

UNCLASSIFIED

BMDO RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)	DATE February 2000
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BUDGET ACTIVITY 4 - Demonstration and Validation	PE NUMBER AND TITLE 0603870C Boost Phase Intercept - D/V	PROJECT 1294
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COST (In Thousands)	FY1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
1294 UAV Boost Phase Interceptor	6335	4961	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

The Unmanned Aerial Vehicle (UAV)- Boost Phase Intercept (BPI) project is a continuation of two tasks: Task 1 Israeli Boost Phase Intercept System (IBIS) Risk Mitigation and Boost Phase Launcher Intercept (BPLI) concept development; and Task 2 cooperative UAV-based BPI and BPLI Concepts. Task 1 is a cooperative U.S./Government of Israel (GOI) BPI program which involves further refinement (risk mitigation) of the UAV-based BPI concept which destroys tactical ballistic missiles in the boost phase of flight and an evaluation of a BPLI concept which destroys the Transporter-Erector Launcher (TEL) shortly after launch. Task 1 efforts are performed in Israel and focus on risk reduction on key elements of the Israeli Boost Phase Intercept System (IBIS) concept and concept development and evaluation of a BPLI system. Task 2 of this cooperative effort is performed in the U.S. and will support and expand key elements of both concepts. It includes developing the UAV-based BPI and BPLI system requirements for scenarios of operation and employment in support of U.S. expeditionary forces. The requirements will address development of search and track sensors, Battle Management, Command, Control, Communications, Computers and Intelligence (BMC4I) and a Concept of Operations (CONOPS) based on readily available U.S. technologies. Task 2 will leverage Service capabilities by addressing issues outlined in the BMDO Technology Master Plan (TMP).

The BPI and BPLI concept defines a means of destroying hostile ballistic missiles over enemy territory. UAVs armed with interceptors show significant near term promise. Previous cooperative investigations of the UAV-based BPI concept and the recent Air Force Airborne Laser (ABL) Analysis of Alternatives (AoA) study (May 97) concluded that such a BPI system could be cost effective and complementary to terminal missile defense systems. Current studies are evaluating the effectiveness of the BPLI concept to determine its cost effectiveness in complementing BPI and terminal defenses.

The BPI program is also a risk mitigation effort for the ABL program and could provide complementary support to ABL. The program uses cooperative activities in the U.S. and Israel to mitigate risk of developing UAV-based BPI systems. The GOI is lead on the BPLI concept and the lead on the risk mitigation of the unmanned aerial vehicle (UAV) platform and interceptor while the U.S. is lead on the Infrared Search and Track (IRST) activities. The Battle Management and Control (BMC) and system engineering and integration responsibilities are shared. The U.S. and GOI share costs on a 75/25 percent ratio for Task 1, Task 2 is being accomplished by BMDO/Service Integrated Product Teams (IPT) and Industry.

FY 1999 Accomplishments

- 3700 Completed the IBIS Risk Mitigation Effort. Initiated a 7-month concept development effort for the Boost Phase Launcher Intercept (BPLI) concept.
 - 2296 Analyzed the IBIS system survivability. Evaluated contribution of UAV system in a complementary role to ABL. Evaluated the use of the Global Hawk as a possible platform for the concepts.
 - 339 Completed development of the IRST hardware. Initiating flight testing of the IRST.
- Total 6335

FY 2000 Planned Program:

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- 2500 Continue evaluation/refinement of Israeli BPI concepts in the areas of IR sensor development and command and control.
 - 2461 Initiate flight testing of Raytheon developed IRST. Prepare an evaluation of Israeli BPI/BPLI concepts and provide a report to Congress.
- Total 4961

FY 2001 Planned Program:

- 0
- Total 0

B. Program Change Summary	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
Previous President's Budget (FY 2000_PB)		6426	0	0
Congressional Adjustments			+5000	
Appropriated Value			5000	
Adjustments to Appropriated Value				
a. Congressional Reductions				
b. OSD Reductions (FFRDC, Inflation, etc)			-146	
c. Emergency Supplemental				
d. Internal Reprogramming			107	
Adjustments to Budget Years Since FY 2000_PB		-91	+4961	
Current Budget Submit (FY 2001_PB)		6335	4961	0

Change Summary Explanation: Changes due to FY99 and FY00 appropriations and subsequent OSD reductions.

C. Other Program Funding Summary	<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

D. Acquisition Strategy: UAV BPI/BPLI Program is accomplished through cooperative US/GOI efforts. Efforts utilize combination of BMDO, Service, GOI, and industry to accomplish requirements and concept development.

E. Schedule Profile	<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>

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IBIS risk Mitigation Contract (HQ 0006-97-C0010) +Extension		2Q					
BPLI Concept Study (HQ 0006-97-C0010)+ext.	4Q	3Q					
IRST contract (Raytheon)							
-IRST hardware development complete	4Q						
-IRST flight testing		3Q					

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BMDO RDT&E COST ANALYSIS (R-3)

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I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Israeli MOD	FFP	Israel	31403	2779				TBD	34182	
b. ONR/NAWC-CL	MIPR	Texas,CA, Michigan	7945	300				TBD	8245	
c. Engine /Simulations	MIPR	Air Force	302	300				TBD	602	
d.										
e.										
Subtotal Product Development:			39650	3379					43029	

Remark:

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. ANSER	CPFF	Washington D.C.	3315	1582				TBD	4897	
b.										
c.										
Subtotal Support Costs:			3315	1582					4897	

Remark:

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Test Resources	MIPR	USAF/WL/M	80					TBD	80	
b.										
c.										
Subtotal Test and Evaluation:			80						80	

Remark:

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IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. N/A										
b.										
c.										
Subtotal Management Services:										

Remarks:

Project Total Cost:			43045	4961					48006	
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Remark: