

UNCLASSIFIED

<b>ARMY RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)</b>	DATE <b>February 1999</b>
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<b>BUDGET ACTIVITY</b> <b>5 - Engineering and Manufacturing Development</b>	<b>PE NUMBER AND TITLE</b> <b>0604270A Electronic Warfare (EW) Development</b>
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COST (In Thousands)	FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	84106	86258	78603	81037	71055	68958	36071	37095	Continuing	Continuing
D665 Aircraft Survivability Equipment Development	49161	64176	8415	211	3134	10070	13061	13095	Continuing	Continuing
D2VT Advanced Threat Infrared Countermeasures (ATIRCM)/Common Missile Warning System (CMWS) Operational Test	146	1173	834	0	0	0	0	0	0	2153
DL12 Signals Warfare Development	29716	16285	21930	56146	53052	42362	12836	13810	Continuing	Continuing
DL15 Army Reprogramming and Analysis Team (ARAT)	1075	3316	0	0	0	0	0	0	0	17670
DL16 Trojan Development	1198	1308	0	0	0	0	0	0	0	4341
DL18 High Value Asses Defense System	2810	0	0	0	0	0	0	0	0	25613
DL20 Advanced Threat Infrared Countermeasures/ Common Missile Warning Systems (ATIRCM/ CMWS) Development	0	0	47424	24680	14869	16526	10174	10190	Continuing	Continuing

**A. Mission Description and Budget Item Justification:** This program element encompasses engineering and manufacturing development for tactical electronic warfare (EW), signals warfare (SW), aircraft survivability equipment (ASE), battlefield deception, rapid software reprogramming and protection of personnel and equipment from hostile artillery. EW encompasses the development of tactical EW equipment and systems mounted in both ground and air vehicles. The systems under this program provide the Army with the capability to degrade or deny hostile forces the effective use of their communications, countermortar/counterbattery radars, surveillance radars, infrared/optical battlefield surveillance systems and electronically fused munitions. Existing Army EW systems must be replaced or upgraded to maintain their capability in the face of threat technical advancements. This program element satisfies requirements for brigade, division, corps and higher commanders to conduct electronic warfare to meet tactical and Special Electronic Mission Aircraft (SEMA) requirements, attach/scout, and assault/cargo mission requirements. Signals Warfare Development provides for development of multifunction ground based and airborne intelligence and electronic warfare systems. The Shortstop Development program will provide effective protection of personnel and equipment from electronically fused munitions. Trojan developments will complete Proof-of-Principle R&D for specific Trojan applications in advanced threat signals processing and prototype software upgrades; high frequency (HF) algorithms for compact antenna array technology (CAAT) configured into small aperture antenna arrays; search and acquisition capabilities for unattended signal collectors; and new digital intelligence collection, processing and dissemination technology. The

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ARAT Project will develop, test and equip an Army wide infrastructure capable of rapidly reprogramming electronic combat software embedded in offensive and defensive weapon systems.

<b>B. Program Change Summary</b>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
Previous President's Budget (FY 1999 PB)	84180	85989	16128	13635
Appropriated Value	87024	86989		
Adjustments to Appropriated Value				
a. Congressional General Reductions	-2844	-731		
b. SBIR / STTR	-2017			
c. Omnibus or Other Above Threshold Reductions	-689			
d. Below Threshold Reprogramming	+2632			
e. Rescissions				
Adjustments to Budget Years Since FY 1999 PB			+62475	+67402
Current Budget Submit (FY 2000 / 2001 BES)	84106	86258	78603	81037

Change Summary Explanation: FY 2000/2001 – funding increase in support of critical ATIRCM developmental efforts.

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<b>BUDGET ACTIVITY</b> <b>5 - Engineering and Manufacturing Development</b>	<b>PE NUMBER AND TITLE</b> <b>0604270A Electronic Warfare (EW) Development</b>	<b>PROJECT</b> <b>D665</b>
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COST <i>(In Thousands)</i>	FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
D665 Aircraft Survivability Equipment Development	49161	64176	8415	211	3134	10070	13061	13095	Continuing	Continuing

**A. Mission Description and Budget Item Justification:** Aircraft Survivability Equipment Development provides for the development and system integration of Aircraft Survivability Equipment (ASE) to achieve survivability, reduce vulnerability, and enhance combat effectiveness required to fulfill all Army aircraft mission requirements. Equipment developed will increase combat effectiveness and potential for mission accomplishment by reducing or eliminating the ability of threat air defense systems to detect, hit, track, damage or destroy Army aircraft. Developments respond to the approved requirements documents, test and type classification for production and fielding of ASE systems to address infrared, radar, laser and optical/electro-optical directed air defense threats. Efforts in development include new or upgraded systems to counter monopulse, millimeter wave, frequency agile, pulse doppler and continuous wave radars, passive infrared missile seekers and laser directed weapon systems. Continual adjustments are made to this program to meet the changing and evolutionary nature of technology and threat. This program has joint service applications that are coordinated through the Joint Technical Coordinating Group for Aircraft Survivability (JTTCG/AS), as well as NATO applications coordinated through DOD. This project also provides the technical base for electronic warfare equipment for Apache, Blackhawk, Chinook, Comanche and Special Operations Aircraft. The Suite of Integrated Radio Frequency Countermeasures (SIRFC) and Advanced Threat Infrared Countermeasures (ATIRCM) systems are necessary to the survival of the AH-64, MH-47E, MH-60K, RC-12K, EH-60, UH-60 and CH-47D aircraft. The ATIRCM program has been designated a Tri-service program. The SIRFC is an Office of the Secretary of Defense (OSD) oversight program with high joint interest. Air Force Special Operations Command (AFSOC) selected SIRFC as CV-22 EW bus controller and sensor fusion processor. SIRFC EMD schedule is connected to the CV-22 development and test schedule and is monitored closely by US Special Operations Command (SOCOM). Both SIRFC and ATIRCM have application to the Air Force and Navy aircraft. The SIRFC system key capabilities include advanced threat radar warning, advanced threat radar jammer, sensor data fusion and light weight modular design. ATIRCM/CMWS is an integrated Infrared (IR) countermeasure system designed to bring the latest and most sophisticated state of the art technologies available for US Army aircraft to survive on the modern digital battlefield.

