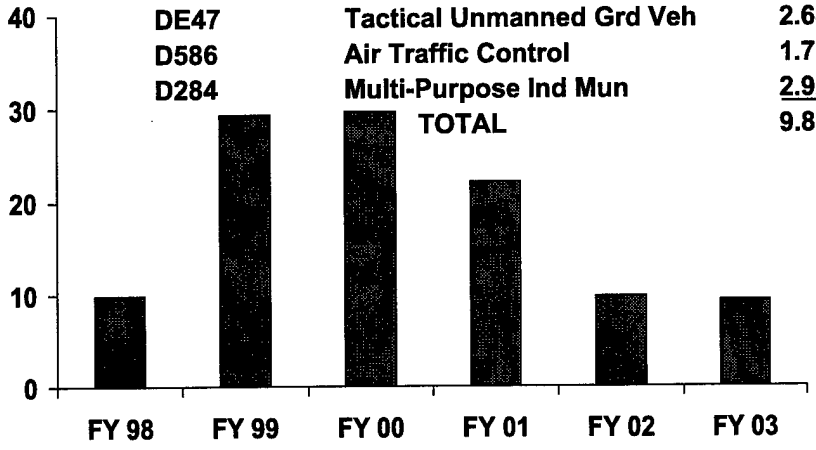

Figure 12 (U)

97_APBI.ppt

U.S. ARMY AVIATION & MISSILE COMMAND

RDTE PROGRAM

BUDGET ACTIVITY 6 - RDT&E MANAGEMENT SUPPORT

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$ In Millions

Project #	Title	FY 98
MM46	Missile Cmd/Ctr Support	2.243
D092	Aircraft Certification	2.919
MM43	Aviation Cmd/Ctr Support	4.972
	TOTAL	10.134

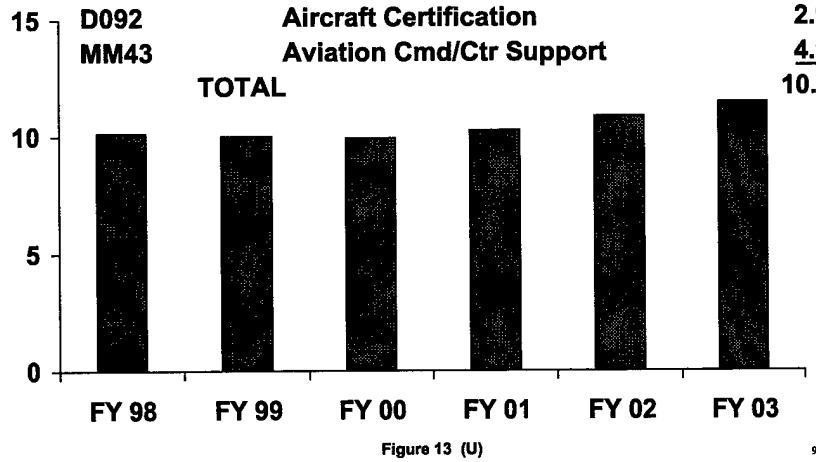

Figure 13 (U)

97_APBI.ppt

U.S. ARMY AVIATION & MISSILE COMMAND

1997 Advance Planning Briefing for Industry

RDTE PROGRAM

BUDGET ACTIVITY 7 - OPERATIONAL SYSTEMS DEVELOPMENT

$ In Millions

Project #	Title	FY 98
D106	Aircraft Compon Improv Prog	2.940
D303	STINGER RMP PIP	5.024
DE25	Manufacturing Science & Tech	5.200
TOTAL		13.164

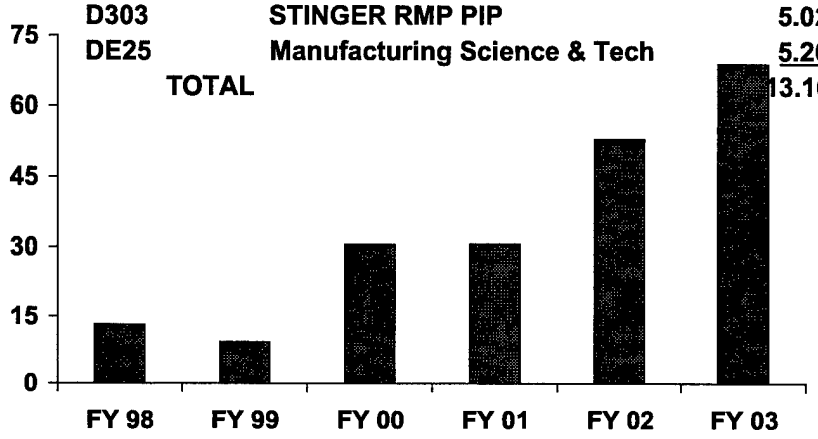

Figure 14 (U)

97_APBI.ppt

U.S. ARMY AVIATION & MISSILE COMMAND

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PROCUREMENT PROGRAM

DIRECT ARMY

$ In Millions

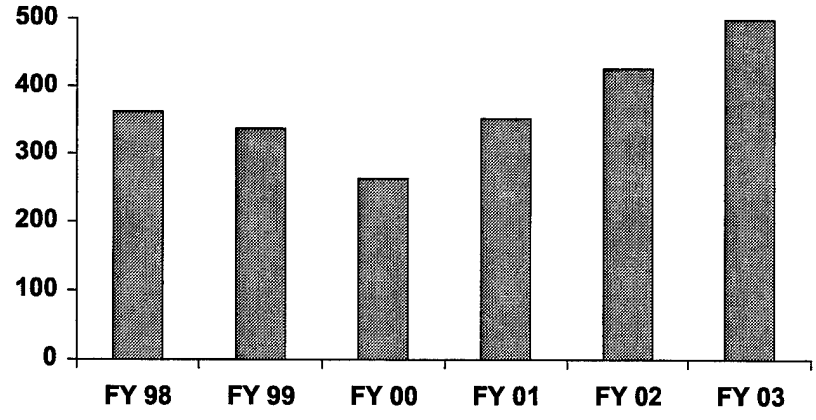


Figure 15 (U)

97_APBI.ppt

U.S. ARMY AVIATION & MISSILE COMMAND
PROCUREMENT PROGRAM
FY 98 PROGRAMS

1997 Advance Planning Briefing for Industry

$ In Millions

Program	Funds	Program	Funds
Elect Rpr Shelter	5.678	OH-58 Mods	.748
TMDE Spares	2.255	C-20 Aircraft Mods	.853
STINGER Blk I Upgrade	12.411	UH-1 Mods	4.679
Missile Demilitarization	1.507	Mods < $2.0M	1.735
Items < $2.0M	.954	Common Ground	30.636
Integ Fam of Test Equip	14.828	Air Traffic Control	5.802
TMDE Modernization	6.572	UH-60A BLACKHAWK	225.084
Calibration Set Equip	6.572	KIOWA Warrior	38.822
AH1F Mods	.451	Industrial Facilities	2.049
C-12 Cargo Airplane Mods	.613		

TOTAL $362.249

Figure 16 (U)

97_APBI.ppt

U.S. ARMY AVIATION & MISSILE COMMAND
SUMMARY

1997 Advance Planning Briefing for Industry

- Contracts comprise 88% of FY 98 AMCOM funding, which should allow considerable contractual opportunities.
- Data is based on FY 98 President's Budget and is subject to change.
- Forecast of funds show our long-range Research and Development and Procurement programs.
- RDT&E funds slightly decline thru FY 01, with funds increasing starting in FY 02.
- Procurement funds are on a downward slope thru FY 00 but show considerable increases starting in FY 01.

Figure 17 (U)

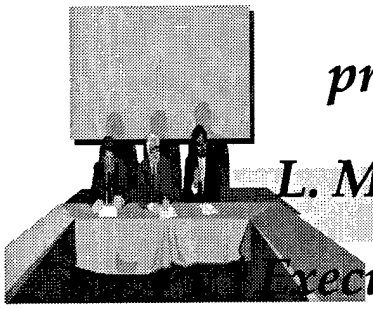
97_APBI.ppt

Acquisition Review
Ms. L. Marlene Cruze
AMCOM Acquisition Center

AMCOM

Acquisition Center

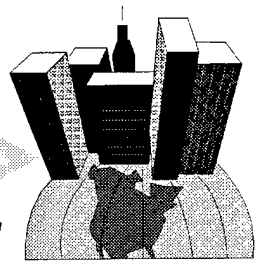
Advance Planning Briefing for Industry



presented by

L. Marlene Cruze

Executive Director



Acquisition Center

1 of 15

Acquisition Center

OUR MAJOR CUSTOMERS

PEO's, PM'S

- PEO Aviation
- PEO Tactical Missile
- PEO Missile Defense
- PEO Command & Control
- PEO Intelligence & Electronic Warfare
- PEO Armored Systems Modernization (And Associated PM's)
- Navy PEO Cruise Missile & Joint Tactical UAV

ACQUISITION

AMCOM ELEMENTS

- Deputy for Systems Acquisition
- Integrated Materiel Mgt Ctr
- Research, Dev & Engr Ctr
- Redstone Arsenal Spt Act
- Aviation Applied Tech Dir
- Corporate Information Ctr
- Security Assistance Mgt Dir
- Unmanned Ground Vehicle PM
- Information Mgmt Dir

