EXHIBIT R-2, RDT&E Budget Item Justification							DATE: **June 2001**			
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY/BA-05**					R-1 ITEM NOMENCLATURE ENHANCED MODULAR SIGNAL PROCESSOR (EMSP)/ 0604507N					
COST ($ in Millions)	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Total PE Cost	**0.871**	**0.867**	**1.013**							
Enhanced Modular Signal Processor/V1440*	**0.871**	**0.000**	**0.000**							
Enhanced Modular Signal Processor/Q1440*	**0.000**	**0.867**	**1.013**							
Quantity of RDT&E Articles										

*The PEO identification changes from PEO(USW) to PEO(MUW) starting in FY 2001 due to the merger of PEO(USW) and PEO(MIW). Therefore, the prefix V changes to Q.

A. Mission Description and Budget Item Justification: This program improves Navy Signal Processing Hardware and Software.

PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 2000 ACCOMPLISHMENTS:

($0.471) Continued joint program initiative and formed a joint Peer Review Process (PRP) to develop and implement a Common Commercial-Off-The-Shelf (COTS) signal processing solution for the DDG51 AN/SQQ-89 Surface ASW Combat System, Carrier Vessel-Tactical Support Center (CV-TSC), SH-60 Airborne Low Frequency Sonar (ALFS), and P-3 Special Projects systems platforms using Common Operating Environment/Tactical Advanced Signal Processing (COE/TASP) as a foundation.

($0.400) Completed Final Vector Signal Imaging Processing (VSIP) Library Specification Version 1.0 and VISP Test Suite (CoreLite) for COE/TASP. Completed Draft Version 1.0 Message Passing Interface/Real Time (MPI/RT) Standard Specification. COE/TASP will allow common COTS signal processing software applications (which are hardware-independent) to run on multiple platforms (DDG51 AN/SQQ-89, CV-TSC, SH-60 ALFS, and P-3 Special Projects), thus replacing aging Mil Spec Signal Processors.

2. (U) FY 2001 PLAN:

($0.452) Via the Peer Review Process (PRP), complete preliminary design of a Common COTS signal processing solution for the DDG51 AN/SQQ-89 Surface ASW Combat System, CV-TSC, SH-60 Airborne Low Frequency Sonar (ALFS), and P-3 Special Projects systems platforms using COE/TASP.

EXHIBIT R-2, RDT&E Budget Item Justification	DATE: June 2001
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY/BA-05**	R-1 ITEM NOMENCLATURE ENHANCED MODULAR SIGNAL PROCESSOR(EMSP) / 0604507N

($0.400) Support Common COTS signal processing and other Navy applications using the Final Vector Signal Image Processing (VSIP) Library for

Common Operating Environment /Tactical Advanced Signal Processor (COE/TASP). Continue to work with industry to develop and enhance

capabilities/functions for VSIP Library. Initiate migration of Message Passing Interface/Real Time (MPI/RT) functionality into the Common Object Request

Broker Agent (CORBA).

($0.015) Portion of extramural program reserved for Small Business Innovation Research assessment in accordance with 15 USC 638.

3. (U) FY 2002 PLAN:

($0.613) Via the Peer Review Process (PEP) complete detailed/final design of a Common COTS signal processing solution for DDG51 AN/SQQ-89

Surface ASW Combat System, CV-TSC, SH-60 Airborne Low Frequency Sonar (ALFS), and P-3 Special Projects systems platforms

	FY 2000	FY 2001	FY 2002
FY 2001 President's Budget:	0.965	0.875	1.139
Appropriated Value:	0.970	0.875	
Adjustment to FY 2000/2001 Appropriated Value/			
FY 2001 President's Budget:	-0.099	-0.008	-0.126
FY 2002 PRES Budget Submit:	0.871	0.867	1.013

Funding: FY 2000 decrease for SBIR (-$0.019), N6 Sponsor BTR (-$0.050), and minor pricing adjustments (-$0.030). FY 2001 decrease for minor pricing adjustments (-$0.008). FY 2002 decrease for N6 Sponsor adjustment (-$0.050) and PBD 807 - Navy Offsets (-$0.080), and minor pricing adjustments ($0.004).

Schedule: Not applicable.
Technical: Not applicable.

EXHIBIT R-2, RDT&E Budget Item Justification	DATE: **June 2001**
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY/BA-05**	R-1 ITEM NOMENCLATURE ENHANCED MODULAR SIGNAL PROCESSOR(EMSP)/ 0604507N

C. Other Program Funding Summary

	FY 2000	FY 2001	FY2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Complete	Cost
OPN P-1 Line Item 95 (B.L. 298000/72DC)										
	0.9	1.5	1.3							

D. Acquisition Strategy: a) Complete joint program initiatives to implement COTS signal processing solution across various platforms. b) Assist current EMSP user programs in transporting their EMSP-based application software to COTS. c) Seek industry standard middleware products that isolate Navy application software products from future changes in COTS hardware.