- FY 1998 Accomplishments:**
- 32540 Continued EMD of ATIRCM/CMWS
  - 1883 Continued EMD of the AIRCMM
  - 11175 Continued EMD of SIRFC
  - 551 Continued development of AVESSA
  - 3012 Continued in-house and program management administration
- Total 49161

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**FY 1999 Planned Program:**

- 35750 Continue EMD of ATIRCM/CMWS
- 1438 Continue EMD of the AIRCMM
- 348 Continue EMD of the AVESSA
- 21328 Continue EMD of the SIRFC
- 2975 Continue in-house and program management administration
- 2337 Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Programs

Total 64176

**FY 2000 Planned Program:**

- 7900 Complete EMD of the SIRFC
- 515 Continue in-house and program management administration

Total 8415

**FY 2001 Planned Program:**

- 211 Continue in-house and program management administration

Total 211

<b>B. <u>Other Program Funding Summary</u></b>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	To <u>Compl</u>	Total <u>Cost</u>
APA, BA 4 AZ3508 ASE*		5108	88	14632	14619	13427	13415		Cont	Cont
APA, BA 2 AA0720 ASE Modifications**	23112	2735	11796	4517	14422	4802	4993	2250	Cont	Cont

\*SSN AZ3508 all years are SIRFC only funding.  
 \*\*SSN AA0720 FY98 funding includes ATIRCM Funding. FY99 – 2005 are SIRFC funds only.

**C. Acquisition Strategy:** Project is comprised of multiple programs which have been competitively awarded.

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BUDGET ACTIVITY <b>5 - Engineering and Manufacturing Development</b>	PE NUMBER AND TITLE <b>0604270A Electronic Warfare (EW) Development</b>	PROJECT <b>D665</b>
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<b>D. Schedule Profile</b>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2004</u>	<u>FY 2005</u>
Continued EMD of ATIRCM/CMWS	4Q									
Continued EMD of AIRCMM	4Q									
Continued EMD contract of SIRFC	4Q									
Continued EMD of AVESSA	4Q									
Continued EMD of ATIRCM/CMWS		4Q								
Continued EMD of AIRCMM		4Q								
Continued EMD of SIRFC		4Q								
Continued EMD of AVESSA		4Q								
Continue EMD of ATIRCM/CMWS			4Q							
Continue EMD of AIRCMM			4Q							
Continue EMD of SIRFC			4Q							
Continue EMD of AVESSA			4Q							
Complete EMD of SIRFC				3Q						

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ARMY RDT&E COST ANALYSIS (R-3)										DATE February 1999		
BUDGET ACTIVITY <b>5 - Engineering and Manufacturing Development</b>					PE NUMBER AND TITLE <b>0604270A Electronic Warfare (EW) Development</b>					PROJECT <b>D665</b>		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Thiokol (AIRCMM)	C/CPIF	Picatinny Arsenal, NJ	6182	1438	2Q FY99						7620	
b. ITT Corp (SIRFC)	C/CPAF	CECOM	43659	18442	2Q FY99	7900	1Q FY00				70001	
c. Sanders (ATIRCM)	C/CPAF	CECOM	41569	23199	2Q FY99						64768	
d. Various Contracts		CECOM	15364								15364	
Subtotal Product Development:			106774	43079		7900					157753	
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Support Cost	MIPR	CAS	2082	2082	2Q FY99						4164	
b. Modeling & Sim	MIPR			3148							3148	
Subtotal Support Costs:			2082	5230							7312	
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. TECOM	MIPR		4312	3675	Reimburs						7987	
b. EPG	MIPR		6025	4344	Reimburs						10369	
c. MISC	MIPR		1521	2536	Reimburs						4057	
Subtotal Test and Evaluation:			11858	10555							22413	
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
c. Project Management	MIPR	Various		2975		515		211			3701	
a. SBIR/STTR				2337							2337	
Subtotal Management Services:				5312		515		211			6038	

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BUDGET ACTIVITY <b>5 - Engineering and Manufacturing Development</b>	PE NUMBER AND TITLE <b>0604270A Electronic Warfare (EW) Development</b>	PROJECT <b>D665</b>
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	Total PYs Cost	FY 1999 Cost		FY 2000 Cost		FY 2001 Cost		Cost To Complete	Total Cost	Target Value of Contract
Project Total Cost:	120714	64176		8415		211			193516	

