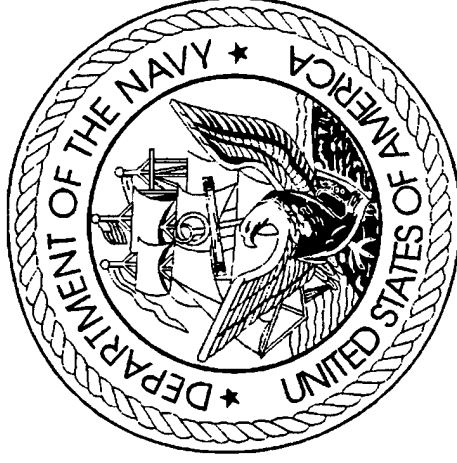


DEPARTMENT OF THE NAVY
FY 1998/1999 BUDGET ESTIMATES



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Department of the Navy
FY 1998/1999 RDT&E Program

Exhibit R-1

APPROPRIATION: 1319n Research, Development, Test and Evaluation, Navy

DATE: February 1997

		Millions of Dollars								
R-1 Line Number	Program Element Number	Item Nomenclature	Budget		FY 1997			FY 1998	FY 1999	Security Classification
			Activity		FY 1996					
127	0604256N	Threat Simulator Development	6		28.234	22.574	12.860	15.010	U	
128	0604258N	Target Systems Development	6		23.202	29.686	48.308	54.766	U	
129	0604759N	Major T & E Investment	6		48.872	38.950	33.236	18.000	U	
130	0605152N	Studies & Analysis Support/Navy	6		7.558	6.679	8.755	9.264	U	
131	0605154N	Center for Naval Analyses	6		42.903	38.608	43.476	44.794	U	
132	0605155N	Fleet Tactical Development	6		2.464	2.861	2.747	3.654	U	
133	0605502N	Small Business Innovative Research (Prior Year Only -- R2/R3 Not Required)	6		111.340	-	-	-	U	
134	0605804N	Technical Information Services	6		2.293	4.533	8.763	8.950	U	
135	0605853N	Management, Technical, & International Spt	6		17.500	19.672	24.305	26.911	U	
136	0605856N	Strategic Tech Support (R2/R3 Materials provided in Classified Budget Book)	6		2.890	1.907	2.110	2.238	U	
137	0605861N	RDT&EN Science & Technology Management	6		60.140	55.961	57.591	56.663	U	
138	0605862N	RDT&EN Instrumentation Modernization	6		11.509	5.946	8.546	8.544	U	
139	0605863N	RDT&E,N Ship & Aircraft Support	6		59.706	48.253	48.596	55.613	U	
140	0605864N	Test and Evaluation Support	6		235.938	233.908	263.934	272.624	U	
141	0605865N	Operational T&E Capability	6		5.974	7.358	9.107	9.154	U	
142	0605866N	Navy SEW Support	6		2.970	2.753	2.783	4.170	U	
143	0605867N	SEW Surveillance/Recon. Support	6		11.675	11.488	11.941	13.941	U	
144	0605871M	MC Tac Exploit of Natl Capab (Prior Year Only -- R2/R3 Not Required)	6		2.753	-	-	-	U	
145	0605873M	Marine Corps Program Wide Support	6		5.378	7.459	8.207	8.884	U	
146	0909999N	Problem Disbursements (Prior Year Only -- R2/R3 Not Required)	6		1.377	-	-	-	U	
Total RDTE Management Support					684.676	538.596	595.265	613.180		

UNCLASSIFIED

Department of the Navy
FY 1998/1999 RDT&E Program
Alphabetic Listing

Exhibit R-1

APPROPRIATION: 1319n Research, Development, Test and Evaluation, Navy DATE: February 1997

