EXHIBIT R-2, RDT&E Budget Item Justification							DATE: JUNE 2001			
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY BA-4**					R-1 ITEM NOMENCLATURE **0603879N SINGLE INTEGRATED AIR PICTURE (SIAP) SYS ENG**					
COST ($ in Millions)	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2006	Cost to Complete	Total Cost
Total PE Cost	**0.000**	**20.000**	**43.140**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**

A. (U) Mission Description and Budget Item Justification

A Single Integrated Air Picture (SIAP) is the product of fused, near-real-time and real-time data from multiple sensors to allow development of common, continuous, and unambiguous tracks of all airborne objects in the surveillance area. All airborne objects must be detected, tracked, and reported. Each object must have one and only one track identifier and associated characteristics to be incorporated into a single combat identification process. Current systems do not provide this capability. The SIAP System Engineering (SE) Task Force was approved by the Joint Requirements Oversight Council (JROC) in March 2000, and chartered in October 2000 by the Under Secretary of Defense to perform "the system engineering needed to fix problems in the existing Joint Data Network (JDN) and to guide development toward a future SIAP capability." This PE is funded by all the services and controlled by SIAP Acquisition Executive.

The SIAP Task Force will develop the tools and processes and perform the system engineering that will identify cost effective fixes to Tactical data link systems. The resulting prioritized list of fixes will be addressed in incremental blocks designed to improve the SIAP. Each Block will identify specific changes to be implemented in specific systems to improve the Joint Theater Air and Missile Defense Family of Systems SIAP capability. These changes will identify the engineering specifications, supporting rationale (test results and analysis), and acquisition estimate expected to implement the changes. Once approved by the JROC, implementation of these recommended changes is the responsibility of the affected Service programs.

• Block 0 addresses four joint warfighting shortfalls selected for their impact on the JDN, their applicability across the Services, and the engineering maturity reflected by interface change proposals already on-record with the Joint Interoperability for Tactical Command and Control system process. Block 0 provides the catalyst for prototyping the SIAP system engineering processes that will be developed and used to address these change proposals. The change proposals that will be addressed are: improved Correlelation/Decorrelation, Formation Tracking/Correlation, Identification taxonomy and symbology, and an ID conflict resolution matrix.

• Block 1 will address a prioritized subset of JDN deficiencies determined by the SIAP SE Task Force and United States Joint Forces Command to provide the greatest operational benefit to the warfighter which can be implemented in the near- to mid-term.

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A. (u) Mission Description and Budget item justification (cont.)

SIAP RDT&E Budget ($M)

		FY00	FY01	FY02
Block 0				
	Reqts Analysis	**-**	**$1.250**	**$0.150**
	Functional Analysis	**-**	**$10.900**	**$0.300**
	Acquisition Assessment	**-**	**$1.350**	**$0.400**
	SIAP Architecture	**-**	**$0.350**	**$0.050**
	Program Mgt	**-**	**$2.700**	**$0.100**
	Engineering Controls	**-**	**$1.050**	**$0.200**
	Total	**$0.000**	**$17.600**	**$1.200**
Block 1				
	Reqts Analysis	**-**	**$0.175**	**$3.025**
	Functional Analysis	**-**	**$1.730**	**$25.610**
	Acquisition Assessment	**-**	**$0.175**	**$3.225**
	SIAP Architecture	**-**	**$0.070**	**$1.330**
	Program Mgt	**-**	**$0.100**	**$5.900**
	Engineering Controls	**-**	**$0.150**	**$2.850**
	Total	**$0.000**	**$2.400**	**$41.940**

PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY2001 PLAN ($20.0M)

This effort will recommend Joint Data Network fixes to improve the JTAMD Fos SIAP performance and lay the groundwork for engineering concepts needed to support the 2010 Integrated Architecture.

Key Events include:

- Modifying evaluation tools and infrastructure to support a disciplined system engineering process in support of Block 0.

identify the specific changes to be implemented in specific systems to improve the JTAMD FoS SIAP capability. This will include engineering specifications, supporting rationale, and acquisition cost/schedule estimates.

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Other FY 2001 activity includes:

- June 2001 delivery of a set of initial operational, technical and performance Measures of Effectiveness/Measures of Performance that will objectively assess SIAP capacity and capability.

- July 2001 delivery of a SIAP Lessons Learned Database that consolidates and leverages previous related activities, exercises, and real world operations.

- July 2001 delivery of a Prioritized Block Improvement list that establishes the criteria and prioritizes proposed JDN fixes based on estimated cost, schedule, and contribution to the air picture. This list will be divided into blocks to facilitate detailed engineering and recommend solutions for implementation.

- Capability and Limitations Document: development begins in FY 2001, with a scheduled delivery in December 01. This will document SIAP related capabilities and limitations of the Joint Theater Air and Missile Defense Family of Systems (JTAMD FoS). It will provide a tool for the warfighter to extract the highest level of SIAP performance possible from the existing Theater Air and Missile Defense architecture and will serve as a tool for the Joint Interface Control Officer.

- System Engineering Management Plan: Development of the SEMP begins in FY 2001, with a scheduled delivery in Dec 2001. The SEMP provides a uniform framework for controlling all SIAP products.

- Work also begins on the SIAP Normative Baseline, SIAP Roadmap, and the SIAP Component of the Theater Air Missile Defense 2010 Integrated Architecture, which all have scheduled deliveries in December 2002.