EXHIBIT R-2, RDT&E Budget Item Justification	DATE: **June 2001**
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY/BA-05**	R-1 ITEM NOMENCLATURE ENHANCED MODULAR SIGNAL PROCESSOR/ 0604507N

E. Schedule Profile

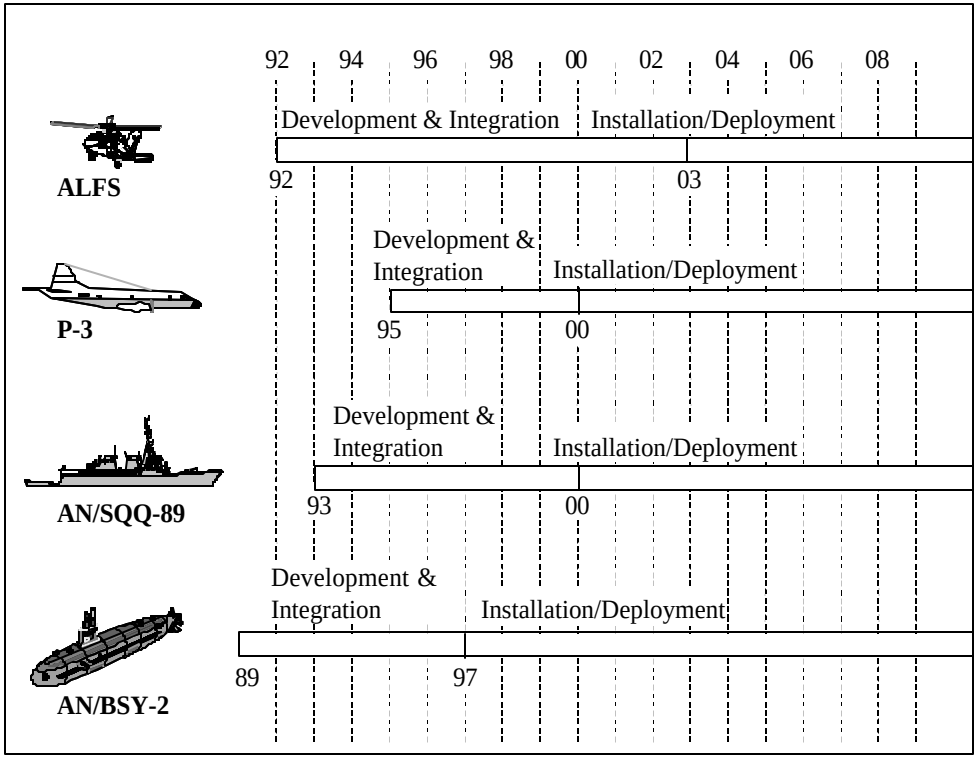

Exhibit R-3 Cost Analysis (page 1)											DATE: **June 2001**	
APPROPRIATION/BUDGET ACTIVITY **RDT&E,N/ BA-05**			PROGRAM ELEMENT **0604507N**			PROJECT NAME AND NUMBER EMSP V1440/Q1440						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & 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
Signal Processor COTS Technology	WR/MP	MSU/GTRI/SPAWAR	2.318	0.400	12/99	0.400	12/00	0.400	12/01	CONT.	CONT.	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Product Development			2.318	0.400		0.400		0.400		0.000	CONT.	
Remarks:												
Development Support Equipment												
Software Engineering Support	WR	NAWC/AD	2.664	0.115	11/99	0.080	11/00	0.100	11/01	CONT.	CONT.	
Common Processing	Var.	Misc.		0.118	02/00	0.104	11/00	0.313	Var.	CONT.	CONT.	
Miscellaneous	PD/Var.	Misc.		0.208	Var.	0.200	Var.	0.200	Var.	CONT.	CONT.	
											0.000	
											0.000	
											0.000	
Subtotal Support			2.664	0.441		0.384		0.613		0.000	CONT.	
Remarks:												

Exhibit R-3 Cost Analysis (page 2)								DATE: **June 2001**				
APPROPRIATION/BUDGET ACTIVITY **RDT&E,N/BA-05**		PROGRAM ELEMENT **0604507N**			PROJECT NAME AND NUMBER EMSP V1440/Q1440							
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
Developmental Test & Evaluation											0.000	
Operational Test & Evaluation											0.000	
Tooling											0.000	
GFE											0.000	
Subtotal T&E			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
Contractor Engineering Support											0.000	
											0.000	
Program Management Support	CPFF	TWD	0.175	0.030	05/00	0.083	02/01	0.000			CONT.	
											0.000	
											0.000	
											0.000	
Subtotal Management			0.175	0.030		0.083		0.000		0.000	CONT.	
Remarks:												
Total Cost			5.157	0.871		0.867		1.013		0.000	CONT.	
Remarks:												