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								DATE February 1999		
BUDGET ACTIVITY <b>5 - Engineering and Manufacturing Development</b>				PE NUMBER AND TITLE <b>0604270A Electronic Warfare (EW) Development</b>				PROJECT <b>D2VT</b>		
COST (In Thousands)	FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
D2VT Advanced Threat Infrared Countermeasures (ATIRCM)/Common Missile Warning System (CMWS) Operational Test	146	1173	834	0	0	0	0	0	0	2153
<p><b>A. Mission Description and Justification:</b> This project supports the operational testing for the Advanced Threat Infrared Countermeasures (ATIRCM)/ Common Missile Warning System (CMWS). This project will provide active and passive Infrared Countermeasure (IRCM) protection against infrared guided weapons. The system is designed to meet operational requirements for a modular IRCM system capable of providing awareness and self-protection jamming countermeasures. The system is applicable to the AH-64D, MH-47D/E, MH-60K/L, EH-60, UH-60, and CH-47D aircraft. The program has been designated a tri-service program, with application to the Air Force and Navy aircraft.</p> <p><b>FY 1998 Accomplishments:</b></p> <ul style="list-style-type: none"> <li>146 Initiated ATIRCM/CMWS operational test support</li> </ul> <p>Total 146</p> <p><b>FY 1999 Planned Program:</b></p> <ul style="list-style-type: none"> <li>1142 Continue ATIRCM/CMWS operational test support</li> <li>31 Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Programs</li> </ul> <p>Total 1173</p> <p><b>FY 2000 Planned Program:</b></p> <ul style="list-style-type: none"> <li>834 Complete ATIRCM/CMWS operational test support</li> </ul> <p>Total 834</p> <p><b>FY 2001 Planned Program:</b> Project not funded in FY 2001</p>										
<b>B. Other Program Funding Summary</b>										
	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	To Compl	Total Cost
APA, BA 4 AZ3507 ASE Infrared CM				8147	26761	69377	114196	111603	Cont	Cont
APA, BA 2 AA0720 ATIRCM Modifications				705	12121	12075	21317	31410	Cont	Cont
<p>Project D2VT <span style="float:right">Page 8 of 25 Pages</span> <span style="float:right">Exhibit R-2A (PE 0604270A)</span></p>										

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C. Acquisition Strategy: Not applicable

<b>D. Schedule Profile</b>	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
Continue Operational testing for ATIRCM/CMWS				2Q	2Q					

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BUDGET ACTIVITY <b>5 - Engineering and Manufacturing Development</b>				PE NUMBER AND TITLE <b>0604270A Electronic Warfare (EW) Development</b>					PROJECT <b>DL12</b>	
COST (In Thousands)	FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
DL12 Signals Warfare Development	29716	16285	21930	56146	53052	42362	12836	13810	Continuing	Continuing
<p><b>A. <u>Mission Description and Budget Item Justification:</u></b> Signals Warfare Development provides for a family of integrated ground-based and heliborne intelligence and electronic warfare common sensor (IEWCS) systems. In Fiscal Year (FY) 1998, the US Army decided the objective Ground Based Common Sensor-Light (GBCS-L) systems were not ready to enter IOT&amp;E. However, the Army's intention to field the GBCS-L Limited Production Urgent (LPU) to the 82<sup>nd</sup> ABN Div in response to an urgent operational requirement is still valid. The United States Marine Corps is utilizing the same subsystems as IEWCS and configuring them in a Light Armored Vehicle as a part of the Mobile Electronic Warfare Support System (MEWSS) improvement program.</p> <p>The Army has decided to restructure the former IEWCS program, essentially making a "right turn" from IEWCS into a new program to be called Prophet. Prophet will consist of air and ground platforms and a ground control element.</p> <p>The Prophet Operational Requirement Document (ORD) has been revised and is currently undergoing final review. The desired capabilities in the revised ORD include the following: remoting operations of subsystems; Joint Airborne Signals Intelligence (SIGINT) Architecture (JASA) compliance, increased Area of Responsibility (AOR) coverage, and electronic mapping of the battlefield.</p> <p>The Prophet system will use the emerging SIGINT standards for internal system interfaces/communications/datalinks and the tactical communications standards for the external system interfaces with the Army Tactical Command and Control System (ATACCS), the intelligence community and other specified intelligence processing facilities.</p> <p>FY 00 and FY 01 funding supports this restructured program. This project provides for engineering and manufacturing development (EMD) and testing leading to Milestone III for the restructured Prophet program.</p> <p>This project is unclassified and there is a cooperative effort with the United Kingdom's Project Catalyst. The National Security Agency's Defense Cryptologic Program (DCP), Program Element 030885G also provides a portion of the funds required for subsystem development.</p> <p><b>FY 1998 Accomplishments:</b></p> <ul style="list-style-type: none"> <li>• 1365 Developed increased TACJAM-A special signal capabilities and correct existing platform integration problems IAW UKMOU</li> <li>• 1790 Continued Development and integration of GBCS-H</li> <li>• 1789 Fixed existing central software issues</li> <li>• 4790 Contractor field tests and follow on fixes</li> <li>• 1100 Conducted training and provide contractor depot level repair in preparation for and support of DT/OT for GBCS-L</li> <li>• 11064 Conducted DT/OT on GBCS-L</li> <li>• 761 Full-band DF Calibration</li> <li>• 2400 Government Test Support to DT/OT, GBCS-L</li> <li>• 2500 C2 Upgrade</li> <li>• 2157 Raytheon FSED GBCS-L Recalibration</li> </ul>										
Project DL12	Page 10 of 25 Pages					Exhibit R-2A (PE 0604270A)				

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Total 29716

**FY 1999 Planned Program:**

- 300 Prepare for/conduct Special In-Process Review leading to the E&MD contract
  - 3500 Continue Government Support of On-Going GBCS-ONS (Operational Needs Statement) Efforts
  - 1500 C2 Upgrade
  - 3300 COMINT subsystem development; increase accuracy and coverage
  - 1800 Conduct investigations and demonstrate existing technology and off-the-shelf COTS hardware as COMINT technologies
  - 600 Conduct initial technical survey of available manpack (MP) COMINT receivers in preparation for Special In Process Review of restructured Prophet program
  - 1200 Preliminary design of JASA compliant architecture
  - 1560 Initiate design of Common Remote/Reporting Architecture
  - 2107 Systems Engineering and Front End Trade-Off Analysis to prepare performance specifications
  - 418 Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Programs
- Total 16285

