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<b>ARMY RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 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>0604770A Joint Surveillance/Target Attack Radar System</b>				<b>PROJECT</b> <b>D202</b>		
<i>COST (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
D202 Army Joint STARS (TIARA)	6464	5463	11535	26871	25227	10752	16437	130	Continuing	Continuing
<p><b>A. Mission Description and Justification:</b> This is a Tactical Intelligence and Related Activities (TIARA) program. The Joint Army/Air Force program objective is to develop a radar, datalink, ground station, and airframe that will provide the capability to locate, track and classify tracked and wheeled vehicles beyond ground line-of-sight during the day, night and under most weather conditions. Radar data is distributed to ground station modules via a secure surveillance and control data link. The Army developed the initial ground components of the JSTARS under this PE/Project. The rapidly deployable Common Ground Station(CGS) is housed in a Standard Integrated Command Post Shelter (SICPS) and mounted on a High Mobility Multi-Purpose Wheeled Vehicle (HMMWV). The CGS will integrate signal, imagery, and other intelligence processing into a single ground station, resulting in enhanced battle management as well as significant cost savings. These enhancements are being implemented in a phased approach of Pre-Planned Product Improvement (P3I) initiatives and provide significant expansion of the system performance parameters. Specific enhancements include: integration of Secondary Imagery Dissemination, extended range Satellite Communications (SATCOM relay) capability, full on the move and manportable operations as well as integration/interface with other service/allied sensor systems. Commencing with the FY99 effort, the primary P3I effort will focus on modifications to the CGS interfaces and processors required to maintain interoperability with and exploit the capabilities being added to the JSTARS aircraft under the Radar Technology Improvement Program (RTIP). The RTIP radar will provide a much greater fidelity of Imagery Intelligence (IMINT) products and will provide enhanced targeting and battle management ability. The CGS architecture, to include data link and ADP processors, will require significant redesign and modifications to remain fully interoperable. The actual radar enhancements and all associated modifications to the Joint Stars air platform are fully funded within the USAF RDT&amp;E PE 060440F.</p> <p><b>FY 1998 Accomplishments:</b></p> <ul style="list-style-type: none"> <li>• 473 Conducted Interoperability Testing</li> <li>• 5991 Provided IOT&amp;E Support</li> </ul> <p>Total 6464</p> <p><b>FY 1999 Planned Program:</b></p> <ul style="list-style-type: none"> <li>• 1600 Initial CGS Data Link Enhancement required to make full connectivity with primary sensor / Tactical Control Data Link (TCDL) Planning/Design</li> <li>• 3082 Conduct IOT&amp;E Retest/Reliability Test Event and Reports</li> <li>• 656 Conduct Expanded Performance Interoperability Testing/Demonstrations</li> <li>• 125 Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Programs</li> </ul> <p>Total 5463</p>										
Project D202			<i>Page 1 of 5 Pages</i>				Exhibit R-2 (PE 0604770A)			

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**FY 2000 Planned Program:**

- 9812 Continue CGS Data Link Enhancement /Tactical Data Link (TCDL)
  - 523 Modeling and Simulation for Enhanced Radar Modes (ESAR/ISAR)
  - 350 Technical Test
  - 850 Start TCDL Planning/Integration
- Total 11535

**FY 2001 Planned Program:**

- 18478 Continue CGS Data Link Enhancement / TCDL
  - 4030 Continue CGS Interoperability/Technical Testing for Enhanced Synthetic Aperture Radar(ESAR)/Inverse Synthetic Aperture Radar(ISAR)
  - 4363 Initial TCDL Integration/Data Compression
- Total 26871

<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)	6726	5503	4010	12135
Appropriated Value	6940	5503		
Adjustments to Appropriated Value				
a. Congressional General Reductions	-214	-40		
b. SBIR / STTR	-154			
c. Omnibus or Other Above Threshold Reduction	-51			
d. Below Threshold Reprogramming	-57			
e. Rescissions				
Adjustments to Budget Years Since FY 1999 PB			7525	14736
Current Budget Submit (FY 2000/2001 PB)	6464	5463	11535	26871

Change Summary Explanation: Funding - FY 2000/2001 - Funds were realigned from OPA in accordance with revised acquisition strategy and approved Army cost position (June 1998) for CGS extended range capability associated with the Air Force RTIP development efforts.

