

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE February 1997		
BUDGET ACTIVITY 4 - Demonstration and Validation				PE NUMBER AND TITLE 0603870C Boost Phase Intercept Theater Missile					PROJECT 1294	
				Defense Concept Development						
<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
1294 UAV Boost Phase Intercept	0	23,276	12,885	0	0	0	0	0	TBD	TBD
A. <u>Mission Description and Budget Item Justification</u>										
<p>The UAV-Based Boost Phase Intercept (BPI) project covers two tasks; Task 1: Israeli Boost Phase Intercept System (IBIS) Risk Mitigation, and Task 2: Cooperative UAV-Based BPI Concepts. Task 1 is a cooperative U.S./Government of Israel (GOI) BPI program which involves further development and refinement (risk mitigation) of the UAV-based BPI concept which destroys tactical ballistic missiles in the boost phase of flight, before engine cutoff, preferably while in enemy territory. This project is based on the use of Unmanned Aerial Vehicles (UAV) armed with on-board interceptors to provide the means of destroying enemy missiles in their boosting phase of flight. Task 1 efforts will be performed in Israel and will focus on key elements of the IBIS concept. Task 2 of this cooperative effort will be performed in the U.S. and will support and expand key elements of the IBIS concept. It will include developing the UAV-based BPI system requirements for scenarios of operation and employment in support of U.S. expeditionary forces. The requirements will address kinetic energy interceptors, UAVs, search and track sensors, Battle Management, Command, Control, Communications, Computers and Intelligence (BMC4I), and the concept of operations (CONOPS) based on readily available U.S. technologies.</p> <p>Along with attack operations, the BPI concept is a means of destroying hostile ballistic missiles in enemy territory. UAVs armed with interceptors show significant near term promise. Previous cooperative investigations of the UAV-based BPI concept and a recent Air Force Airborne Laser (ABL) Analysis of Alternatives (AoA) study concluded that such a BPI system could be very cost effective and complementary to terminal missile defense systems.</p> <p><u>FY 1996 (\$ in Thousands)</u></p> <ul style="list-style-type: none"> - \$0 Covered under PE0603872C. - \$0 Total <p><u>FY 1997 (\$ in Thousands)</u></p> <ul style="list-style-type: none"> - \$16,000 Initiate risk mitigation activities with the GOI. Emphasize development of key lightweight interceptor seeker and control system technologies, search and track algorithms, fire control algorithms, and simulation of BMC4I technologies. - \$2,000 Validate UAV-based BPI system performance parameters through simulations and wargaming. - \$5,276 Analyze technical issues including survivability, interceptor effectiveness, and lethality. - \$23,276 Total 										
Project 1294			Page 1 of 5 Pages				Exhibit R-2 (PE 0603870C)			

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)

DATE
February 1997

BUDGET ACTIVITY 4 - Demonstration and Validation	PE NUMBER AND TITLE 0603870C Boost Phase Intercept Theater Missile Defense Concept Development	PROJECT 1294
--	--	------------------------

FY 1998 (\$ in Thousands)

- \$4,000 Demonstrate a prototype search, launch detection, tracking and discrimination capability.
- \$3,885 Demonstrate, via simulation, key UAV performance and command and control parameters. Further refine interceptor design.
- \$5,000 Develop a proof-of-concept demonstration plan.
- \$12,885 Total

FY 1999 (\$ in Thousands)

- \$0 Project continuation decision expected in Fiscal Year 1998.
- \$0 Total

Acquisition Strategy This program is a “hedge” for the ABL program. Conduct cooperative activities in the U.S. and Israel to mitigate risk of developing UAV-based BPI systems. The GOI will take the lead on risk mitigation of the interceptor while the U.S. will lead for the Infrared Search and Track (IRST) sensor activities in other system elements, such as BMC4I and system integration will be shared. The US and GOI will share costs. Task 1 is being done under a firm fixed price contract with Israeli industry. Task 2 is being accomplished by BMDØri-Service Integrated Product Teams (IPT) with additional support provided by industry.