**FY 2000 Planned Program:**

- 21930 Award E&MD Contract for restructured Prophet program. Design and develop the SIGINT capability in response to revised ORD. Develop the architecture required for interoperability between air and ground platforms and the ground control element.
- Total 21930

**FY 2001 Planned Program:**

- 56146 Continue E&MD Contract for restructured Prophet program. Continue design and develop the SIGINT capability in response to revised ORD. Initiate development of a soldier transportable SIGINT subsystem. Continue developing the architecture required for interoperability between air and ground platforms and the ground control element. Begin Spiral Development testing. Start fabrication of Air/Control elements.
- Total 56146

<b>B. Other Program Funding Summary</b>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>To Compl</u>	<u>Total Cost</u>
OPA (SSN BZ7326)	0	12039	0	0	0	34645	134862	101834	Cont'd	Cont'd
OPA (SSN BZ9750)	1615	4877	9090	2771	2867	144	5847	9810	Cont'd	Cont'd
APA (SSN AB3000)	36475	0	4915	9820	0	99671	119455	113471	Cont'd	Cont'd

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<b>B. <u>Other Program Funding Summary</u></b>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	To <u>Compl</u>	Total <u>Cost</u>
RDTE Budget Activity 7 DCP PE 030885G, GBCS	18334	17350	13225	13035	15966	13060	11806	12178	Cont'd	Cont'd
RDTE Budget Activity 7 DCP PE 030885G, CHALS-X	1996	3800	3991	4726	3918	2700	2488	2060	Cont'd	Cont'd
<p><b>C. <u>Acquisition Strategy:</u></b> In November 1995, the US Army competitively awarded a five-year contract to continue development and to acquire the GBCS/AQF systems required to meet initial Army needs. Contracted for six (6) GBCS Limited Production Urgent (LPU) units in support of the 82<sup>nd</sup> Abn Division's urgent operational requirement and three (3) Low Rate Initial Production (LRIP) units of the Advanced QuickFix (AQF) and initiated development of the GBCS-H.</p> <p>The US Army has decided that the GBCS-L systems were not ready to enter IOT&amp;E and that the requirements/ORD should be reviewed and restructured. This decision resulted in the restructure of the program. FY99 was established as the transition year between GBCS/AQF and the restructured Prophet program. The following decisions were made:</p> <ul style="list-style-type: none"> <li>a. The GBCS-Heavy segment of the program was terminated.</li> <li>b. The AQF systems would undergo a DT/OT in FY99. Subsequent decision cancelled DT/OT of AQF.</li> <li>c. No MS III decision reviews for production of objective systems (GBCS-L/AQF).</li> <li>d. GBCS-LPUs would be fielded to the 82<sup>nd</sup> ABN Div. GBCS-LPUs upgrades/fixes have been delayed; deployment of GBCS-ONS scheduled to start in 4Q00.</li> <li>e. Requirements would be relooked. ORD requirements are being reevaluated and will be finalized in FY99.</li> <li>f. Program Special In Process Review (SIPR) will be conducted in 3QFY99, at which time the revised Acquisition Strategy would be approved.</li> <li>g. Contractual: Competitive contract award for development, fabrication, and integration of E&amp;MD Systems for Prophet.</li> </ul>										
<b>D. <u>Schedule Profile</u></b>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>		
Complete GBCS-L DT/OT	4Q									
SIPR for Restructured Program		3Q								
Award Contract/begin E&MD of Restructured Program			2Q							
Spiral Development Testing				3Q	3Q	3Q				
Begin Development of Oper/Maint Trainers						2Q				
Complete IOT&E									2Q	
MS III Decision									4Q	
<p>Project DL12 <span style="float: right;">Page 12 of 25 Pages</span> <span style="float: right;">Exhibit R-2A (PE 0604270A)</span></p>										

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BUDGET ACTIVITY  
**5 - Engineering and Manufacturing Development**

PE NUMBER AND TITLE  
**0604270A Electronic Warfare (EW) Development**

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<b>ARMY RDT&amp;E COST ANALYSIS (R-3)</b>										DATE <b>February 1999</b>		
BUDGET ACTIVITY <b>5 - Engineering and Manufacturing Development</b>					PE NUMBER AND TITLE <b>0604270A Electronic Warfare (EW) Development</b>					PROJECT <b>DL12</b>		
<b>I. Product Development</b>	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. TACJAM (Joint venture)	C-CPIF	Sanders/AEL; Lansdale, PA	213744	0		1000	1Q	1450	1Q	0	216194	216194
b. LRIP procurement (GBCS-L and AQF)	SS-CPFF	IBM/Loral; Owego, NY	47923	0						0	47923	47923
c. Full scale engineering development models (GBCS-L/ H, AQF)	C-CPAF	ESI; Richardson, TX	107606	0						0	107606	107606
d. Mod to Bradley derivative for GBCS-H	SS-CPFF	FMC/UDLP; Santa Clara, CA	16257	0						0	16257	16257
e. LRIP procurement (GBCS-L and AQF)	C-FFP	LMFS-O; Owego, NY	22423	6907	2Q00					0	29330	29330
f. AD/EXJAM	SS-CPIF	Loral; Owego, NY	1785							0	1785	1785
g. Misc efforts		Various	3056							0	3056	3056
h. Engineering/Program Support	FFP	Questech; Falls Church, VA	2033	850	2Q	700	1Q	800	1Q	CONT	4383	4383
i. Prophet development	TBD	TBD	0	5160	2Q00	17730	1Q	49196	1Q	CONT	72086	72086
j. Engineering Support	MIPR	I2WD; Fort Monmouth, NJ	0	900	2Q						900	900
k. SBIR/STTR				418							418	418
Subtotal Product Development:			414827	14235		19430		51446			499938	
<b>II. Support Costs</b>	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Alternative COMINT system	FFP	MITRE; McLean, VA	75							0	75	75
Subtotal Support Costs:			75								75	75