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<b>C. <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 Compl	Total Cost
BA1080 Joint STARS (TIARA)	89276	86895	82176	57773	13510	4184	14226	26881	Cont	Cont
BS9724 Joint STARS Spares	6108	8709	6166	6224	6929	4414	0	0	Cont	Cont
1001018A NATO AGS C35	10147	2980	0	0	0	0	0	0	Cont	Cont

This Joint Program is also related to Air Force PE 060477

**D. Acquisition Strategy:** In December 1995, the JSTARS Ground Station Program awarded an eight year [basic plus seven one year options] production contract to acquire the balance of ground stations required to meet Army needs. Initial production quantities are designated Low Rate Initial Production (LRIP), and supported the March 1998 Initial Operational Test. The IOT&E Retest/Reliability Test Event and Reports, scheduled for the 2Qtr 99, will support the MSIII DAB decision in June 99. The contract also includes provisions for the design, development and test of various P3Is. Following P3I prove out, the modifications will be folded into the production contract via fixed price contract revisions. Those P3I enhancements initiated prior to the Full Production Decision (Milestone III) include Advanced Imagery Processing, Integration of Improved Data Modem (IDM) providing Army Aviation Command and Control (A2C2) interoperability and radar masking analysis tools. All P3Is will be developed and implemented in accordance with the CGS System Improvement Plan (SIP).

<b>E. <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>
Initiate CGS Data Link Enhancement/TCDL		2Q						
IOT&E Phase 3 Test		2Q						
Milestone III		3Q						
Initial P3I Technical Test		3Q						
Initial P3I Operational Assessment		4Q						
Initiate TCDL Integration			1Q					
Initial CGS Data Link Enhancement Technical Test			3Q					
Modeling And Simulation			3Q					
Interoperability/Technical Test				3Q				
Continue CGS Data Link Enhancement						1Q		
Complete CGS Data Link Enhancement							1Q	
Complete TCDL Integration							1Q	
Data Link Enhancement IOT&E							2Q	

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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>0604770A Joint Surveillance/Target Attack Radar System</b>						PROJECT <b>D202</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. DAAB07-96-C-S201	SS/CPFF	Motorola, Scottsdale, AZ	3826	276	2Q	120	2Q	0		Cont	4222	
b. DAAB07-96-C-S204	C/FP	Motorola, Scottsdale, AZ	8813	316	2Q	338	2Q	1127	2Q	Cont	10594	
c. Expanded CGS Capability RTIP	CPFF	TBD	0	1600	2Q	9766	1Q	17863	1Q	Cont	29229	
d. TCDL	CPFF	TBD	0	0		850	1Q	3463	2Q	Cont	4313	
e. SBIR/STTR				125							125	
<b>Subtotal Product Development:</b>			<b>12639</b>	<b>2317</b>		<b>11074</b>		<b>22453</b>			<b>48483</b>	
<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. CECOM	MIPR		85	87	1Q	52	1Q	250	1Q	Cont	474	
b. Miscellaneous			163	29	1Q	16	1Q	76	1Q	Cont	284	
<b>Subtotal Support Costs:</b>			<b>248</b>	<b>116</b>		<b>68</b>		<b>326</b>			<b>758</b>	
<b>III. Test and Evaluation</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. Initial Operational Test	MIPR	TEXCOM	4984	1488	1Q	0		0		Cont	6472	
b. OEC	MIPR	OEC	1163	325	1Q	0		0		Cont	1488	
c. USAF	MIPR	USAF	850	0		0		0		Cont	850	
d. Developmental Test	TBD	TBD	0	0		137	1Q	700	1Q	Cont	837	
e. Interoperability Test	MIPR	TBD	0	0		0		3042	1Q	Cont	3042	
f. Miscellaneous	MIPR	DOD	1250	0		0		0		Cont	1250	
g. DAAB07-96-C-S204	C/FP	Motorola, Scottsdale, AZ	3425	894		0		0		Cont	4319	
<b>Subtotal Test and Evaluation:</b>			<b>11672</b>	<b>2707</b>		<b>137</b>		<b>3742</b>			<b>18258</b>	

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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. Project Management			1024	323	1Q	256	1Q	350	1Q	Cont	1953	
Subtotal Management Services:			1024	323		256		350			1953	
<b>Project Total</b>			25583	5463		11535		26871			69452	

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