OTHER CUSTOMERS

- Defense Intelligence Agency
- U.S.Army TMDE Activity
- STRICOM
- Other U.S. Military Services
- SOCOM
- Defense Logistics Agency
- CMPSC

Over 166 Major Systems, Programs Organizations

2 of 15

Acquisition Center

PAST PERFORMANCE

•FASA 1994 REQUIRES COLLECTION AND USE OF PAST PERFORMANCE INFORMATION

•FASA REQUIREMENT IMPLEMENTED IN FAR 15.6 AND 42..15

OPERATING UNDER TEMPORARY SUSPENSION FROM OFPP ADMINISTRATOR

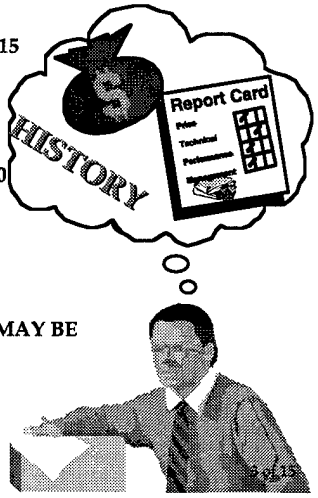
COLLECT PPI AT COMPLETION OF CONTRACTS $1,000,000 OR MORE

USE AS A FACTOR IN SOURCE SELECTIONS OF $1,000,000 OR MORE

•ANY RECENT, RELEVANT DATA THAT CAN BE VERIFIED MAY BE USED

PREFERENCE FOR GOVERNMENT DATA

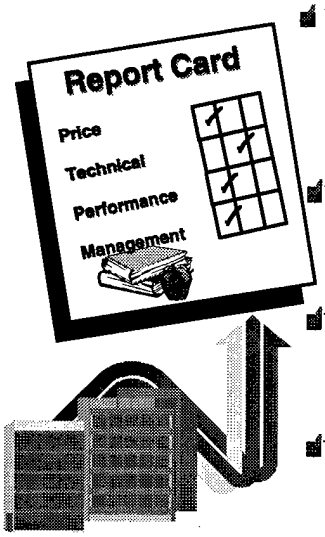
SOURCES OF INFORMATION NOT LIMITED TO FORMAL DATA BASES



3 of 15

Acquisition Center

STATUS OF PAST PERFORMANCE DATA COLLECTION SYSTEMS

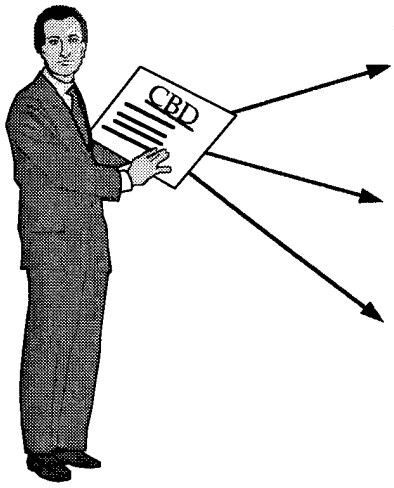


- DEPARTMENT OF DEFENSE (DoD)
  - OVERARCHING/WORKING INTEGRATED PRODUCT TEAMS WORKING
  - DEVELOPING BUSINESS AREA FOR DATA COLLECTION
  - SEPARATE DATA BASES
- DEPARTMENT OF THE ARMY (DA)
  - PAST PERFORMANCE INFORMATION SYSTEM (PPIMS) - ESTIMATED TO GO ONLINE OCT 97
- U.S. ARMY MATERIEL COMMAND (AMC)
  - CONTRACTOR INFORMATION SYSTEM (CIS) - SYSTEM CANCELLED 22 MAY 97
- U.S. ARMY AVIATION & MISSILE COMMAND (AMCOM)
  - LOCAL DATA COLLECTION SYSTEM/DATA BASE IN EFFECT UNTIL PPIMS GOES ONLINE

4 of 15

Acquisition Center

Secondary Items Initiative



- Uses the synopsis as a solicitation document

- Applicable to actions between $25,000 - $100,000

- Helps contractors and the government reduce cycle time by 15 days

5 of 15

Acquisition Center

First Article Waiver

- New clause contained in our secondary item procurements containing a first article provision

- Allows contractors to request waiver of first articles based on sucessful production of a similar item

- Places onus on contractor to provide rationale for similarity of items

- Rationale reviewed and decision made by contracting officer on prospective waivers

6 of 15

Acquisition Center

Commercial Credit Card Program

- **Usage: All commercial purchases valued at or below $2,500 (Exceptions: cellular phones, explosives and refreshments)**
- **Catalog/line card may be sent to each AMCOM credit card holder**
- **Listing of AMCOM credit card holders may be obtained through Acquisition Center's Freedom of Information Office:**

U.S. Army Aviation & Missile Command
Attn: AMSAM-AC-BM/Mary Evelyn French
Redstone Arsenal, AL 35898
Fax Number: (205) 876-5306

Acquisition Center

Commercial Credit Card Program

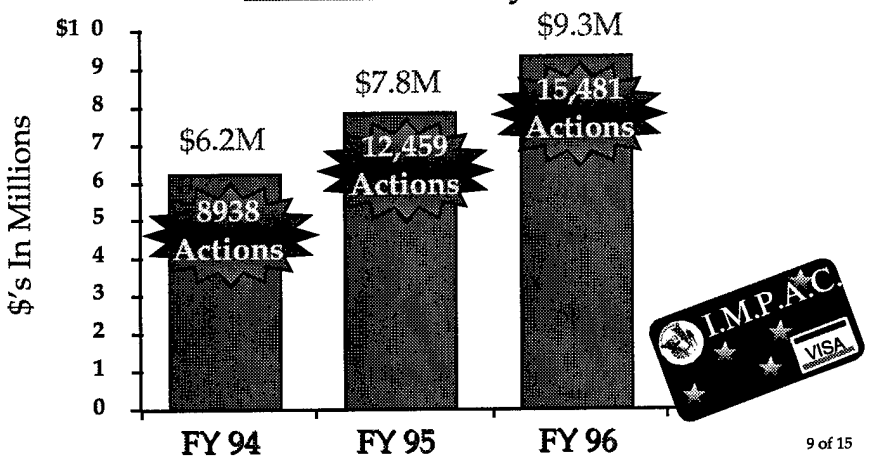
Recent Developments

Authorization granted to issue Special Bankcards with a purchase range of $2500-$25,000

- **Special Conditions for these transactions: *Limited by Statute to***
- **Small Business with blanket purchase agreements in place with AMCOM**
- **Vendors with GSA Federal Supply Schedules (Can be large or small businesses)**
- **Competition required from 3 sources**
- **Buy American Act Applies**
- **Special Cards issued in August 1997**
- **Blanket Purchase Agreements being established now**
- **Direct Inquires to the AMCOM Acquisition Center Contracting Officer: Kathy Ray (205) 876-4226**

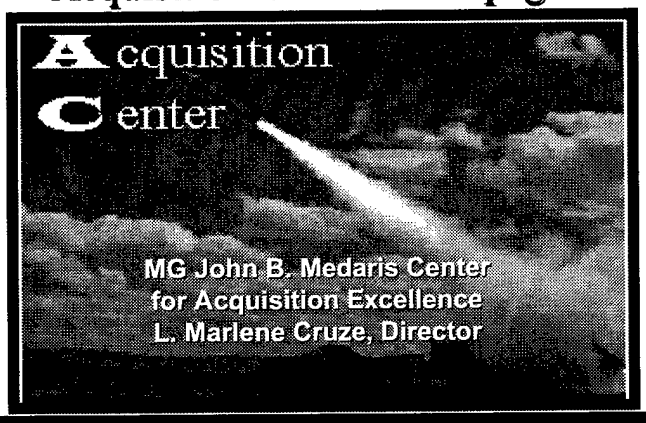
Acquisition Center

Commercial Credit Card Program
Recent Activity



Acquisition Center

Acquisition Center Homepage



TEAM REDSTONE ACQUISITION INFORMATION &
OTHER ACQUISITION INFORMATION
www.redstone.army.mil/acq_ctr/

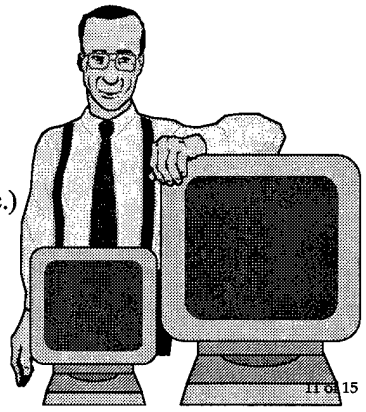
Acquisition Center

Electronic Bulletin Board System (BBS)

•Available on the Internet at http://www.redstone.army.mil/procbbs.