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<b>ARMY RDT&amp;E COST ANALYSIS (R-3)</b>										DATE <b>February 1999</b>		
BUDGET ACTIVITY <b>5 - Engineering and Manufacturing Development</b>				PE NUMBER AND TITLE <b>0604270A Electronic Warfare (EW) Development</b>						PROJECT <b>DL12</b>		
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. DT/OT Support	MIPR	EPG/Fort Hood, TX	4965							0	4965	4965
b. DT/OT Support	MIPR	Government; TBD						2000	2Q	CONT	2000	2000
Subtotal Test and Evaluation:			4965					2000			6965	6965
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Contractor Engineering and Support	FFP	Questech; Falls Church, VA	4120	700	2Q	700	1Q	700	1Q	CONT	6220	
b. Contractor Engineering and Support	FFP	Sytex; Doylestown, PA	500	300	2Q	300	1Q	400	1Q	CONT	1500	
c. In-House	Direct	Fort Monmouth, NJ	9478	250	2Q	700	1Q	800	1Q	CONT	11228	
d. Government Engineering and Logistics Support	MIPR	CECOM; Fort Monmouth, NJ	8685	800	2Q	800	1Q	800	1Q	CONT	11085	
e. Monitor efforts of FMC/UDLP	MIPR	TACOM; Warren, MI	70	0						0	70	
Subtotal Management Services:			22853	2050		2500		2700			30103	
Project Total Cost:			442720	16285		21930		56146			537081	

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								DATE February 1999		
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604270A Electronic Warfare (EW) Development				PROJECT DL15		
COST (In Thousands)	FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
DL15 Army Reprogramming and Analysis Team (ARAT)	1075	3316	0	0	0	0	0	0	0	17670
<p><b>A. <u>Mission Description and Justification:</u></b> Army Reprogramming and Analysis Team (ARAT) for Target Sensing Systems (TSS) project will design, develop, implement, test, equip and institutionalize an Army-wide infrastructure capable of rapidly reprogramming electronic combat software embedded in offensive and defensive weapon systems. ATSS are those tactical weapons and sensor systems which rely on embedded, well-defined target or emitter signature data for specific identification. Systems supported by this project include but are not limited to: radar warning receiver and jammer sub-systems of attack, scout, utility and SEMA aircraft; aircraft survivability equipment; automated intelligence collection systems and jammers; advanced threat sensors for air defense, artillery and missile applications, and use as vehicle /troop self-protection systems. The project focuses on advanced information management technologies to: automate the threat recognition process; evaluate the operational impact of threat changes on inventoried sensor; develop, test and evaluate software to counter the change; develop tactical loading devices for deploying or deployed forces; and institutionalize the infrastructure to accomplish these tasks as well as distribute/disseminate the new software.</p> <p><b>FY 1998 Accomplishments:</b></p> <ul style="list-style-type: none"> <li>• 1075 Began development of specific flagging models for AN/APR-39A(V)2 Radar Warning Receiver</li> </ul> <p>Total 1075</p> <p><b>FY 1999 Planned Program:</b></p> <ul style="list-style-type: none"> <li>• 827 Complete integration of Radio Frequency (RF) based systems into reprogramming infrastructure.</li> <li>• 327 Complete design of communications architecture paths to support CONUS and OCONUS field unit communications.</li> <li>• 1179 Implement support plans for PM, Aviation Electronic Combat .</li> <li>• 602 Complete Development of specific flagging models for AN/APR-39A(V)2 Radar Warning Receiver.</li> <li>• 300 Development of Multi-Service Electronic Combat Secure Web Site.</li> <li>• 81 Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Programs</li> </ul> <p>Total 3316</p> <p><b>FY 2000 Planned Program:</b> Project not funded in FY 2000</p> <p><b>FY 2001 Planned Program:</b> Project not funded in FY 2001</p> <p><b>B. <u>Other Program Funding Summary:</u></b> Not applicable.</p>										
Project DL15			Page 15 of 25 Pages				Exhibit R-2A (PE 0604270A)			

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<b>ARMY RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)</b>	DATE <b>February 1999</b>
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BUDGET ACTIVITY <b>5 - Engineering and Manufacturing Development</b>	PE NUMBER AND TITLE <b>0604270A Electronic Warfare (EW) Development</b>	PROJECT <b>DL15</b>
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**C. Acquisition Strategy:** The ARAT to TSS project will design, develop, implement, test, equip and institutionalize all Army-wide infrastructure capable of reprogramming electronic combat software embedded in offensive and defensive weapons systems. The program requirements for software engineering, development, support equipment engineering acquisition, operational training and test and evaluations support will be acquired by the use of time and material contracts. This strategy will further such major program events such as the test and evaluation of off-the-shelf and developmental loading devices, the completion of connectivity of a secure Wide Area Network with all reprogramming centers and the development of flagging models for specific electronic combat survivability systems.

