

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification							DATE: <b>FEBRUARY 2006</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RESEARCH DEVELOPMENT TEST &amp; EVALUATION, NAVY / BA-05</b>				R-1 ITEM NOMENCLATURE 0604507N / Enhanced Modular Signal Processor (EMSP)				
COST (\$ in Millions)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost		\$1.061	\$1.063	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000
1440 Enhanced Modular Signal Processor		\$1.061	\$1.063	\$0.000	\$0.000	\$0.000	\$0.000	\$0.000

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:**

The objective of this Program Element (PE) is to improve Navy Signal Processing Hardware and Software Capabilities. Efforts include the development of a Portable Digital Signal Processing Operating System (PDOS), an associated tool set that supports development of reusable signal processing application software, and, replacement of obsolete, unreliable and unsupportable AN/UYS-1/2/2A legacy host computer resources.

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EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>FEBRUARY 2006</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-05</b>		PROGRAM ELEMENT NUMBER AND NAME 0604507N / Enhanced Modular Signal Processor (EMSP)			PROJECT NUMBER AND NAME 1440 / Enhanced Modular Signal Processor			
COST (\$ in Millions)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Cost		1.061	1.063	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Qty								

### A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The objective of this Program Element (PE) is to improve Navy Signal Processing Hardware and Software Capabilities. Efforts include the development of a Portable Digital Signal Processing Operating System (PDOS), an associated tool set that supports development of reusable signal processing application software, and, replacement of obsolete, unreliable and unsupportable AN/UYS-1/2/2A legacy host computer resources.

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APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-05</b>	PROGRAM ELEMENT NUMBER AND NAME 0604507N / Enhanced Modular Signal Processor (EMSP)	PROJECT NUMBER AND NAME 1440 / Enhanced Modular Signal Processor																	
<b>B. Accomplishments/Planned Program</b>																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;"></th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY 06</th><th style="width: 15%;">FY 07</th></tr></thead><tbody><tr><td>PDOS Development</td><td></td><td style="text-align: center;">0.250</td><td style="text-align: center;">0.250</td><td></td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;">FY 05-06: Development of a Portable Digital Signal Processing Operating System, an associated tool set that supports development of reusable signal processing application software.</div>							FY 05	FY 06	FY 07	PDOS Development		0.250	0.250		RDT&E Articles Quantity				
		FY 05	FY 06	FY 07															
PDOS Development		0.250	0.250																
RDT&E Articles Quantity																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;"></th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY 06</th><th style="width: 15%;">FY 07</th></tr></thead><tbody><tr><td>Legacy Host Computer Replacement of AN/UYS-1/2/2A</td><td></td><td style="text-align: center;">0.811</td><td style="text-align: center;">0.813</td><td></td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;">FY05-06: Investigate and commence replacement of AN/UYS-1/2/2A legacy host computer resources which are obsolete, unreliable and unsupportable.</div>							FY 05	FY 06	FY 07	Legacy Host Computer Replacement of AN/UYS-1/2/2A		0.811	0.813		RDT&E Articles Quantity				
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Legacy Host Computer Replacement of AN/UYS-1/2/2A		0.811	0.813																
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RDT&E Articles Quantity																			

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APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-05</b>	PROGRAM ELEMENT NUMBER AND NAME 0604507N / Enhanced Modular Signal Processor (EMSP)	PROJECT NUMBER AND NAME 1440 / Enhanced Modular Signal Processor	
<b>C. PROGRAM CHANGE SUMMARY:</b>			
Funding:	FY 2005	FY 2006	FY 2007
FY 2006 President's Budget Controls	1.063	1.079	0.000
FY 2007 President's Budget Controls	1.061	1.063	0.000
Total Adjustments	-0.002	-0.016	0.000
Summary of Adjustments:			
Other general provisions	-0.002	-0.016	
Subtotal	-0.002	-0.016	0.000
Schedule:			
Not applicable.			
Technical:			
Not applicable.			

