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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE February 1997		
BUDGET ACTIVITY 5 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604861C Theater High-Altitude Area Defense System - TMD					PROJECT 2260	
<i>COST (\$ In Thousands)</i>	FY 1996 Actual	FY 1997 Estimate	FY 1998 Estimate	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	Cost to Complete	Total Cost
2260 Theater High Altitude Area Defense	0	277,508	261,480	578,467	603,213	584,561	413,884	372,674	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Theater High Altitude Area Defense (THAAD) System Engineering and Manufacturing Development (EMD) phase will refine and mature the Demonstration/Validation (Dem/Val) system design to ensure component and system performance, producibility, and supportability. The EMD contractor will design, develop, fabricate, integrate, assemble, test, check-out, evaluate, document, deliver, and support the THAAD system.

FY 1996 (\$ in Thousands)

- \$0 N/A
- \$0 Total

FY 1997 (\$0 in Thousands)

- \$268,537 Funds are being reprogrammed to Dem/Val to support revised flight test schedule
- \$5,769 Targets: Funds are being reprogrammed to Dem/Val to support revised flight test schedule
- \$1,697 OT&E: Funds are being reprogrammed to Dem/Val to support revised flight test schedule
- \$1,505 Small Business Innovative Research
- \$277,508 Total

FY 1998 (\$ in Thousands)

- \$258,873 Award EMD contract. Begin preparation and training for the THAAD Limited User Test(LUT) for the User Operational Evaluation System (UOES). Begin software maintenance. Begin THAAD objective system design. Initiate material purchases for hardware. Continue lethality studies and algorithm development. Continue pursuing integration of THAAD Battle Management/Command, Control, Communications, Computers, Intelligence (BM/C4I) with the Project Manager (PM), Air Defense Command and Control Systems (ADCCS) to take advantage of previous Army developments of force operations software. Includes support for ADCCS to establish test requirements and cases for Computer Software Component integration and test.
- \$2,607 Targets: Continue procurement of targets to support THAAD flight tests. Maintain infrastructure to support TMD targets.
- \$261,480 Total

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<p><u>FY 1999 (\$ in Thousands)</u></p> <ul style="list-style-type: none"> - \$555,200 Begin delivery of EMD hardware (Launcher and Testbeds). Participate in Theater Critical Measurements Program (TCMP)-3 to evaluate the Radar and BM/C4I. Participate in System Integration Test (SIT)-2 exercise to evaluate system interoperability. Conduct the additional UOES tests (AUT). Continue system design engineering, lethality analysis, and algorithm development. Begin ground testing and integration of the THAAD system including UOES Radar. Conduct requirements and design reviews. - \$16,498 Targets: Continue procurement of targets to support THAAD flight tests. Maintain infrastructure to support TMD targets. - \$5,375 Lethality - Continue lethality simulation code validation, begin design/development of test hardware. - \$1,394 OT&E. Continue independent assessment of THAAD system. - \$578,467 Total <p><u>Acquisition Strategy</u></p> <p>The EMD phase contract (missile, launcher, BM/C4I, and Radar) will be a sole source award to the Dem/Val contractor team (As approved September 15, 1995 by USD(A&T)) utilizing the DoD Acquisition Streamlining approach. The contractor team for the EMD phase will become the contractor team for the Low Rate Initial Production (LRIP) and Full Rate Production (FRP) phases. A single prime contractor will have total system performance responsibility for the EMD, LRIP, and FRP.</p> <p>B. Program Change Summary (\$ in Thousands)</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="text-align: center;"><u>FY 1996</u></th> <th style="text-align: center;"><u>FY 1997</u></th> <th style="text-align: center;"><u>FY 1998</u></th> <th style="text-align: center;"><u>FY 1999</u></th> <th style="text-align: center;">Total Cost</th> </tr> </thead> <tbody> <tr> <td>Previous FY 97 President's Budget</td> <td style="text-align: center;">0</td> <td style="text-align: center;">212,798</td> <td style="text-align: center;">481,513</td> <td style="text-align: center;">534,820</td> <td style="text-align: center;">1,229,131</td> </tr> <tr> <td>Appropriated Value</td> <td></td> <td style="text-align: center;">277,798</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Adjustments to Appropriated Value:</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">a. General Reductions (FFRDC, Inflation etc.)</td> <td></td> <td style="text-align: center;">-290</td> <td></td> <td></td> <td></td> </tr> <tr> <td>FY 98/President's Budget Request</td> <td style="text-align: center;">0</td> <td style="text-align: center;">277,508</td> <td style="text-align: center;">261,480</td> <td style="text-align: center;">578,467</td> <td style="text-align: center;">1,117,455</td> </tr> </tbody> </table> <p>Change Summary Explanation:</p> <p>Funding: A request has been submitted to reprogram FY 97 EMD funds to Dem/Val. This submission reflects the realignment of FY98 and FY99 funds between Dem/Val and EMD funds.</p> <p>Schedule: The Milestone II DAB Review milestone has slipped due to longer than expected Flight 6 failure investigation and Flight 7 preparation. The Flight 6 failure investigation caused Flight 7 to move from September to December 1996. An inertial measurement unit software error, found during software verification testing of FTV-07, further delayed the flight test to late February 1997.</p>				<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	Total Cost	Previous FY 97 President's Budget	0	212,798	481,513	534,820	1,229,131	Appropriated Value		277,798				Adjustments to Appropriated Value:						a. General Reductions (FFRDC, Inflation etc.)		-290				FY 98/President's Budget Request	0	277,508	261,480	578,467	1,117,455
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<p>Technical: None</p> <p>C. <u>Other Program Funding Summary (\$ in Thousands)</u></p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th><u>FY 1996</u></th> <th><u>FY 1997</u></th> <th><u>FY 1998</u></th> <th><u>FY 1999</u></th> <th><u>FY 2000</u></th> <th><u>FY 2001</u></th> <th><u>FY 2002</u></th> <th><u>FY 2003</u></th> <th>To <u>Compl</u></th> <th>Total <u>Cost</u></th> </tr> </thead> <tbody> <tr> <td>2260, THAAD Procurement,SSN C494000*</td> <td align="right">0</td> <td align="right">0</td> <td align="right">0</td> <td align="right">0</td> <td align="right">0</td> <td align="right">*33,785</td> <td align="right">*531,725</td> <td align="right">*606,315</td> <td align="right">*Cont</td> <td align="right">*Cont</td> </tr> <tr> <td>2260, THAAD MILCON, PE 0604861C</td> <td align="right">13,104</td> <td align="right">0</td> <td align="right">4,565</td> <td align="right">0</td> <td align="right">0</td> <td align="right">0</td> <td