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Exhibit R-2, RDT&E Budget Item Justification									DATE FEBRUARY 1999	
APPROPRIATION/BUDGET ACTIVITY RDT&E,DW/BA 4					R-1 ITEM NOMENCLATURE Program Element (PE) Name and No. ADVANCED SENSOR APPLICATIONS PROGRAM PE 0603714D8Z					
COST(\$In Millions)	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	Cost to Complete	Total Cost
Total PE Cost	14.279	17.918	15.345	15.646	15.814	16.143	16.481	16.828	Continuing	Continuing
Project Name/No. and Subtotal Cost ASAP/P714	14.279	17.918	15.345	15.646	15.814	16.143	16.481	16.828	Continuing	Continuing
Quantity of RDT&E Articles	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		

A. Mission Description and Budget Item Justification

Brief Description of Element: The program focuses on continued development of domestic and foreign non-acoustic technology that has demonstrated potential for improvements in U.S. capabilities. Through joint international programs, unique and innovative approaches and technologies to expanding the performance envelopes of existing systems are examined for potential enhancements to U.S. abilities to detect and locate potential threats to U.S. National Security. **This program supports military and intelligence requirements identified in Joint Vision 2010, the Defense Science and Technology Strategy, Full Spectrum Dominance and the Joint Warfighting Capability Objectives.**

In FY 1998, Congress added funding for the High Frequency Active Auroral Research Program (HAARP). This program examines the utility of the ionospheric modification facility developed under HAARP for military, intelligence, counterproliferation, counterterrorism and counternarcotics missions. This program supports military and

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intelligence requirements identified in the Joint Vision 2010, Defense Science and Technology Strategy, Full Spectrum Dominance and the Joint Warfighting Capability Objectives.

Program Accomplishments and Plans:

FY 1998 Accomplishments:

- Defined specific environmental parameters relevant to littoral and open ocean defense priorities (5.500 Million)
- Completed procurement of testbed hardware to be tested first quarter FY 2000 (3.400 Million)
- Completed joint evaluation of technology and moved understanding of radar scattering into phase II (4.119 Million)
- Completed refurbishment of on-board strategic array and computer programming upgrade (1.000 Million)
- Assisted in defining conventional signal generation and system propagation (0.260 Million)

FY 1999 Plans:

- Continue data collections for environmental applications relevant to military/intelligence applications (5.500 Million)
- Begin data collections with new system to evaluate mechanisms at low angles(4.618 Million)
- Complete testbed and bench testing in preparation for full scale evaluation(3.400 Million)

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- Transition the sensor project to acquisition (1.000 Million)
- Collect and evaluate data (0.400 Million)
- Initiate exploration and demonstrate potential for high priority military applications for HAARP (2.000 Million)
- Assess initial capabilities of Stochastic Resonance Technology (1.000 Million)

FY 2000 Plans:

- Define specific sensor parameters relevant to environmental technologies(5.700 Million)
- Continue data collections with system to evaluate false alarm statistics(4.745 Million)
- Establish requirements for foreign cooperative technology evaluation projects(2.000 Million)
- Complete performance evaluation for military and intelligence applications(1.900 Million)
- Define performance characteristics(1.000 Million)

FY 2001 Plans:

- Complete systems evaluation of environmental technologies for Defense applications (4.500 Million)
- Continue data collections and evaluation for modeling validation for sensor systems, expand applications(4.846 Million)
- Define priorities for foreign technology evaluations and establish test program(3.200 Million)
- Establish false alarm rates for final systems and define detailed performance envelopes (1.400 Million)

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- Continue definition of space-based system requirements and capabilities for systems (1.700 Million)

B. <u>Program Change Summary</u>	<u>FY1998</u>	<u>FY1999</u>	<u>FY2000</u>	<u>FY2001</u>	Total Cost
Previous President's Budget	17.655	15.147	15.602	15.928	Continuing
a. Congressional Add		+3.000			
Appropriated Value	17.655	18.147	15.602	15.928	
Adjustments to Appropriated Value					
a. DoD Internal Reprogramming	-3.000				
b. Undistributed Congressional Reduction	-.069				
c. OSD Adjustments	-.307				
d. Inflation Adjustment		-.229	-.257	-.282	
Amended Budget Estimate	14.279	17.918	15.345	15.646	Continuing

Change Summary Explanation: N/A

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C. Other Program Funding Summary: None

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Exhibit R2a RDT&E Project Justification									DATE FEBRUARY 1999	
APPROPRIATION/BUDGET ACTIVITY RDT&E,DW/BA 4					R-1 ITEM NOMENCLATURE Program Element (PE) Name and No. ADVANCED SENSOR APPLICATIONS PROGRAM PE 0603714D8Z					
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RDT&E Articles Qty										