•To gain access via modem please call
Randy Drawdy, 205-876-8034

•Provides contractors the capability to read:
- -Current Competitive Solicitations
- -Regulations (Such as FAR, AFARS, Etc.)
- -Synopses Information
- -Procurement History
- -Small Business Capabilities
- -Qualifications of Source of Supply



11 of 15

Acquisition Center

On-Line Registration Website

Logistics/
Electronic Commerce
Integration
Organization

www.acq.osd.mil/ec/

Central Contractor Registration

YOUR ONLINE RESOURCE FOR TRADING PARTNER REGISTRATION

http://ccr.edi.disa.mil

12 of 15

Acquisition Center

CONTRACT AWARDED WITHOUT DISCUSSIONS

SINCE 1985 SEVERAL DOZEN COMPETITIVE ACQUISITIONS FOR MISSION SUPPORT SERVICES HAVE BEEN CONDUCTED BY AMCOM ACQUISITION CENTER, INCLUDING RDEC

CONSERVATIVE VIEW HAS BEEN HISTORICALLY MAINTAINED AND CREATED INCREASING LEADTIME AND WORKLOAD

CHANGING ENVIRONMENT AND DECREASING RESOURCES NECESSITATE SIMPLIFICATION OF PROCESS AS WELL AS RECOGNITION OF INCREASED RISK

13 of 15

Acquisition Center

Impediments to Award Without Discussions

Government Responsibility

- ✓ **POORLY DEFINED SOLICITATION INSTRUCTIONS**
- ✓ **AMBIGUOUS RESOLVE TO AWARD BASED UPON ORIGINAL PROPOSAL**
- ✓ **LOOSE CONDUCT OF CLARIFICATION PHASE**
- ✓ **LOOSELY CONDUCTED MONITORING OF EVALUATION COMMITTEES**
- ✓ **INADVERTENT DISCUSSIONS BEING CONDUCTED BY OTHER THAN THE CONTRACTING OFFICER**

14 of 15

Acquisition Center

Impediments to Award Without Discussions

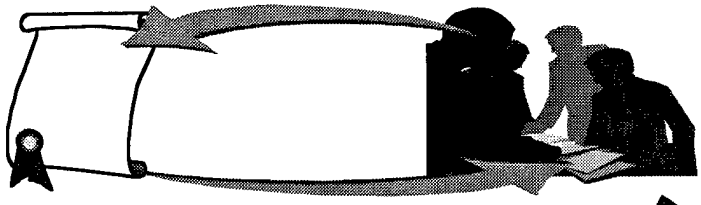
Offeror Responsibility

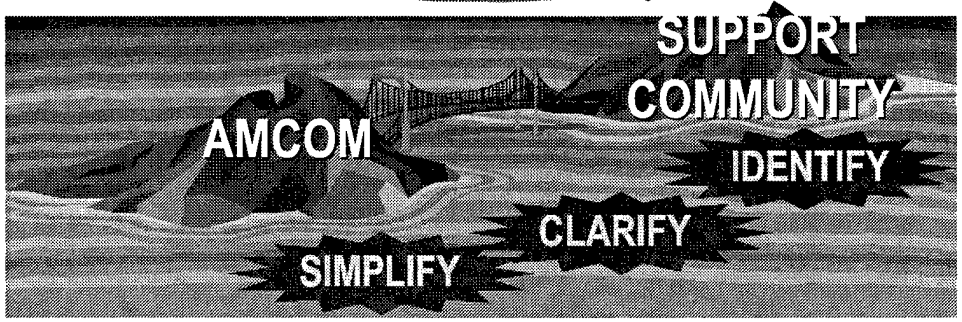
- ✓ LACK OF DILIGENCE/ATTENTION TO DETAIL
- ✓ FAILURE TO REQUEST CLARIFICATION OF SOLICITATION REQUIREMENTS
- ✓ INCLUSION OF UNACCEPTABLE PROVISIONS/ALTERNATIVES
- ✓ APPARENT EXPECTATION THAT THE GOVERNMENT WILL PROVIDE RED TEAM SERVICES THROUGH EVALUATION PROCESS.
- ✓ FOSTERING THE OPENING OF DISCUSSIONS THROUGH CONVERSATIONS WITH OTHER THAN THE CONTRACTING OFFICER

15 of 15

Acquisition Center

A CONTRACT FOR THE FUTURE





Legislative Initiatives
Mr. Robert J. Spazzarini
Chief Legal Counsel, AMCOM Legal Office

ADR

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ALTERNATIVE DISPUTE RESOLUTION

"ALTERNATIVE MEANS OF DISPUTE RESOLUTION" MEANS ANY PROCEDURE THAT IS USED TO RESOLVE ISSUES IN CONTROVERSY, INCLUDING, BUT NOT LIMITED TO, CONCILIATION, FACILITATION, MEDIATION, FACTFINDING, MINITRIALS, ARBITRATION AND USE OF OMBUDSMAN, OR ANY COMBINATIONS THEREOF. 5 U.S.C.571

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THE ADMINISTRATIVE DISPUTE RESOLUTION ACT OF 1996
P.L. 104-320; SEE 5 U.S.C.571

"MADE PERMANENT LAW OF THE ADRA OF 1990 WITH SIGNIFICANT CHANGES."

2

WHAT IS ADR?

A COLLECTIVE NAME FOR A NUMBER OF JOINT PROBLEM-SOLVING PROCESSES USED IN LIEU OF FORMAL, ADVERSARIAL METHODS FOR RESOLVING CONFLICT. USUALLY INVOLVE A NEUTRAL THIRD PARTY.

THE CONTINUUM OF ADR PROCESSES RANGE FROM THOSE OVER WHICH THE PARTIES HAVE THE MOST CONTROL (MEDIATION, CONCILIATION, PARTNERING) TO PROCESSES OVER WHICH THEY HAVE THE LEAST CONTROL (SUCH AS BINDING ARBITRATION).

3

ONE IMPORTANT ADR PROCESS IS PARTNERING

PARTNERING IS A PROCESS USED IN CONTRACTING THAT IS DESIGNED TO AVOID DISPUTES.
AT THE START OF A PROJECT PARTIES SEEK TO IDENTIFY COMMON GOALS AND ESTABLISH CLEAR LINES OF COMMUNICATION. IT MAY INVOLVE JOINT WORKSHOPS MANAGED BY A NEUTRAL FACILITATOR TO DEVELOP A TEAM CHARTER. A PARTNERING AGREEMENT USUALLY INCLUDES A COMMITMENT BY THE PARTIES TO USE ADR TO RESOLVE DISPUTES THAT ARISE DURING THE PROJECT.

4

The GOAL of the AMC Partnering Program is...

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To promote government-industry communication and teamwork throughout the acquisition process by implementation of a *"Model Partnering Process"*.

5

"Partnering is a natural extension of the Integrated Product Team concept. It provides a flexible framework for government and industry team members to work together to solve problems and informally resolve disputes. This helps reduce program costs and speeds the fielding of Army equipment. To paraphrase the late, great Vince Lombardi -- Partnering isn't everything, it's the only thing."
--Honorable Gilbert F. Decker
Assistant Secretary of the Army (RDA)

"Accomplishment of AMC's mission depends on our ability to work effectively with our partners in industry. Partnering helps us to do this successfully and deliver the very best products to our ultimate customers -- the soldiers."
-- General Johnnie E. Wilson
Commanding General, AMC

"In an era of diminishing resources, Partnering is a smart business strategy. The time that contracting officers and program managers invest in improving communication with their industry partners yields big dividends in better contract performance."
-- Gary Tull
Assistant Deputy Chief of Staff for
Research, Development & Acquisition, AMC

What Partnering Is:

- A mutual commitment by the parties to facilitate improved contract performance through enhanced communication
- Where the parties form a relationship based upon teamwork, cooperation, and a shared vision for success;
- Focused on accomplishing common goals and objectives;
- An agreement to avoid surprises and expeditiously resolve disputes at the lowest possible level.

7

Genesis of Partnering

- Used extensively in construction contracting by industry and the U.S. Army Corps of Engineers since the 1980's.
- AMC Pilot Program successfully employed by some MSCs on a wide spectrum items/services during the last 3 years.
- AMC Steering Committee established in 1996 to develop a Model Partnering Process for use throughout AMC.

8

Benefits of Partnering

Partnering...

- establishes mutual goals and objectives
- builds trust and encourages open communication
- helps the parties eliminate surprises
- enables the parties to anticipate and resolve problems
- avoids disputes through informal conflict management procedures
- avoids litigation through the use of Alternative Dispute Resolution
- reduces paperwork

9

Benefits of Partnering (cont.)

Partnering...