<b>D. <u>Schedule Profile</u></b>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2004</u>	<u>FY 2005</u>
Complete design of communications architecture paths to support CONUS and OCONUS field unit communications			4Q							
Implement support plans for PM, Aviation Electronic Combat .			4Q							
Complete development of specific flagging models for AN/APR-39A(V)2 Radar Warning Receiver.			4Q							
Development of Multi-Service Electronic Combat Secure Web Site.			4Q							
Complete integration of Radio Frequency (RF) based systems into reprogramming infrastructure.			4Q							

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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								DATE February 1999		
BUDGET ACTIVITY <b>5 - Engineering and Manufacturing Development</b>				PE NUMBER AND TITLE <b>0604270A Electronic Warfare (EW) Development</b>				PROJECT <b>DL16</b>		
COST (In Thousands)	FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
DL16 Trojan Development	1198	1308	0	0	0	0	0	0	0	4341
<p><b>A. <u>Mission Description and Budget Item Justification:</u></b> This project is a Tactical Intelligence and Related Activities (TIARA) program. A key factor in modern warfare is the ability to collect, process and use information about an adversary while preventing him from obtaining similar information. Trojan is a combined operational and readiness mission system which uses advanced networking technology to provide seamless rapid radio relay, secure communications to include voice, data, facsimile, and electronic reconnaissance support to U.S. forces throughout the world. Trojan operations may be easily tailored to fit military intelligence unit training schedules and surged during specific events to involve every aspect of the tactical intelligence collection, processing, analysis and reporting systems. This project engineers, tests and evaluates new digital intelligence collection, processing and dissemination technology using the fielded Trojan systems, prior to the acquisition of those technologies. Digitization is the process that will enable the United States to win on the battlefield of the information war. This capability will allow us to process and disseminate real-time intelligence data from various sources; it forms the intelligence needed to issue orders inside the threat decision cycle. To that end, it is imperative the Trojan system keep pace with digitization initiatives in order to respond aggressively to the emerging intelligence communication threats.</p> <p><b>FY 1998 Planned Program:</b></p> <ul style="list-style-type: none"> <li>• 247 Conducted operational test and evaluation of previously developed specialized software and enhanced signal processing algorithms).</li> <li>• 330 Tested Warfighter Information Network (WIN) interfaces technology for the Trojan intelligence network.</li> <li>• 490 Conducted proof-of-concept testing of ATM switching technology for incorporation into Trojan Spirit.</li> <li>• 131 Developed prototype Common Remoted Systems compatible Remote Receiver Group for Trojan Classic XXI.</li> </ul> <p>Total 1198</p> <p><b>FY 1999 Planned Program:</b></p> <ul style="list-style-type: none"> <li>• 480 Conduct operational assessment of voice/audio over Internet Protocol (IP) technology, and develop prototype architecture to maximize bandwidth of Trojan intelligence collection/dissemination products to reduce communications costs.</li> <li>• 318 Continue implementation and testing of Warfighter Information Network (WIN) Intelligence Gateway (IG) interfaces for the Trojan network.</li> <li>• 480 Apply Common Remote Systems (CRS) control and functionality to soldier transportable remote SIGINT collection packages, and demonstrate prototype systems</li> <li>• 30 Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Programs</li> </ul> <p>Total 1308</p> <p><b>FY 2000 Planned Program:</b> Project not funded in FY 2000</p>										
Project DL16			Page 17 of 25 Pages				Exhibit R-2A (PE 0604270A)			

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<b>ARMY RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)</b>								DATE <b>February 1999</b>		
BUDGET ACTIVITY <b>5 - Engineering and Manufacturing Development</b>					PE NUMBER AND TITLE <b>0604270A Electronic Warfare (EW) Development</b>			PROJECT <b>DL16</b>		
FY 2001 Planned Program: Project not funded in FY 2001										
<b>B. Other Program Funding Summary</b>										
	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Compl	Total Cost
OPA BA0331	3225	3520	4268	4382	4412	4430	4512	4641	Cont'd	Cont'd
OPA BA0333	462	460	0	0	0	0	0	0	0	923
<b>C. Acquisition Strategy:</b> Competitive contract award utilizing firm fixed price and best value selection procedures for engineering and manufacturing development.										
<b>D. Schedule Profile</b>										
	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2004	FY 2005
<b>Acquisition Milestones</b>										
Contract Award for Spec Software for Sig Proc Algorithms	4Q*									
Contract Award for enhanced Sig Proc Algorithms	4Q*									
Procurement of hardware for Interface of Trojan Intel Network to WIN POC testbed		4Q*								
Procurement of development of Multi-bandwidth compression algorithms		4Q*								
Procurement of Voice over IP software applications and hardware			4Q							
Procurement of hardware for development of advanced prototype for WIN IG			4Q							
Procurement of hardware for development of CRS capable soldier remote portable SIGINT			4Q							
<b>Engineering Milestones</b>										
Prototype insertion-video compression/processing	4Q*									
Spec software for signal processing Algorithms		4Q*								
Evaluate Enhanced signal processing algorithms		4Q*								
Project DL16 <span style="float: right;">Page 18 of 25 Pages</span> <span style="float: right;">Exhibit R-2A (PE 0604270A)</span>										

<b>ARMY RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)</b>	DATE <b>February 1999</b>
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BUDGET ACTIVITY <b>5 - Engineering and Manufacturing Development</b>	PE NUMBER AND TITLE <b>0604270A Electronic Warfare (EW) Development</b>	PROJECT <b>DL16</b>
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<b>D. Schedule Profile</b>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2004</u>	<u>FY 2005</u>
Demonstrate prototype CRS capable soldier remote portable SIGINT			4Q							
Demonstrate WIN Intelligence Gateway (IG) interface to Trojan network			4Q							