A. Mission Description and Budget Item Justification:

The program focuses on continued development of domestic and foreign non-acoustic technology that has demonstrated potential for improvements in U.S. capabilities. Through joint international programs, unique and innovative approaches and technologies to expanding the performance envelopes of existing systems are examined for potential enhancements to U.S. abilities to detect and locate potential threats to U.S. National Security. **This program supports military and intelligence requirements identified in Joint Vision 2010, the Defense Science and Technology Strategy, Full Spectrum Dominance and the Joint Warfighting Capability Objectives.**

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B. Other Program Funding Summary: N/A

C. Acquisition Strategy:

The program plans to continue the support of major contractors through ISSO contracting office. As activities transfer to the Office of Special Technology, contracts supporting those efforts will transfer with them. As required by the DFAR and DoD acquisition reform policies, all initiatives will meet appropriate regulations and requirements. The acquisition strategy is reviewed bi-annually to identify possible improvements in customer support and enhancements to program efficiency.

D. Schedule Profile:

Fiscal Year actual and planned events by quarter:

- Define parameters 2QFY98
- Define priority military/intelligence activities for HAARP 4QFY98
- Complete procurement of hardware 4QFY98
- Define priority military/intelligence activities for HAARP 4QFY98
- Initiate U.S. activities 1QFY99
- Transition joint activities 1QFY99
- Complete refurbished array 2QFY99
- Begin exploration and demonstration of HAARP Capabilities 1QFY99
- Assess initial capabilities of Stochastic Resonance for Defense/intelligence applications 1QFY99
- Continue data collections for environmental activities 3QFY99
- Data collection with new system 3QFY99
- Complete testbed 4QFY99
- Transition array activities 4QFY99
- Define parameters 1QFY00
- Continue joint data collections 2QFY00

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- Define requirements for foreign cooperative evaluations 2QFY00
- Complete evaluation 3QFY00
- Define system parameters 4QFY00
- Complete sensor system evaluation technology 4QFY00
- Define environmental parameters 1QFY01
- Continue data collections for applications 2QFY01
- Continue evaluations for foreign cooperative technology tests 3QFY01
- Establish false alarm statistics for operational concepts 3QFY01
- Evaluate space-based benefits for applications 4QFY01
- Continue data collections for model validation 1QFY02
- Continue evaluation of foreign technology for military/intelligence Applications 1QFY02
- Establish baseline technology capabilities for critical military Requirements 2QFY02
- Define vulnerabilities 3QFY02
- Evaluate system enhancements for upgrades to foreign technologies 4QFY02
- Evaluate foreign technology capability 4QFY02
- Continue data collections to verify technology capabilities 1QFY03
- Collect data for model validation and verification 2QFY03
- Define vulnerabilities 3QFY03
- Evaluate mechanisms for detection under all environmental conditions 4QFY03
- Establish system performance parameters 1QFY04
- Collect data on sensors for false alarm and enhanced performance evaluations for foreign technologies 2QFY04
- Verify models for enhanced system performance 3QFY04
- Validate models and theory for technology capabilities 4QFY04
- Define new processing techniques for enhanced system capability 4QFY04

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Exhibit R-3, Project Cost Analysis

Exhibit R-3 Cost Analysis (page 2)								Date: February 1999				
APPROPRIATION/BUDGET ACTIVITY RDT&E,DW/BA 4			PROGRAM ELEMENT PE0603714D8Z				PROJECT NAME AND NUMBER ASAP/P714					
Cost Categories (Tailor to WBS, or System /Item Requirements)	Contract Method & Type	Performing Activity Location	Total PYS Cost	CY Cost	CY Award Date	BY1 Cost	BY1 Award Date	BY2 Cost	BY2 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Development Test & Evaluation	Multiple	Various	49.098	5.177	4/99	5.578	4/00	5.686	4/01	Con't	Con't	
Operational Test & Evaluation												
Tooling												
GFE												
Subtotal T&E			49.098	5.177		5.578		5.686				
Remarks												
Contractor Engineering Support	multiple	Various	28.398	6.179	4/99	3.411	4/00	3.481	4/01	Con't	Con't	
Government Engineering Support	Multiple	Various	53.495	5.457	4/99	5.882	4/00	5.374	4/01	Con't	Con't	
Program Management Support												
Program Management Personnel												
Travel			1.304	.005	4/99	.005	4/00	.005	4/01	Con't.	Con't	
Labor (Research Personnel)												
Overhead	multiple	Various	11.491	1.100	4/99	.469	4/00	1.100	4/01	Con't	Con't	
Subtotal Management			94.688	12.741		9.767		9.960				
Remarks												

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