- reduces the time and cost of contract performance
- reduces administration and oversight
- improves safety
- improves engineering efforts
- improves morale and promotes professionalism in the workforce
- generates harmonious business relations
- focuses on the mutual interests of the parties

10

When To Use Partnering

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- Major/complex contract efforts
- Two years or longer program
- Problem plagued program
- Three or more major players
- Significant technical or urgency issues
- Competitive or sole source

11

Partnering Is NOT:

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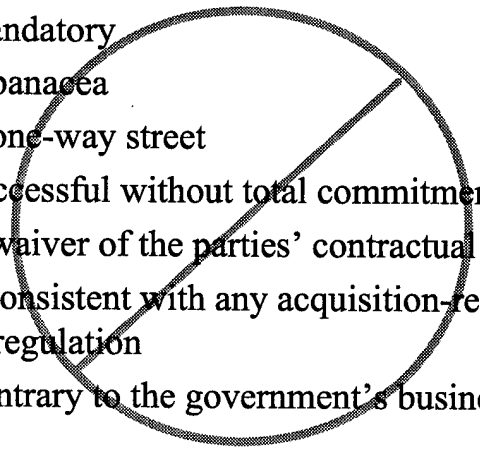
- Mandatory
- A panacea
- A one-way street
- Successful without total commitment
- A waiver of the parties' contractual rights
- Inconsistent with any acquisition-related statute or regulation
- Contrary to the government's business interests



12

Step No. 1

Getting Started

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- Deciding to Partner
  - Where it will pay off
  - Anyone suggests Partnering
  - Apply "When to Use..." criteria

◆Obtaining Resources
- ◆Time
- ◆Money

◆Making the Commitment
- ◆Senior management
- ◆Program Stakeholders
- ◆Empowerment of Participants
- ◆Designation of "Champions"

13

Step No. 2

Communicating With Industry

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- Extending the invitation to Partner
  - Solicitation
  - World Wide Web
  - Pre-Solicitation Conference
- Securing a Mutual Agreement to Partner

14

Step No. 3

Conducting the Workshop and Developing the Charter

- Selecting a Facilitator
  - Role of the Facilitator
- Preparing for the Workshop
  - Selecting the Participants
  - Reviewing the Contract
  - Choosing a Workshop Site
  - Coordinating with the Facilitator

15

Step No. 3 (cont.)

Conducting the Workshop and Developing the Charter

- Conducting the Workshop
  - Team-building
  - Roles & Responsibilities
  - The Charter or Agreement
  - Problem Resolution
    - Rocks in the Road
    - Conflict Escalation
    - Alternative Dispute Resolution
  - Measuring Success

16

Step No. 4

Making It Happen

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- Following Procedures
- Active Champion Involvement
- Continuous Communication
- Identification of Problems and Joint Problem-Solving
- Periodic Reviews
- Measure and Celebrate Success
- Reinforcement

17

"Partnering has improved our program by expanding open communication. Changes and improvements have been much easier to incorporate as a result of Partnering."
-- Bill Reynolds
Lead Contract Manager
Textron Marine & Land Systems

"Partnering cuts decision time, which means money, especially to the small contractor."
-- David T. Morgan, Jr.
Vice-President/General Manager
Valentec Systems, Inc.

"Partnering has replaced finger-pointing with Teamwork."
-- Dr. Daryl R. Kendrick
Program Director
Lockheed Martin Ordnance Systems

"Through the implementation of the Partnering process, we were able to preclude a recurrence of the performance and schedule problems that we had repeatedly experienced in the past, while also eliminating claims and litigation."
-- James Ott
Director of Public Works
U. S. Army Communications-Electronics Command

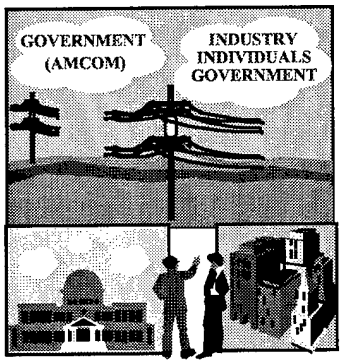
18

Command Ombudsman
Mr. John W. Finafrock
AMCOM Ombudsman

U.S. Army Aviation and Missile Command

Command Ombudsman

1997 Advance Planning Briefing for Industry



Mr. John W. Finafrock, AMCOM Ombudsman

U.S. Army Aviation and Missile Command

ATTN: AMSAM-OB

Building 5300, Room 5145

Redstone Arsenal, AL 35898-5000

U.S. Army Aviation and Missile Command

What's An Ombudsman?

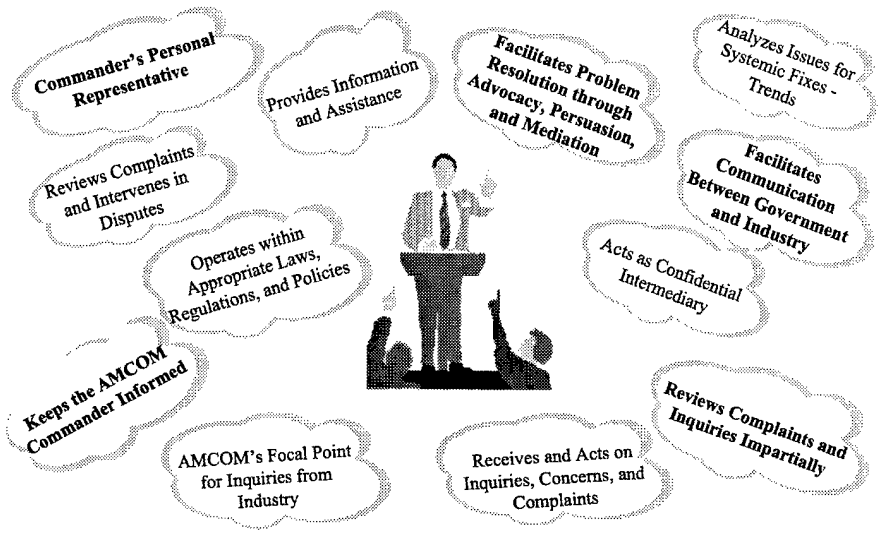
1997 Advance Planning Briefing for Industry

"*OMBUDSMAN:* AN INDEPENDENT SENIOR GOVERNMENT OFFICIAL WITH RESPONSIBILITY TO RECEIVE AND ACT ON INQUIRIES AND COMPLAINTS CONCERNING THE MSC, WHICH ARE BROUGHT TO HIS ATTENTION BY INDUSTRY, THE PRIVATE SECTOR, OR INTERNAL GOVERNMENT SOURCES"

U.S.ARMY MATERIEL COMMAND

U.S. Army Aviation and Missile Command
The Command Ombudsman's Charter

1997 Advance Planning Briefing for Industry

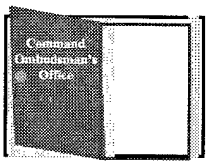


U.S. Army Aviation and Missile Command

"GENERAL" INFORMATION

1997 Advance Planning Briefing for Industry

Confidential Intermediary Approach Centerpiece of Ombudsman Effort and Ability to "Help"

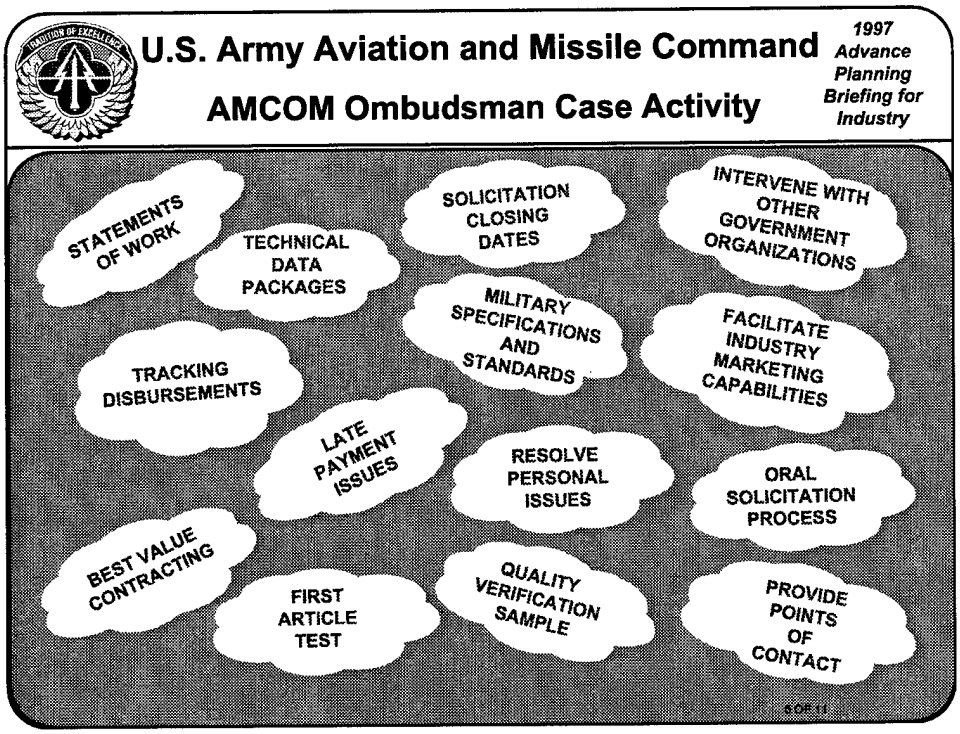


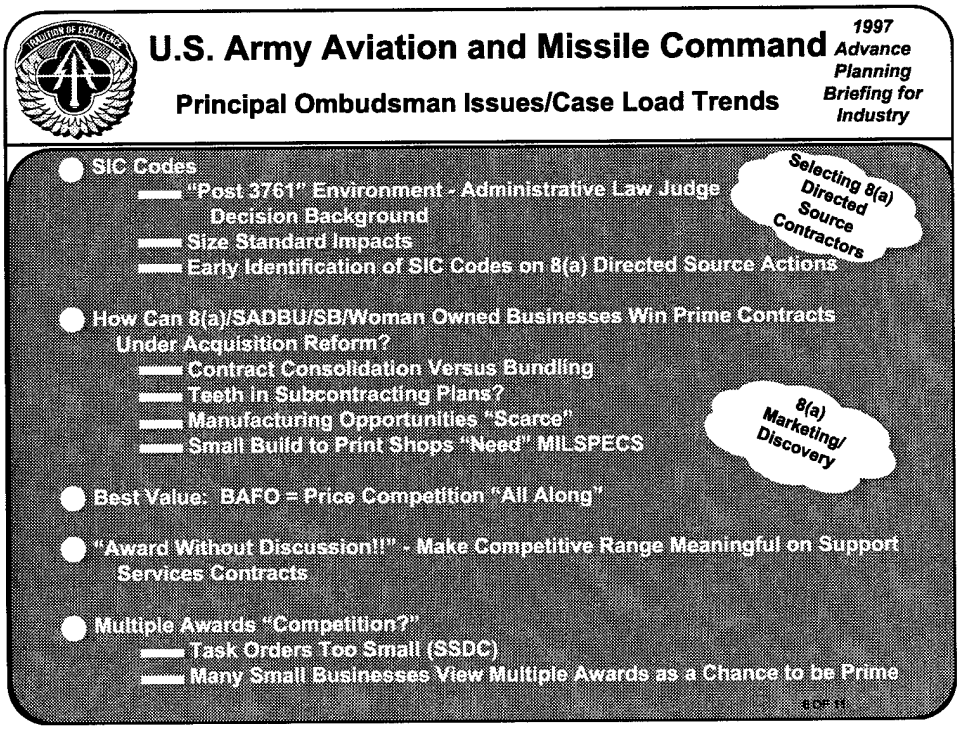
Current Office Location Conducive to Contacts - - - "Discreetly Walk Off Hallway" Building 5300, Room 5145 (First Floor)

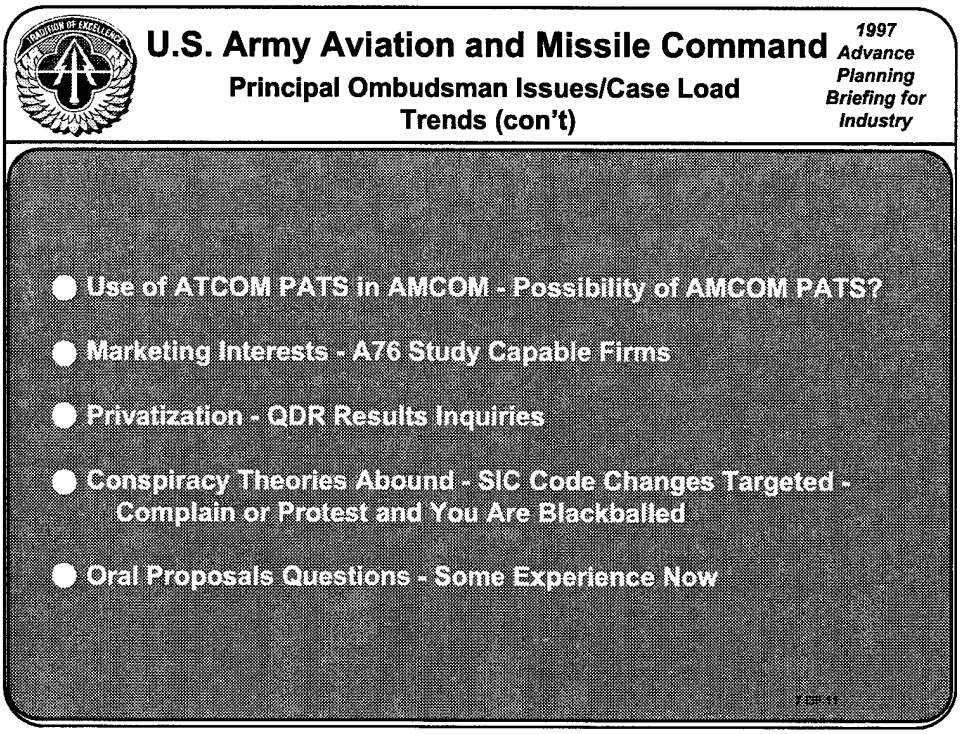
Cases Generally Fall into These Categories:

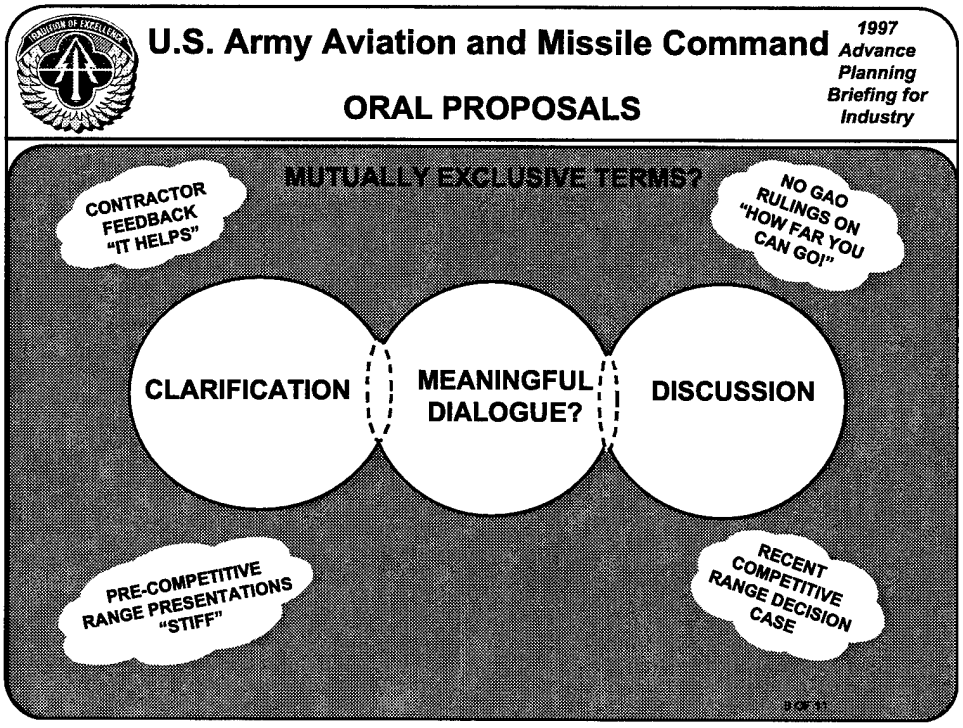
- **30-40% Solicitations**
- **20-30% Contracts**
- **15-25% Business Opportunities**
- **5-8% Personal**