align="right">0</td> <td align="right">4,994</td> <td align="right">Cont</td> <td align="right">Cont</td> </tr> <tr> <td>2260, THAAD Dem/Val, PE 0603861C</td> <td align="right">565,818</td> <td align="right">341,307</td> <td align="right">294,647</td> <td align="right">16,778</td> <td align="right">0</td> <td align="right">0</td> <td align="right">0</td> <td align="right">0</td> <td align="right">0</td> <td align="right">1,215,634</td> </tr> </tbody> </table> <p>* IN ARMY TOA</p> <p>D. <u>Schedule Profile</u></p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th colspan="3"><u>FY 1996</u></th> <th colspan="3"><u>FY 1997</u></th> <th colspan="3"><u>FY 1998</u></th> <th colspan="3"><u>FY 1999</u></th> </tr> <tr> <th></th> <th>1</th><th>2</th><th>3</th> <th>4</th><th>1</th><th>2</th><th>3</th> <th>4</th><th>1</th><th>2</th><th>3</th> <th>4</th> </tr> </thead> <tbody> <tr> <td>EMD Contract Award</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td> </tr> <tr> <td>Limited User Test</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td> </tr> <tr> <td>Additional UOES Test</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td></td> </tr> </tbody> </table>										<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>	To <u>Compl</u>	Total <u>Cost</u>	2260, THAAD Procurement,SSN C494000*	0	0	0	0	0	*33,785	*531,725	*606,315	*Cont	*Cont	2260, THAAD MILCON, PE 0604861C	13,104	0	4,565	0	0	0	0	4,994	Cont	Cont	2260, THAAD Dem/Val, PE 0603861C	565,818	341,307	294,647	16,778	0	0	0	0	0	1,215,634		<u>FY 1996</u>			<u>FY 1997</u>			<u>FY 1998</u>			<u>FY 1999</u>				1	2	3	4	1	2	3	4	1	2	3	4	EMD Contract Award														Limited User Test														Additional UOES Test													
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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 1997				
BUDGET ACTIVITY				PE NUMBER AND TITLE			PROJECT				
5 - Engineering and Manufacturing Development				0604861C Theater High-Altitude Area Defense System - TMD			2260				
A. <u>Project Cost Breakdown (\$ in Thousands)</u>											
	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>							
a. Prime Contract	0	268,537	224,173	425,200							
b. Other Government Activities	0	0	8,100	55,600							
c. Support Contracts	0	0	26,600	51,900							
d. Program Management	0	0	0	22,500							
e. Targets	0	5,769	2,607	16,498							
f. Lethality	0	0	0	5,375							
g. OT&E	0	1,697	0	1,394							
h. Small Business and Innovative Research	0	1,505	0	0							
Total		277,508	261,480	578,467							
B. <u>Budget Acquisition History and Planning Information (\$ in Thousands)</u>											
Performing Organizations:											
Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY 1996	Budget FY 1996	Budget FY 1997	Budget FY 1998	Budget FY 1999	Budget to Complete	Total Program
<u>Product Development Organizations</u>											
LMMS	CPFF/SS	Feb 97			0	0	249,600	224,173	425,200	0	898,973
RAYTHEON	CPIF/CPAF	Feb 97			0	0	18,937	0	0	0	18,937
<u>Support and Management Organizations</u>											
SETA	C/CPAF	April 98			0	0	0	11,050	22,500		33,550
Other Spt Cont	Various	Multiple			0	0	0	15,550	29,400		44,950
OGAs	MIPR	Multiple			0	0	0	8,100	53,300		61,400
SBIR					0	0	1,505	0	0		1,505
<u>Test and Evaluation Organizations</u>											
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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)										DATE	
BUDGET ACTIVITY										PROJECT	
5 - Engineering and Manufacturing Development					0604861C Theater High-Altitude Area Defense System - TMD					2260	
Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY 1996	Budget FY 1996	Budget FY 1997	Budget FY 1998	Budget FY 1999	Budget to Complete	Total Program
WSMR/USAKA	MIPR	April 98			0	0	0	0	24,800		24,800
OT&E					0	0	1,697	0	1,394		3,091
Targets					0	0	5,769	2,607	16,498		24,874
Lethality					0	0	0	0	5,375		5,375
B. Budget Acquisition History and Planning Information Continued (\$ in Thousands)											
Government Furnished Property:											
Item Description	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Delivery Date		Total Prior to FY 1996	Budget FY 1996	Budget FY 1997	Budget FY 1998	Budget FY 1999	Budget to Complete	Total Program
<u>Product Development Property</u>											
N/A					0	0	0	0	0	0	
<u>Support and Management Property</u>											
N/A					0	0	0	0	0	0	
<u>Test and Evaluation Property</u>											
N/A					0	0	0	0	0	0	
Subtotal Product Development							268,537	224,173	425,200		917,910
Subtotal Support and Management								1,505	34,700	105,200	141,405
Subtotal Test and Evaluation								7,466	2,607	48,067	58,140
Total Project								277,508	261,480	578,467	1,117,455
Project 2260											
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