\*Denotes a completed effort

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<b>ARMY RDT&amp;E COST ANALYSIS (R-3)</b>										DATE <b>February 1999</b>																																									
BUDGET ACTIVITY <b>5 - Engineering and Manufacturing Development</b>					PE NUMBER AND TITLE <b>0604270A Electronic Warfare (EW) Development</b>					PROJECT <b>DL16</b>																																									
I. Product Development: Not applicable.																																																			
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:15%;">II. Support Costs</th> <th style="width:10%;">Contract Method &amp; Type</th> <th style="width:15%;">Performing Activity &amp; Location</th> <th style="width:5%;">Total PYs Cost</th> <th style="width:5%;">FY 1999 Cost</th> <th style="width:5%;">FY 1999 Award Date</th> <th style="width:5%;">FY 2000 Cost</th> <th style="width:5%;">FY 2000 Award Date</th> <th style="width:5%;">FY 2001 Cost</th> <th style="width:5%;">FY 2001 Award Date</th> <th style="width:5%;">Cost To Complete</th> <th style="width:5%;">Total Cost</th> <th style="width:5%;">Target Value of Contract</th> </tr> </thead> <tbody> <tr> <td>a. Misc.</td> <td>C/CPFF MIPR MIPR MIPR</td> <td></td> <td align="right">3023</td> <td align="right">1308</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td align="right">0</td> <td align="right">4331</td> <td></td> </tr> <tr> <td colspan="3"><b>Subtotal Support Costs:</b></td> <td align="right">3023</td> <td align="right">1308</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td align="right">4331</td> <td></td> </tr> </tbody> </table>													II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract	a. Misc.	C/CPFF MIPR MIPR MIPR		3023	1308						0	4331		<b>Subtotal Support Costs:</b>			3023	1308							4331	
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract																																							
a. Misc.	C/CPFF MIPR MIPR MIPR		3023	1308						0	4331																																								
<b>Subtotal Support Costs:</b>			3023	1308							4331																																								
III. Test and Evaluation: Not applicable																																																			
IV. Management Services: Not applicable																																																			
<b>Project Total Cost:</b>			3023	1308							4331																																								

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<b>ARMY RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)</b>	DATE <b>February 1999</b>
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<b>BUDGET ACTIVITY</b> <b>5 - Engineering and Manufacturing Development</b>	<b>PE NUMBER AND TITLE</b> <b>0604270A Electronic Warfare (EW) Development</b>	<b>PROJECT</b> <b>DL18</b>
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COST (In Thousands)	FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
DL18 High Value Asses Defense System	2810	0	0	0	0	0	0	0	0	25613

**A. Mission Description and Budget Item Justification** The SHORTSTOP Operational Requirements Document, approved Apr 94, called for a system with a lightweight autonomous configuration to provide protection for personnel and other high value assets against proximity fuzed munitions. The Engineering & Manufacturing Development (EMD) program for the SHORTSTOP Electronic Protection System (SEPS) provided a lightweight, fully integrated Radio Frequency Countermeasure system in three configurations: a manpack system, a stand alone system, and a vehicle mounted system.

**FY 1998 Planned Program:**

- 120 Complete development of 1553 instrumentation data interface
- 885 Develop Low-Profile Rigid Antenna
- 642 Conduct threat assessment and develop simulation
- 929 Develop countermeasure techniques
- 234 Conduct live fire testing

Total 2810

**FY 1999 Planned Program:** Project not funded in FY 1999

**FY 2000 Planned Program:** Project not funded in FY 2000

**FY 2001 Planned Program:** Project not funded in FY 2001

<b>B. <u>Other Program Funding Summary</u></b>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>To</u>	<u>Total</u>
<b>Other Procurement Army</b>									<u>Compl</u>	<u>Cost</u>
SSN: VA8000-Shortstop	5780	9973								20753

**C. Acquisition Strategy:** FY98 funding will develop additional capabilities which may be incorporated into SEPS.

<b>ARMY RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)</b>	DATE <b>February 1999</b>
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BUDGET ACTIVITY <b>5 - Engineering and Manufacturing Development</b>	PE NUMBER AND TITLE <b>0604270A Electronic Warfare (EW) Development</b>	PROJECT <b>DL18</b>
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<b>D. Schedule Profile</b>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2004</u>	<u>FY 2005</u>
Complete 1553 interface development		2Q							
Complete development of Threat Assessment/Simulation		3Q							
Complete development of Low-Profile Rigid Antenna		3Q							
Complete development of countermeasure techniques		3Q							
Conduct Testing		4Q							

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<b>ARMY RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)</b>	DATE <b>February 1999</b>
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<b>BUDGET ACTIVITY</b> <b>5 - Engineering and Manufacturing Development</b>	<b>PE NUMBER AND TITLE</b> <b>0604270A Electronic Warfare (EW) Development</b>	<b>PROJECT</b> <b>DL20</b>
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COST (In Thousands)	FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
DL20 Advanced Threat Infrared Countermeasures/ Common Missile Warning Systems (ATIRCM/ CMWS) Development	0	0	47424	24680	14869	16526	10174	10190	Continuing	Continuing

**A. Mission Description and Budget Item Justification:** The ATIRCM/CMWS is a U. S. Army program to develop, test and integrate defensive infrared (IR) countermeasures capabilities into existing, current generation host platforms for more effective protection against a greater number of IR guided missile threats than afforded by currently fielded IR countermeasures. The CMWS component systems is a joint U. S. Navy, U. S. Marine Corps, and U. S. Air Force program to develop, test, and integrate common missile warning on tactical aircraft and rotorcraft for IR guided missile threat warning. The ATIRCM/CMWS is the core systems of the U. S. Army's modular Suite of Integrated Infrared Countermeasures (SIIRCM). For the Army, the current IRCM configuration for the fleet helicopter consist of the AN/ALQ-144A for the AH-64 and the UH/MH-60 and the AN/ALQ-156 missile detector and M-130 flare/chaff dispenser for the CH/MH-47. The ATIRCM/CMWS will selectively replace the AN/ALQ-144A, AN/ALQ-156 or AN/AAR-47, and the M-130. For the Navy and the Air Force, no existing equivalent systems exists.