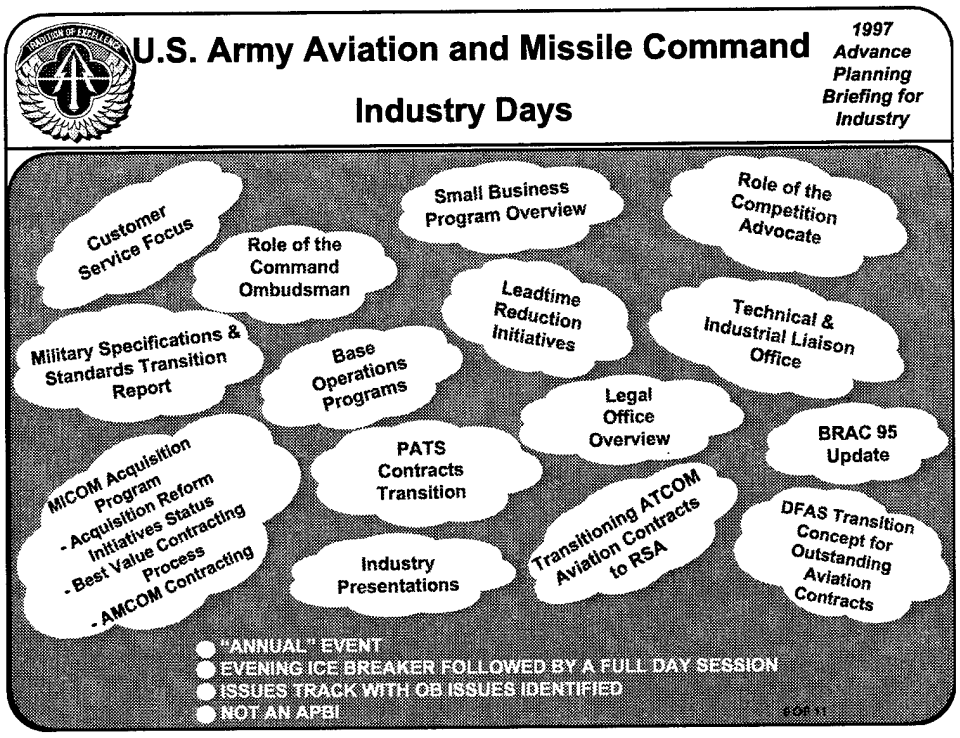
Mix Varies Over Time

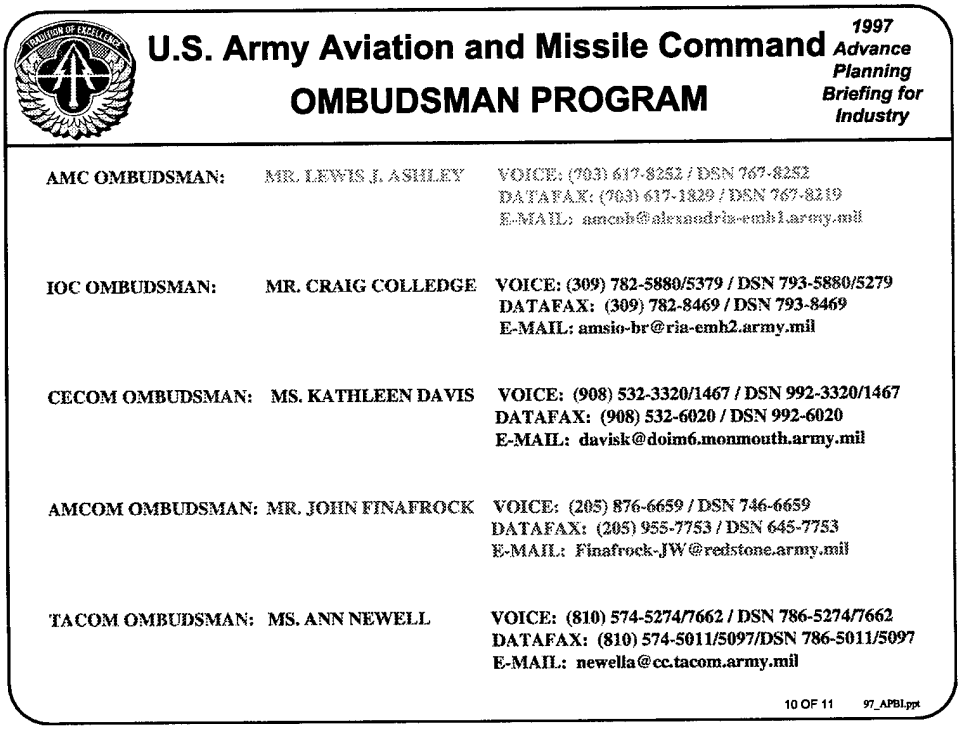

U.S. Army Aviation and Missile Command
1997 Advance Planning Briefing for Industry
AMCOM Ombudsman Case Activity
STATEMENTS OF WORK
TECHNICAL DATA PACKAGES
SOLICITATION CLOSING DATES
INTERVENE WITH OTHER GOVERNMENT ORGANIZATIONS
MILITARY SPECIFICATIONS AND STANDARDS
FACILITATE INDUSTRY MARKETING CAPABILITIES
TRACKING DISBURSEMENTS
LATE PAYMENT ISSUES
RESOLVE PERSONAL ISSUES
ORAL SOLICITATION PROCESS
BEST VALUE CONTRACTING
FIRST ARTICLE TEST
QUALITY VERIFICATION SAMPLE
PROVIDE POINTS OF CONTACT
6 OF 11


U.S. Army Aviation and Missile Command
1997 Advance Planning Briefing for Industry
Principal Ombudsman Issues/Case Load Trends
SIC Codes
"Post 3761" Environment - Administrative Law Judge Decision Background
Size Standard Impacts
Early Identification of SIC Codes on 8(a) Directed Source Actions
Selecting 8(a) Directed Source Contractors
How Can 8(a)/SADBU/SB/Woman Owned Businesses Win Prime Contracts Under Acquisition Reform?
Contract Consolidation Versus Bundling
Teeth In Subcontracting Plans?
Manufacturing Opportunities "Scarce"
Small Build to Print Shops "Need" MILSPECS
8(a) Marketing/ Discovery
Best Value: BAFO = Price Competition "All Along"
"Award Without Discussion!" - Make Competitive Range Meaningful on Support Services Contracts
Multiple Awards "Competition?"
Task Orders Too Small (SSDC)
Many Small Businesses View Multiple Awards as a Chance to be Prime
6 OF 11


U.S. Army Aviation and Missile Command
1997 Advance Planning Briefing for Industry
Principal Ombudsman Issues/Case Load Trends (con't)
Use of ATCOM PATS in AMCOM - Possibility of AMCOM PATS?
Marketing Interests - A76 Study Capable Firms
Privatization - QDR Results Inquiries
Conspiracy Theories Abound - SIC Code Changes Targeted - Complain or Protest and You Are Blackballed
Oral Proposals Questions - Some Experience Now


U.S. Army Aviation and Missile Command
1997 Advance Planning Briefing for Industry
ORAL PROPOSALS
MUTUALLY EXCLUSIVE TERMS?
CONTRACTOR FEEDBACK "IT HELPS"
NO GAO RULINGS ON "HOW FAR YOU CAN GO!"
CLARIFICATION
MEANINGFUL DIALOGUE?
DISCUSSION
PRE-COMPETITIVE RANGE PRESENTATIONS "STIFF"
RECENT COMPETITIVE RANGE DECISION CASE


U.S. Army Aviation and Missile Command
Industry Days
1997 Advance Planning Briefing for Industry
Customer Service Focus
Role of the Command Ombudsman
Small Business Program Overview
Role of the Competition Advocate
Military Specifications & Standards Transition Report
Base Operations Programs
Leadtime Reduction Initiatives
Technical & Industrial Liaison Office
Legal Office Overview
BRAC 95 Update
MICOM Acquisition Program
- Acquisition Reform Initiatives Status
- Best Value Contracting Process
- AMCOM Contracting
PATS Contracts Transition
Industry Presentations
Transitioning ATCOM Aviation Contracts to RSA
DFAS Transition Concept for Outstanding Aviation Contracts
"ANNUAL" EVENT
EVENING ICE BREAKER FOLLOWED BY A FULL DAY SESSION
ISSUES TRACK WITH OB ISSUES IDENTIFIED
NOT AN APBI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10 OF 11
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U.S. Army Aviation and Missile Command
Command Ombudsman

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EQUIP/SUPPLY/SERVICES/MAINTAIN
FAA - PHASE II -- ACTIONS PENDING

ACTIONS	PROPONENT/STATUS
● BRIEFING TO VICE CHIEF OF STAFF OF ARMY BY AMSAA	HQ AMC POSTPONED (QDR)
● AMC REIMBURSABLE POLICY - ESTABLISH POLICY TO STANDARDIZE PROCEDURES AND PROCESSES FOR DEVELOPING RATES	HQ AMC / TBD
● 6.X CHALLENGE - DETERMINE WHO SHOULD BE DOING 6.1, 6.2, 6.3, AND APPRORIATE BALANCE OF EFFORTS ACROSS THE COMMAND	HQ AMC / BEING STAFF
● COMMAND WIDE BUSINESS PRACTICE REVIEW/STANDARDS - MEA-LED TEAM TO INVESTIGATE BEST BUSINESS PRACTICES AT THE FUNCTIONAL LEVEL	MEA / 15 AUG 97
● CONFIGURATION MANAGEMENT AUTOMATION - IEA TEAM TO INVESTIGATE AUTOMATED SYSTEMS, AND IDENTIFY BEST SOLUTION, IMPLEMENTATION TIMEFRAME AND COST	IEA / 30 SEP 97
● TEST, MEASUREMENT, AND DIAGNOSTIC EQUIPMENT (TMDE) SUPPORT - JOINT AMC/ARNG GROUP TO EVALUATE OPTIONS, REPORT TO CG AMC AND DA DCSLOG	HQ AMC / 30 SEP 98
● FOCUSED SUSTAINMENT MAINTENANCE (FSM) - AMC/DA TEAM TO DEVELOPE DETAILED PLAN FOR MOVING ARMY TOWARD FSM	HQ AMC / 30 SEP 97 *
● FOCUSED SUSTAINMENT MAINTENANCE (FSM) - AMC/DA TEAM TO DEVELOPE DETAILED PLAN FOR MOVING ARMY TOWARD FSM	RMD / 30 SEP 98 *

* OUR BEST ESTIMATE

Small Business Office
Mr. John F. Nelson
Small Business Advocate
Small and Disadvantaged Business Utilization Office

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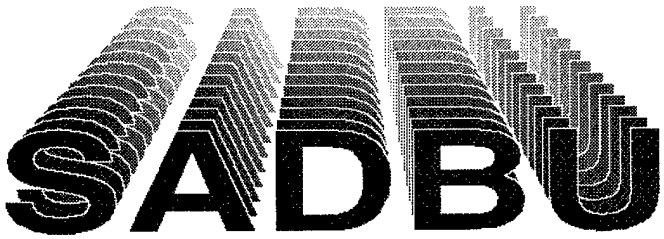

JOHN F. NELSON
SADBU

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OVERVIEW

- WHO WE ARE
- WHAT WE DO
- WHAT OUR GOALS ARE
- SIGNIFICANT PROGRAM REQUIREMENTS AND FEATURES

SMALL BUSINESS PROGRAM

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- MANDATED BY LAW AND E.O.
- COVERAGE:
  - SMALL DISADVANTAGED BUSINESS (8a)
  - WOMEN-OWNED SMALL BUSINESS
  - HISTORICALLY BLACK COLLEGES & UNIVERSITIES & MINORITY INSTITUTIONS (HBCUs/MIs)
- GOALS ESTABLISHED BY CONGRESS AND PRESIDENT - ADJUSTED TO REFLECT COMMAND, INSTALLATION CIRCUMSTANCES.