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**D. OTHER PROGRAM FUNDING SUMMARY:**

<u>Line Item No. &amp; Name</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>Complete</u>	<u>Total Cost</u>
OPN BLI 2980 / Items Less Than \$5M (N71 Navy Signal Processor program portion only)	0.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0	1.0

  

**E. ACQUISITION STRATEGY:**

Not applicable.

  

**F. MAJOR PERFORMERS:**

Naval Air Warfare Center/Patuxent River (NAWC/Patuxent River): EMSP Computer Program Support Activity (CPSA), Technical Design Agent  
 Naval Sea Systems Command (NAVSEA/Crane): EMSP ISEA/Hardware Support Activity

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Exhibit R-3 Cost Analysis (page 1)											DATE: <b>FEBRUARY 2006</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-05</b>			PROGRAM ELEMENT 0604507N / Enhanced Modular Signal Processor (EMSP)			PROJECT NUMBER AND NAME 1440 / Enhanced Modular Signal Processor								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost			FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Signal Processor COTS Technology	Var.	Var.	3.215									0.000	3.215	
Subtotal Product Development			3.215			0.000		0.000		0.000		0.000	3.215	
Remarks:														
Software Development	WX	NAWC/Pax River, MD	4.730			0.621	10/04	0.650	10/05			0.000	6.001	
Hardware Development	WX	NAVSEA/Crane, IN	0.699			0.358	10/04	0.238	10/05			0.000	1.295	
S/W, H/W Dev./Common Processing	Var.	Var.	0.070			0.054	01/05	0.150	10/05			0.000	0.274	
Common Processing	IP	ARI, CT	0.225									0.000	0.225	
Subtotal Support			5.724			1.033		1.038		0.000		Continuing	Continuing	
Remarks:														

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Exhibit R-3 Cost Analysis (page 2)										DATE: FEBRUARY 2006				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME								
RDT&E, N / BA-05			0604507N / Enhanced Modular Signal Processor (EMSP)			1440 / Enhanced Modular Signal Processor								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost			FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Subtotal T&E			0.000			0.000		0.000		0.000		0.000	0.000	
Remarks:														
Program Management Support	IP/CPFF	TWD & Associates, VA	0.383									0.000	0.383	
Program Management Support	CPAF	BAE Systems, MD				0.028	12/04	0.025	02/06			0.000	0.053	
Subtotal Management			0.383			0.028		0.025		0.000		Continuing	Continuing	
Remarks:														
Total Cost			9.322	0.000		1.061		1.063		0.000		0.000	11.446	
Remarks:														

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EXHIBIT R4, Schedule Profile																								DATE:											
APPROPRIATION/BUDGET ACTIVITY												PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME											
RDT&E, N / BA-05												0604507N / Enhanced Modular Signal Processor (EMSP)												1440 / Enhanced Modular Signal Processor											
Fiscal Year	2004				2005				2006				2007				2008				2009				2010				2011						
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
PDOS and Tools																																			
Acquisition Milestones																																			
PDOS & Tools Development, Research, Investigation																																			
Develop PDOS Specification																																			
Develop Prototype OS, Tools																																			
Develop PDOS test suites																																			
Develop Signal Processing Benchmark																																			
Test & Evaluation Milestones																																			
Demonstrate PDOS																																			
Production Milestones																																			
Work with Industry to Productize PDOS																																			
Deliveries																																			

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**Exhibit R-2, RDTEN Budget Item Justification**  
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APPROPRIATION/BUDGET ACTIVITY								PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME												
RDT&E, N / BA-05								0604507N / Enhanced Modular Signal Processor (EMSP)												1440 / Enhanced Modular Signal Processor												
Fiscal Year					2005				2006				2007				2008				2009				2010				2011			
					1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Legacy Host Computer Replacement																																
Acquisition Milestones																																
AN/UYS-2/2A Investigate Legacy Computer Replacement																																
AN/UYS-1 COTS Software Development																																
AN/UYS-2/2A COTS Software Development																																
Test & Evaluation Milestones																																
AN/UYS-1 Validation Testing																																
AN/UYS-2/2A Validation Testing																																
Production Milestones																																
AN/UYS-2/2A Contract for Delivery of Replacement host																																
Deliveries																																

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