		Millions of Dollars							
Line Number	R-1 Program Element Number	Item Nomenclature	Budget		FY 1997			Security	
			Activity	FY 1996	FY 1997	FY 1998	FY 1999	Classification	
131	0605154N	Center for Naval Analyses	6	42.903	38.608	43.476	44.794	U	
132	0605155N	Fleet Tactical Development	6	2.464	2.861	2.747	3.654	U	
129	0604759N	Major T & E Investment	6	48.872	38.950	33.236	18.000	U	
135	0605853N	Management, Technical, & International Spt	6	17.500	19.672	24.305	26.911	U	
145	0605873M	Marine Corps Program Wide Support	6	5.378	7.459	8.207	8.884	U	
144	0605871M	MC Tac Exploit of Natl Capab (Prior Year Only -- R2/R3 Not Required)	6	2.753	-	-	-	U	
142	0605866N	Navy SEW Support	6	2.970	2.753	2.783	4.170	U	
141	0605865N	Operational T&E Capability	6	5.974	7.358	9.107	9.154	U	
146	0909999N	Problem Disbursements (Prior Year Only -- R2/R3 Not Required)	6	1.377	-	-	-	U	
138	0605862N	RDT&E,N Instrumentation Modernization	6	11.509	5.946	8.546	8.544	U	
137	0605861N	RDT&E,N Science & Technology Management	6	60.140	55.961	57.591	56.663	U	
139	0605863N	RDT&E,N Ship & Aircraft Support	6	59.706	48.253	48.596	55.613	U	
143	0605867N	SEW Surveillance/Recon. Support	6	11.675	11.488	11.941	13.941	U	
133	0605502N	Small Business Innovative Research (Prior Year Only -- R2/R3 Not Required)	6	111.340	-	-	-	U	
136	0605856N	Strategic Tech Support (R2/R3 Materials provided in Classified Budget Book)	6	2.890	1.907	2.110	2.238	U	
130	0605152N	Studies & Analysis Support/Navy	6	7.558	6.679	8.755	9.264	U	
128	0604258N	Target Systems Development	6	23.202	29.686	48.308	54.766	U	
134	0605804N	Technical Information Services	6	2.293	4.533	8.763	8.950	U	
140	0605804N	Test and Evaluation Support	6	235.938	233.908	263.934	272.624	U	
127	0604256N	Threat Simulator Development	6	28.234	22.574	12.860	15.010	U	
Total RDTE Management Support				684.676	538.596	595.265	613.180		

RDT&E, Navy
Program and Financing (in Thousands of dollars) SUMMARY

		Budget Plan (amounts for RESEARCH, DEV, TEST & EVAL actions programed)			
Identification code 17-1319-0-1-051		1996 actual	1997 est.	1998 est.	1999 est.
Program by activities:					
Direct program:					
00.0101	Basic research	371,517	352,146	382,117	399,633
00.0201	Applied Research	537,711	534,805	490,273	539,070
00.0301	Advanced technology development	472,113	501,133	433,305	470,528
00.0401	Demonstration/validation	1,712,323	1,930,143	2,135,069	2,233,510
00.0501	Engineering and manufacturing development	2,347,827	2,143,869	2,085,768	2,032,475
00.0601	Management support	684,815	538,596	595,265	613,180
00.0701	Operational system development	2,345,195	1,855,062	1,489,225	1,467,918
00.9101	Total direct program	8,471,501	7,855,754	7,611,022	7,756,314
01.0101	Reimbursable program	123,806	121,831	125,000	125,000
10.0001	Total	8,595,307	7,977,585	7,736,022	7,881,314
Financing:					
Offsetting collections from:					
11.0001	Federal funds(-)	-121,737	-121,831	-125,000	-125,000
14.0001	Non-Federal sources(-)	-2,069			
17.0001	Recovery of prior year obligations				
	Unobligated balance available, start of year:				
21.4002	For completion of prior year budget plans				
21.4003	Available to finance new budget plans	-11,600	-4,500		
21.4009	Reprogramming from/to prior year budget plans	-22,369	4,590		
22.1001	Unobligated balance transferred to other accounts	1,000			
22.2001	Unobligated balance transferred from other accounts (-)	-2,500	-4,590		
	Unobligated balance available, end of year:				
24.4002	For completion of prior year budget plans	4,500			
24.4003	Available to finance subsequent year budget plans	2,915			
25.0001	Unobligated balance expiring				
39.0001	Budget authority	8,443,447	7,851,254	7,611,022	7,756,314
Budget authority:					
40.0001	Appropriation	8,508,970	8,044,767	7,611,022	7,756,314
40.3601	Appropriation rescinded (unob bal)		-4,500		
40.7501	Reduction pursuant to P.L. 104-208 (-), 8037(e)		-24,834		