ROLE OF SMALL BUSINESS OFFICE

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- PROVIDES:
  - ADVICE AND GUIDANCE TO SMALL BUSINESS AND HBCUs/MIs REGARDING MARKETING, CONTRACT AND SUBCONTRACT OPPORTUNITIES AND PROCEDURES,
  - ADVICE AND GUIDANCE TO PROGRAM MANAGERS REGARDING SMALL BUSINESS CAPABILITIES, ACQUISITION STRATEGIES, CONTRACT PERFORMANCE.
- INTERFACES WITH:
  SBA
  - ON ALL SMALL BUSINESS MATTERS
  - ON 8(A) PROGRAM REQUIREMENTS
- HBCUs/MIs
  - ON ALL UNIVERSITY RELATED MATTERS

AMCOM FY 98 SMALL BUSINESS PROJECTIONS

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- Total Small Business (14.7%)
- Small Disadvantaged Businesses (3.8%)
- Women-Owned Small Businesses (1.5%)
- Research and Development (13.0%)
- Historically Black Colleges and Universities/Minority Institutions (HBCU/MI) (11.7%)

CENTRAL CONTRACTOR REGISTRATION (CCR)

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- ONE TIME REGISTRATION FOR CONTRACT AWARD ELIGIBILITY
- REPLACES THE STANDARD AUTOMATED BIDDERS LIST (SABL)
- CONTRACTORS MUST BE REGISTERED BY MARCH 31, 1998 TO COMPETE FOR AWARD
- DOD CCR MAY BE ACCESSED VIA THE FOLLOWING:
  - http://www.acq.osd.mil/ec
  - DIAL UP MODEM 614-692-6788 (User ID: ccrpub; password: pub2ccri)
  - DOD CERTIFIED VALUE ADDED NETWORK (VAN)
  - TOLL FREE NUMBER 1-800-334-3414 (FOR PAPER COPY)

TEAM REDSTONE ACQUISITION CENTER BULLETIN BOARD SYSTEM

(http://www.redstone.army.mil/procbbs/)

- Spares/Repair Parts (MASTER SOLICITATION)
- Advanced Planning Acquisition Information
- Solicitations
- Synopses
- Procurement History Query (by NSN)
- Draft Requests for Proposal (RFP)--These files are large
- Small Business Capabilities
- Qualifications of Source of Supply
- AMCOM Acquisition Desk Guide

ADVANCED PLANNING ACQUISITION INFORMATION QUERY

- MAJOR WEAPON SYSTEMS:
  - SELECT THE PROPONENT ORGANIZATION:
- NON-WEAPON SYSTEMS:
  - SELECT THE PROPONENT ORGANIZATION:
- REPAIR PARTS LIST:
- DEPOT MAINTENANCE AND REPAIR LIST:

SMALL BUSINESS CAPABILITIES

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- DATABASE COMPOSED OF MANUFACTURING AND SERVICES CATEGORIES
- SERVES AS INDICATION OF ELIGIBLE FIRMS FOR SET-ASIDE DETERMINATIONS
- IMPORTANT THAT INTERESTED FIRMS REGISTER WITH SB OFFICE

SMALL BUSINESS OFFICE
LOCATED IN BLDG 4488, RM A-106

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List of Acronyms

Acronym List

21CLW	21st Century Land Warrior
3D	Three Dimensional
A/C	Aircraft
AAMDC	Army Air and Missile Defense Command
ABIS	Advanced Battlespace Information Systems
ABL	Airborne Laser
ABM	Anti-Ballistic Missile
ACES	ARROW Continuation Experiments
ACTD	Advanced Concept Technology Demonstration
ADS	Advanced Distributed Simulation
AF	Air Force
AFEMIS	Air Force Equipment Management Information System
AFLIF	Air Force Logistics Information File
AGTFT	Anti-jam GPS Technology Flight Test
AI	Artificial Intelligence
AIT	Automated Identification Technologies
AI2	Advanced Image Intensifier
AJP	Advanced Joint Planning
ALISS	Advanced Light-weight Influence Sweep System
AMC	Army Materiel Command
AMMOLOGS	Ammunition Logistics System
AMMT	Advanced Minehunting and Mapping Technologies
AOC	Air Operations Center
AP	Armor Piercing
ASCIET	All Service Combat Identification Evaluation Team
ASCM	Anti-Ship Cruise Missile
ASD(AE)	Assistant to the Secretary of Defense (Atomic Energy)
ASRN	Autonomous Surveillance/Reconnaissance Networks
ATAC	Advanced Traceability and Control
ATACMS	Advanced Tactical Missile System
ATAV	Army Total Asset Visibility
ATD	Advanced Technology Demonstration
ATLASS	Asset Tracking Logistics and Supply System
ATM	Asynchronous Transfer Mode
ATMD	Advanced Theater Missile Defense
ATR	Automatic Targeting Radar; Automatic Target Recognition
AUP	Advanced Unitary Penetrator
B	Biological
BADD	Battlefield Awareness and Data Dissemination
BCIS	Battlefield Combat Identification System
BDA	Battle Damage Assessment
BFV	Bradley Fighting Vehicle
BM	Ballistic Missile
BMDAE	Ballistic Missile Defense Acquisition Executive
BMDO	Ballistic Missile Defense Organization
BMT	Ballistic Missile Technology
BN TOC	Battalion Tactical Operations Center
BRP	Basic Research Plan
BTRY TOC	Battery Tactical Operations Center
BW	Biological Weapon
C	Chemical
C&C	Cut and Cover

C/B	Chemical and Biological
C2	Command and Control
C2W	Command and Control Warfare
C3	Command, Control, and Communications
C3I	Command, Control, Communications, and Intelligence
C4	Command, Control, Communications, and Computers
C4I	Command, Control, Communications, Computers, and Intelligence
C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance
CA	Contract Award
CAC2	Combined Arms Command and Control
CAIMS/OMMS	Conventional Ammunition Integrated Management System
CAPI	Cryptographic Application Programming Interfaces
CAPS-II	Consolidated Aerial Port System II
CAS	Close Air Support
CAS-A	Combat Ammunition System (Wholesale Level)
CASTFOREM	Combined Arms Support Task Force Evaluation Model
CATOX	Catalytic Oxidation
CBC2	Context-Based Command and Control
CID	Combat Identification
CIMMD	Close-In Man Portable Mine Detector
CINC	Commanders-in-Chief
CJCS	Chairman, Joint Chiefs of Staff
CJTF	Commander, Joint Task Force
CM	Cruise Missile
CMOS	Cargo Movement Operations System
COA	Course of Action
COBRA	Coastal Battlefield Reconnaissance and Analysis
CONOPS	Concept of Operations
CORPS SAM	Corps-Surface-To-Air-Missile
COTS	Commercial Off-the-Shelf
CP	Counterproliferation
CPAF	Cost-Plus-Award-Fee
CPIF	Cost-Plus-Incentive-Fee
CPFF	Cost-Plus-Fixed-Fee
CW	Chemical Weapon
DAAS	Defense Automated Addressing System
DARPA	Defense Advanced Research Projects Agency
DBK	Dominant Battlespace Knowledge
DDRE	Director of Defense Research and Engineering
DEPRA	Defense Program for Redistribution of Assets
DIAL	Differential Absorption of Light
DIRCM	Directional Infrared Countermeasures
DIS	Distributed Interactive Simulation
DISC	Differential Scattering
DISN	Defense Information Systems Network
DIW	Detection, Identification, and Warning
DLA	Defense Logistics Agency
DMSO	Defense Modeling and Simulation Organization
DNA	Defense Nuclear Agency
DOB	Depth of Burst
DoD	Department of Defense
DSB	Defense Science Board
DSP	Defense Support Program
DSS	Distribution Standard System
DSSC	Direct Support Stock Control

DSTAG	Defense S&T Advisory Group
DTAP	Defense Technology Area Plan
DTAV	Defense Total Asset Visibility Program
DTO	Defense Technology Objective
DUSD(AT)	Deputy Undersecretary of Defense (Advanced Technology)
EA	Electronic Attack
ECM	Electronic Countermeasures
EKV	Exo-Atmospheric Kill Vehicle
EMD	Engineering Manufacturing Development
EMI	Electro-Magnetic Interference
EN	Explosive Neutralization
EO	Electro-Optics
EP	Electronic Protection
ES	Electronic Support
ESAI	Enhanced Situation Awareness Insertion
ESM	Electronic Support Measures
EUCOM	European Command
EW	Electronic Warfare
FACs	Forward Air Controllers
FDA	Food and Drug Administration
FFP	Firm-Fixed-Price
FLIR	Forward Looking Infrared Radar
FO/FAC	Forward Observer/Forward Area Controller
FR	France
FTIR	Fourier Transform Infrared
FUE	First Unit Equipped
FW	Fixed Wing
FY	Fiscal Year
FYDP	Future Years Defense Plan
GBI	Ground Based Interceptor
GBR	Ground Based Radar
GBS	Global Broadcast System
GE	Germany
GEM	Guidance Enhanced Missile
GPS	Global Positioning System
GTN	Global Transportation Network
HF	High Frequency
HMD	Helmet Mounted Display
HMMWV	High Mobility Multipurpose Wheeled Vehicle
HPAC	Hazard Prediction Analysis Capability
HPM	High Powered Microwave
HTI	High Temperature Incendiary
HTSF	Hard Target Smart Fuze
HW	Hardware
HWIL	Hardware-In-The-Loop
IADS	Integrated Air Defense System
ID	Identification (Friend or Foe)
IFD	Interim Feasibility Demonstrations
IFF	Identification Friend or Foe
IFT	Integrated Flight Test
IMINT	Imagery Intelligence
IMS	Ion Mobility Spectroscopy
INFOSEC	Information Systems Security