- Block 1 Improvement Plan: Development of the Block 1 Improvement Plan begins in FY 2001, with a scheduled delivery to the JROC in December 2002. This plan will identify the specific changes to be implemented in specific systems to improve the JTAMD FoS SIAP capability. This will include engineering specifications, supporting rationale, and acquisition cost/schedule estimates.

Once approved by the JROC, implementation of these recommended changes is the responsibility of the affected Services.

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2. (U) FY2002 PLAN ($43.140M)

This effort will recommend Joint Data Network enhancements to improve the JTAMD FoS SIAP performance and lay the groundwork for engineering concepts needed to support the 2010 Integrated Architecture. Specific products will include a prioritized list of fixes that will provide the most "bang for the buck"; a set of metrics to define the completeness, continuity, and accuracy of target tracks; and a description of the systems used by the services and the capabilities and limitations of those systems in providing a Single Integrated Air Picture.

Key Events include:

- Focus on JDN enhancements to improve the JTAMD FoS SIAP performance, resulting in the delivery of Block 1.

- Block 1 Improvement Plan: Development of the Block 1 Improvement Plan continues in FY 2002, with a scheduled delivery to the JROC in December 02. This plan will identify the specific changes to be implemented in specific systems to improve the JTAMD FoS SIAP capability. This will include engineering specifications, supporting rationale, and acquisition estimates/costs.

Other FY 2002 activities include:

- December 2001 delivery of Block 0 Improvement Plan to the JROC. This plan will identify the specific changes to be implemented in specific systems to achieve specific improvements to the JTAMD FoS SIAP capability. This will include engineering specifications, supporting rationale, and acquisition estimates/costs.

- December 2001 delivery of Capability and Limitations Document. This gives the Theater Commander a description of the capabilities and limitations of the Joint Theater Air and Missile Defense Family of Systems (JTAMD FoS). It will provide a tool for the warfighter to extract the highest level of SIAP performance possible from the existing Theater Air and Missile Defense architecture.

- Dec 01 Delivery of System Engineering Management Plan. The SEMP provides a uniform framework for controlling all SIAP products.

- SIAP Normative Baseline: Development continues in FY 2002, with a scheduled delivery of December 2002. The Normative Baseline will comprise the set of SIAP requirements, specifications, interface definitions, and metrics the define the expected SIAP capability of current contributing systems. This will be the yardstick against which current SIAP deficiencies and future objective capabilities will be measured.

- SIAP Component of the Theater Air Missile Defense 2010 Integrated Architecture: Development continues in FY 2002 with a scheduled delivery in December 2002. The SIAP component of the TAMD architecture defines the Joint interfaces and connectivity, Joint performance requirements, and the associated information exchange requirements data models. It will represent key elements of a normative baseline for some future/objective SIAP (in comparison to the Normative Baseline's focus on existing systems).

- SIAP Roadmap: Development continues in FY 2002 with a scheduled delivery of December 2002. The SIAP Roadmap builds on the Prioritized Block Improvement List by defining mid- and far-term block upgrades to satisfy operational requirements leading to the objective SIAP capability. It will define the path from current capabilities, through the Normative Baseline, to the objective SIAP capability (2010 Architecture).

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B: Program Change Summary

	FY 2000	FY 2001	FY 2002
FY 2001 President's Budget:		0.000	0.000
Adjustments to FY 2000/FY 2001 Appropriated Value			
FY 2001 President's Budget		0	0
FY 2002 PRES Budget:		20.000	43.140

Funding:

FY01 - Funds were rerprogammed to initiate the SIAP program. (+3.947) Below Threshold Reprogramming, (+16.053) Above Threshold Reprogramming
FY02 - The Departmenr realigned funds to support SIAP requirements through the end of FY 2002 (+43.140)

Technical: N/A

C. OTHER PROGRAM FUNDING SUMMARY: N/A

D. ACQUISITION STRATEGY: N/A

E. SCHEDULE PROFILE: N/A

Exhibit R-3 Cost Analysis (page 1)													DATE: **JUNE 2001**
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N BA 4**			PROGRAM ELEMENT **0603879N**			PROJECT NAME AND NUMBER **Single Integrated Air Picture (SIAP) Sys Eng S3031**							
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 00 Cost	FY 00 Award Date	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	Cost to Complete	Total Cost	Target Value of Contract	
Reqts Analysis	MIPR/ IPIR/PD	var	0.000			1.425	var	3.175	var	continuing	continuing	continuing	
Functional Analysis	MIPR/ IPIR/PD	var	0.000			12.630	var	25.910	var	continuing	continuing	continuing	
Acquisition Assessment	MIPR/ IPIR/PD	var	0.000			1.525	var	3.625	var	continuing	continuing	continuing	
SIAP Architecture	MIPR/ IPIR/PD	var	0.000			0.420	var	1.380	var	continuing	continuing	continuing	
Program Management	MIPR/ IPIR/PD	var	0.000			2.800	var	6.000	var	continuing	continuing	continuing	
Engineering Controls	MIPR/ IPIR/PD	var	0.000			1.200	var	3.050	var	continuing	continuing	continuing	
Subtotal			0.000			20.000		43.140		continuing	continuing	continuing	

Remarks:

R-1 SHOPPING LIST - Item No. 89-6 of 89-6