41.0001	Transferred to other accounts (-)	-95,788	-164,179	
42.0001	Transferred from other accounts	30,265		
43.0001	Appropriation (adjusted)	8,443,447	7,851,254	7,611,022
				7,756,314

RDT&E, Navy
Program and Financing (in Thousands of dollars) SUMMARY

		Obligations			
Identification code	17-1319-0-1-051	1996 actual	1997 est.	1998 est.	1999 est.
Program by activities:					
Direct program:					
00.0101	Basic research	376,671	338,287	380,319	398,581
00.0201	Applied Research	516,813	574,559	492,946	536,141
00.0301	Advanced technology development	454,795	547,033	437,377	468,293
00.0401	Demonstration/validation	1,717,965	1,904,811	2,122,576	2,227,616
00.0501	Engineering and manufacturing development	2,349,662	2,134,153	2,089,256	2,035,669
00.0601	Management support	744,549	528,098	591,864	612,105
00.0701	Operational system development	2,265,328	1,956,980	1,511,178	1,469,191
00.9101	Total direct program	8,425,783	7,983,921	7,625,516	7,747,596
01.0101	Reimbursable program	129,842	125,000	125,000	125,000
10.0001	Total	8,555,625	8,108,921	7,750,516	7,872,596
Financing:					
Offsetting collections from:					
11.0001	Federal funds(-)	-122,295	-121,831	-125,000	-125,000
14.0001	Non-Federal sources(-)	-2,057			
17.0001	Recovery of prior year obligations	-18,694			
	Unobligated balance available, start of year:				
21.4002	For completion of prior year budget plans	-568,848	-605,401	-478,655	-464,161
21.4003	Available to finance new budget plans	-11,600	-4,500		
21.4009	Reprogramming from/to prior year budget plans	1,000			
22.1001	Unobligated balance transferred to other accounts	-2,500	-4,590		
22.2001	Unobligated balance transferred from other accounts (-)				
	Unobligated balance available, end of year:				
24.4002	For completion of prior year budget plans	605,401	478,655	464,161	472,879
24.4003	Available to finance subsequent year budget plans	4,500			
25.0001	Unobligated balance expiring	2,915			
39.0001	Budget authority	8,443,447	7,851,254	7,611,022	7,756,314
Budget authority:					
40.0001	Appropriation				
40.3601	Appropriation rescinded (unob bal)				
40.7501	Reduction pursuant to P.L. 104-208 (-), 8037(e)	8,508,970	8,044,767	7,611,022	7,756,314
			-4,500		
			-24,834		

41.0001	Transferred to other accounts (-)			
42.0001	Transferred from other accounts	-95,788	-164,179	
		30,265		
43.0001	Appropriation (adjusted)	8,443,447	7,851,254	7,611,022
				7,756,314

RDTE, Navy
Program and Financing (in Thousands of dollars) SUMMARY

Identification code	17-1319-0-1-051	Obligations			
		1996 actual	1997 est.	1998 est.	1999 est.
Relation of obligations to outlays:					
71.0001	Obligations incurred	8,431,273	7,987,090	7,625,516	7,747,596
72.1001	Orders on hand, SOY	-142,908	-161,573	-161,573	-161,573
72.4001	Obligated balance, start of year	5,155,440	4,313,313	4,509,333	4,896,362
74.1001	Orders on hand, EOY	161,573	161,573	161,573	161,573
74.4001	Obligated balance, end of year	-4,313,313	-4,509,333	-4,896,362	-5,052,077
77.0001	Adjustments in expired accounts (net)	130,748			
78.0001	Adjustments in unexpired accounts	-18,694			
90.0001	Outlays (net)	9,404,119	7,791,070	7,238,487	7,591,881