IOC	Initial Operating Capability
IOT&E	Initial Operations Test & Evaluation
IP	Internet Protocol
IR	Infrared
IRCM	Infrared Countermeasures
IS	Information Superiority
ISR	Intelligence, Surveillance, and Reconnaissance
IT	Italy
ITAG	Inertial Terrain-Aided Guidance
IW	Information Warfare
IW BDA	Information Warfare Battle Damage Assessment
IW-D	Defense Information Warfare
IW-O	Offensive Information Warfare
IW-P	Information Warfare-Protect
Javelin	Medium Range Anti-Tank Missile (2 km Dragon replacement)
JAMC	Joint Amphibious Mine Countermeasures
JBPDS	Joint Biological Point Detection System
JBREWS	Joint Biological Remote Early Warning System
JCM	Joint Countermine
JCOS	Joint Countermine Operational System
JCS	Joint Chiefs of Staff
JDAM	Joint Defense Attack Munition
JNBCRS	Joint Service Reconnaissance System
JPO-BD	Joint Program Office for Biological Defense
JROC	Joint Requirements Oversight Council
JSAWM	Joint Service Agent Water Monitor
JSCMAD	Joint Service Chemical Miniature Agent Detector
JSCWILD	Joint Service Chemical Warning and Identification LIDAR Detector
JSIMS	Joint Simulation System
JSLSCAD	Joint Service Lightweight Standoff Chemical Agent Detector
JSSAP	Joint Service Small Arms Program
JTAGS	Joint Tactical Ground Station
JTF	Joint Task Force
JTIDS	Joint Tactical Information Distribution System
JTMD	Joint Theater Missile Defense
JTR	Joint Training Readiness
JWARN	Joint Warning and Reporting Network
JWCA	Joint Warfighting Capability Assessment
JWCO	Joint Warfighting Capability Objective
JWDTO	Joint Warfighting Defense Technology Objective
JWE	Joint Warfighting Experiment
JWID	Joint Warfare Interoperability Demonstrations
JWIP	Joint Warfighting Integration Program
JWSTP	Joint Warfighting Science and Technology Plan
kHz	Kilohertz
LAD	Large Area Decontamination
LAD	Logistics Anchor Desk
LADAR	Laser Radar
LAV	Lightly Armored Vehicle
LES	Leading Edge Services
LIDAR	Light (Laser) Detection and Ranging
LIF	Logistics Intelligence File
LIPS	Logistics Information Processing System
LINK	Logistics Information Network

LLNL	Lawrence Livermore National Labs
LRIP	Low-Rate-Initial Production
LRS	Littoral Remote Sensing
LSTAT	Life Support
M&S	Modeling and Simulation
M/S	Multispectral
MALD	Miniature Air Launched Decoy
MAGTF II	Military Assistance Group Task Force - II
MASS	MICAP Asset Sourcing System
MCMIA	Mine Countermeasures Integration and Automation
MEA	Mission Effectiveness Analysis
MEADS	Medium Extended Air Defense System
MITES	Mobile Intelligent Targeting Elements
MITL	Man-in-the-Loop
MLS	Multi-Level Security
MMIC	Monolithic Microwave Integrated Circuit
MOBA	Military Operations in Built-Up Areas
MOE	Military Measures of Effectiveness
MOU	Memorandum of Understanding
MOUT	Military Operations in Urban Terrain
MPIM	Multipurpose Individual Munition
MPM	Microwave Power Module
MRBM	Medium range Ballistic Missile
MRC	Major Regional Conflicts
MRL	Multiple Rocket Launcher
MUMMS	Marine Corps Unified Material Management System
MURI	Multi Disciplinary University Research Initiative
NAMEADSMA	NATO Medium Extended Air Defense System Design
NBC	Nuclear, Chemical, and Biological
NL	Non-Lethal
NMD	National Missile Defense
NRT	Near Real Time
NTM	National Technical Means
NTACMS	Navy Tactical Missile System/Mine Countermeasures
NUGS	Nuclear Unattended Ground Sensors
O&S	Operations & Support
OCSW	Objective Crew Served Weapon
OICW	Objective Individual Combat Weapon
OOTW	Operations Other Than War
OPLAN	Operations Plan
OPSEC	Operational Security
ORD	Operational Requirements Document
OS	Operating System
OSD	Office of the Secretary of Defense
PAC3	Patriot Advanced Capability
PBV	Post-Boost Vehicle
PDV	Project Definition Validation
PE	Program Element
PEO	Program Executive Office
POM	Program Objective Memorandum
PPATS	Proliferation Path Analysis
PRCMRL	Precision Rapid Counter Multiple Rocket Launcher
PSA/TSA	Pressure- and Temperature-Swing Adsorption
PSM	Personnel Status Monitor

PSTS	Precision SIGINT Targeting
QRP	Quick Response Program
RAAP	Rapid Application of Air Power
RAMICS	Remote Airborne Mine Clearance System
REMIS	Reliability and Maintainability Information System
RF	Radio Frequency
RFP	Request For Proposal
RFPI	Rapid Force Projection Initiative
RFTECH	Radio Frequency Technology
RTD	Radar Technology Demonstrator
RV	Reentry Vehicle
RW	Rotary Wing
S&T	Science and Technology
S/D	Self Defense
S/W	Software
SA	Situation Assessment/Awareness
SALTS	Streamlined Automated Logistics Transmission System
SAMMS	Standard Automated Material Management System
SARDB	Survivable Armed Reconnaissance on the Digital Battlefield
SARSS-O	Standard Army Retail Supply System-Objective
SASSY	Supported Activity Supply System
SAW	Surface Acoustic Wave
SBSS	Standard Base Supply System (AF)
SCS	Stock Control System
SEAD	Suppression of Enemy Air Defenses
SEDRE	Sea Emergency Deployment Readiness Exercises
SIGINT	Signal Intelligence
SNAP	Ship Non-Tactical ADP Program (Navy)
SOCOM	Special Operations Command
SOF	Special Operations Forces
SOI	Statement Of Input
SOJ	Standoff Jamming/Jammer
SOLIC	Special Operations - Low Intensity Conflict
SORTS	Status of Resources and Training
SRBM	Short Range Ballistic Missile
STAR	System Threat Assessment Report
STOW	Synthetic Theater of War
STRADIS	Simulation and Training Aide for the Dismounted Soldier
STS	Sensor to Shooter
SUO	Small Unit Operations
SW	Software
TAA	Tactical Assembly Area
TACAIR	Tactical Aircraft
TAP	Technology Area Plan
TARA	Technology Area Review and Assessments
TBD	To Be Determined
TBM	Tactical Ballistic Missiles
TCAIMS	Transportation Coordinator Automated Information Management System
TD	Technology Demonstration
TEED	Tactical End-End Encryption Device
TERMS	Terminal Management System
TFXXI	Task Force XXI
THAAD	Theater High Altitude Area Defense

TLAMS	Tactical Land Attack Missile System
TMD	Theater Missile Defense
TMSF	Tactical Multi-Sensor Data Fusion
TMS	Transportation Management System
TSD	Tactical Surveillance Demonstration
TSDE	Tactical Surveillance Demonstration Enhancement
TUGS	Tactical Unattended Ground Sensors
U.S.	United States
UAV	Unmanned Aerial Vehicle
UGS	Unattended Ground Sensors
UGV	Unmanned Ground Vehicle
UHF	Ultra High Frequency
UICP	Uniform Inventory Control Point
UJTL	Universal Joint Task List
UOES	User Operational Evaluation System
USD(A&T)	Under Secretary of Defense (Acquisition and Technology)
UV	Ultraviolet (radiation)
VHF	Very High Frequency
VHSIC	Very High Speed Integrated Circuit
VIP	Very Important Person
VMISR	Virtual Master Stock Item Record
VMMD	Vehicle Mounted Mine Detector
VV&A	Verification, Validation, and Analysis
W Watts	
W/H	Warhead
WBS	Weapon Borne Sensor
WL	Wright Laboratories, Eglin AFB
WMD	Weapons of Mass Destruction
WPS	Worldwide Port System
WSMR	White Sands Missile Range
XBR	X-Band Radar

Critique Sheet

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In order to improve future APBIs, we solicit your opinions concerning this APBI. Please fill out this form and return it to the critique box in the lobby at your convenience.

Type of Organization:

____ *Prime Contractor* ____ *Subcontractor/Vendor* ____ *Foreign*

____ *Academia* ____ *Government* ____ *Other*

Rating of APBI:	***Excellent***	***Good***	***Fair***	***Poor***
1st Day Sessions	____	____	____	____
2nd Day Sessions	____	____	____	____
Special Functions:				
Luncheon Speakers	____	____	____	____
Tuesday Reception	____	____	____	____
APBI Value to you	____	____	____	____

Were the Briefings:

Relevant and helpful _____ *YES* _____ *NO*

Have you attended a previous APBI?

____ *YES* ____ *NO*

If yes, please compare this APBI with previous AMCOM APBIs:

____ *IMPROVED* ____ *SAME* ____ *LESS*

ADDITIONAL COMMENTS:

_____

_____

_____