**FY 1998 Accomplishments:** Program was funded in Project D665

**FY 1999 Planned Program:** Program will be funded in Project D665

**FY 2000 Planned Program:**

- 25175 Continue EMD contract for ATIRCM/CMWS
  - 13984 Continue Development Testing for ATIRCM/CMWS
  - 1300 Complete EMD for Advanced Infrared Countermeasures Munitions (AIRCMM)
  - 600 Complete EMD for Advanced Visual Electro-optical Signature Suppression & Analysis (AVESSA)
  - 3994 Continue Support costs for ATIRCM/CMWS
  - 2371 Continue in-house and program management administration
- Total 47424

**FY 2001 Planned Program:**

- 12447 Complete EMD contract for ATIRCM/CMWS
- 5899 Initiate ATIRCM/CMWS P3I
- 1000 Initiate AVESSA P3I
- 400 Initiate AIRCMM P3I

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<b>ARMY RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)</b>								DATE <b>February 1999</b>				
<b>BUDGET ACTIVITY</b> <b>5 - Engineering and Manufacturing Development</b>					<b>PE NUMBER AND TITLE</b> <b>0604270A Electronic Warfare (EW) Development</b>			<b>PROJECT</b> <b>DL20</b>				
<p><b>FY 2001 Planned Program: (continued)</b></p> <ul style="list-style-type: none"> <li>• 700 Complete development testing for the ATIRCM/CMWS</li> <li>• 3000 Continue Support costs for ATIRCM/CMWS</li> <li>• 1234 Continue in-house and program management administration</li> </ul> <p>Total 24680</p>												
<b>B. Other Program Funding Summary</b>			<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	To <u>Compl</u>	Total <u>Cost</u>
APA, BA 4 AZ3507 ASE Infrared CM						8147	26761	69377	114196	111603	Cont	Cont
APA, BA 2 AA0722 ATIRCM Modifications						705	12121	12075	21317	31410	Cont	Cont
<p><b>C. Acquisition Strategy:</b> EMD contract competitively awarded in FY 1995 with a LRIP decision and procurement scheduled FY 2000.</p>												
<b>D. Schedule Profile</b>			<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
Continue ATIRCMWS EMD contract							1Q-4Q					
Complete ATIRCM/CMWS EMD contract								4Q				
Continue ATIRCM/CMWS development testing							1Q-4Q	4Q				
Complete ATIRCM/CMWS modeling & simulation							4Q					
Complete AVESSA EMD phase							4Q					
Complete AIRCMM EMD phase							4Q					
Continue Project Management Administration							1Q-4Q	1Q-4Q				
Initiate ATIRCM/CMWS P3I effort								1Q-4Q				
Continue ATIRCM/CMWS P3I effort									1Q-4Q	2Q-4Q	1Q-4Q	1Q-4Q
Initiate AIRCMM P3I effort								1Q-4Q				
Continue AIRCMM P3I effort									1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
Initiate AVESSA P3I effort								1Q-4Q				
Continue AVESSA P3I effort									1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q

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<b>ARMY RDT&amp;E COST ANALYSIS (R-3)</b>	DATE <b>February 1999</b>
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<b>BUDGET ACTIVITY</b> <b>5 - Engineering and Manufacturing Development</b>	<b>PE NUMBER AND TITLE</b> <b>0604270A Electronic Warfare (EW) Development</b>	<b>PROJECT</b> <b>DL20</b>
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I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Thiokol (AIRCMM)	C/CPIF	Picatinny Arsenal, NJ				1300	Jan 00	1000	Jan 01	Cont	2300	Cont
b. Thiokol (AVESSA)	C/CPIF	Picatinny Arsenal, NJ				600	Jan 00	400	Jan 01	Cont	1000	Cont
c. Sanders (ATIRCM)	C/CPAF	CECOM, NJ				25175	Dec 99	18346	Jan 01	Cont	43521	Cont
Subtotal Product Development:						27075		19746			46821	

Remark: FY99 and prior funding included on R-Forms for Project D665

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. CAS	C/FFP	AMCOM, AL				2478	Jan 00	1813	Jan 01		4291	1935
b. Matrix Support	MIPR	Various				1516	Quarterly	1187	Quarterly		2703	2703
c. Project Mgmt Support	MIPR	AMCOM, AL				2371	Quarterly	1234	Quarterly		3605	3649
Subtotal Support Costs:						6365		4234			10599	

Remark: FY99 and prior funding included on R-Forms for Project D665

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 1999 Cost	FY 1999 Award Date	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. EPG support	MIPR	Ft. Huachuca, AZ				500	Quarterly				500	85
b. TECOM support	MIPR	Various				2640	Quarterly	700	Quarterly	1000	4340	5440
c. ATTC test support	MIPR	Fort Rucker, AL				560	Quarterly				560	560
d. Sanders test support	T&M	Nashua, NH				10084	Jan 00				10084	1255
e. Neer test support	C/FFP	AMCOM, AL				200	Dec 99				200	400
Subtotal Test and Evaluation:						13984		700		1000	15684	

Remark: FY99 and prior funding included on R-Forms for Project D665

IV. Management Services: Not applicable.

Project Total Cost:						47424		24680		1000	73104	
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