B. Program Change Summary (\$ in Thousands)

	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>Total Cost</u>
Previous President’s Budget	0	0	0	0	28,438
Appropriated Value		24,300			
Adjustments to Appropriated Value:					
a. MEADS below threshold reprogramming		-999			
b. General Reductions (FFRDC, Inflation etc.)		-25			
Current Budget Submit/President’s Budget	0	23,276	12,885	0	36,161

Change Summary Explanation:

Funding: Project funding, structure, and objective directed by Congress.
 Schedule: None
 Technical: None

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 1997
BUDGET ACTIVITY 4 - Demonstration and Validation	PE NUMBER AND TITLE 0603870C Boost Phase Intercept Theater Missile Defense Concept Development	PROJECT 1294

C. Other Program Funding Summary (\$ in Thousands)

	<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>To</u> <u>Compl</u>	<u>Total</u> <u>Cost</u>
1294 UAV BPI, PE0603872C	5,705	930							TBD	TBD

D. Schedule Profile

	<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 1999</u>
	1	2	3	4	1	2	3	4	1
		2	3		2	3		2	3
Complete IBIS Follow-On Report		X							
Preliminary US UAV BPI Requirements				X					
Contract Milestone (Israeli) Risk Mitigation					X				
IBIS Risk Mitigation Final Report								X	

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 1997					
BUDGET ACTIVITY 4 - Demonstration and Validation				PE NUMBER AND TITLE 0603870C Boost Phase Intercept Theater Missile				PROJECT 1294				
Defense Concept Development												
A. <u>Project Cost Breakdown (\$ in Thousands)</u>												
					<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>				
Task 1 - IBIS Risk Mitigation				See PE0603872C	17,976	7,615	0					
Task 2 - Cooperative UAV-based BPI Concepts				See PE0603872C	5,300	5,270	0					
Total					23,276	12,885						
B. <u>Budget Acquisition History and Planning Information (\$ in Thousands)</u>												
Performing Organizations:												
<u>Contractor or</u>	<u>Contract</u>											
<u>Government</u>	<u>Method/Type</u>	<u>Award or</u>	<u>Performing</u>	<u>Project</u>	<u>Total</u>							
<u>Performing</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Activity</u>	<u>Office</u>	<u>Prior to</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>	
<u>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	<u>FY 1996</u>	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>Complete</u>	<u>Program</u>	
<u>Product Development Organizations</u>												
Israeli MOD	FFP	Jun 97		FY97/98	FY97/98	7,527	0	17,976	7,615	0	TBD	33,118
SMC	MIPR	FY96		0	0	N/A	1,350	0	0	0	TBD	1,350
Navy PEO TAD	MIPR	FY97		300	300	N/A	2,025	800	720	0	TBD	3,545
NAWC-CL	MIPR	FY97		2,750	2,750	N/A	466	2,750	3,050	0	TBD	6,266
DARPA	MIPR	FY96		0	0	N/A	650	0	0	0	TBD	650
<u>Support and Management Organizations</u>												
WJ Schaefer Assoc	CPFF	FY97		0	0	N/A	1,171	1,250	1,000	0	TBD	3,421
SSDC	MIPR	FY96		0	0	N/A	25	0	0	0	TBD	25
SMC	MIPR	FY97		250	250	N/A	0	250	250	0		500
Navy PEO TAD	MIPR	FY97		250	250	N/A	0	250	250	0		500
<u>Test and Evaluation Organizations</u>												
None												
Project 1294												

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 1997				
BUDGET ACTIVITY 4 - Demonstration and Validation				PE NUMBER AND TITLE 0603870C Boost Phase Intercept Theater Missile Defense Concept Development				PROJECT 1294			
B. Budget Acquisition History and Planning Information Continued (\$ in Thousands)											
Government Furnished Property:											
<u>Item Description</u>	<u>Contract Method/Type or Funding Vehicle</u>	<u>Award or Obligation Date</u>	<u>Delivery Date</u>	<u>Total Prior to FY 1996</u>	<u>Budget FY 1996</u>	<u>Budget FY 1997</u>	<u>Budget FY 1998</u>	<u>Budget FY 1999</u>	<u>Budget to Complete</u>	<u>Total Program</u>	
<u>Product Development Property</u>											
<u>Support and Management Property</u>											
BMDO	PR	FY96			18					18	
<u>Test and Evaluation Property</u>											
Subtotal Product Development				7,527	4,491	21,526	11,385			44,929	
Subtotal Support and Management					1,214	1,750	1,500			4,464	
Subtotal Test and Evaluation											
Total Project				7,527	5,705	23,276	12,885			49,393	
Project 1294				Page 5 of 5 Pages				Exhibit R-3 (PE 0603870C)			