RDT&E, Navy
Object Classification (in Thousands of dollars) SUMMARY

Identification code	17-1319-0-1-051	1996 actual	1997 est.	1998 est.	1999 est.
Direct obligations:					
Personnel compensation:					
111.101	Full-time permanent	43,493	43,735	42,937	41,311
111.301	Other than full-time permanent	3,501	2,480	2,390	2,437
111.501	Other personnel compensation	1,515	1,475	1,521	1,492
111.801	Special personal services payments	28	27	27	28
111.901	Total personnel compensation	48,537	47,717	46,875	45,268
Personnel Benefits: Civilian personnel					
112.101	Benefits for former personnel	9,048	10,476	10,454	10,144
113.001	Travel and transportation of persons	310	630	482	438
121.001	Transportation of things	20,199	20,623	21,056	21,498
122.001	Rental payments to GSA	1,289	1,316	1,344	1,372
123.101	Rental payments to others	2,784	2,842	2,902	2,963
123.201	Communications, utilities, and miscellaneous charges	1,682	1,717	1,753	1,790
123.301	Printing and reproduction	5,706	5,826	5,948	6,073
124.001	Advisory and assistance services	412	421	430	439
125.101	Other services with the private sector	246,995	238,054	224,235	220,989
125.201	Purchases goods/services (inter/intra) Fed accounts	5,014,086	4,867,664	4,337,807	4,503,249
125.301	Purchases of goods/services from other Fed agencies	660,632	675,166	690,020	691,000
125.303	Purchases from revolving funds	2,152,752	1,843,022	2,005,149	1,959,183
126.001	Supplies and materials	7,607	7,767	7,930	8,097
131.001	Equipment	8,710	8,893	9,097	9,270
132.001	Land and structures	1,604	1,638	1,673	1,708
141.001	Grants, subsidies, and contributions	243,430	250,149	258,361	264,115
199.001	Total Direct obligations	8,425,783	7,983,921	7,625,516	7,747,596
Reimbursable obligations:					
Personnel Compensation:					
211.101	Full-time permanent	33,284	41,446	35,817	36,545
211.301	Other than full-time permanent	1,237	2,884	3,125	3,192
211.501	Other personnel compensation	551	800	785	807
211.801	Special personal services payments	7			
211.901	Total personnel compensation	35,079	45,130	39,727	40,544

212.101	Personnel Benefits: Civilian Personnel	7,150	8,500	7,400	7,537
213.001	Benefits for former personnel	201			
221.001	Travel and transportation of persons	3,404	3,475	3,548	3,623
222.001	Transportation of things	450	459	469	479
223.101	Rental payments to GSA	77	79	80	82
223.201	Rental payments to others	691	706	720	735
223.301	Communications, utilities, and miscellaneous charges	1,317	1,345	1,373	1,402
224.001	Printing and reproduction	196	200	204	209

RDT&E, Navy
Object Classification (in Thousands of dollars) SUMMARY

Identification code	17-1319-0-1-051	1996 actual	1997 est.	1998 est.	1999 est.
225.201	Other services with the private sector	40,631	35,495	36,065	36,662
225.303	Purchases goods/services (inter/intra) Fed accounts				
226.001	Purchases from revolving funds	20,248	8,778	14,151	12,017
231.001	Supplies and materials	10,729	10,965	11,184	11,419
241.001	Equipment	5,684	5,803	5,925	6,050
	Grants, subsidies, and contributions	3,985	4,065	4,154	4,241
299.001	Total Reimbursable obligations	129,842	125,000	125,000	125,000
999.901	Total obligations	8,555,625	8,108,921	7,750,516	7,872,596

Comparison of FY 1996 Financing as reflected
in FY 1997 Budget with 1996 Financing as
Shown in the FY 1998 Budget

	(\$ in Thousands)		
	Financing per FY 1997 Budget	Financing Per FY 1998 Budget	Increase (+) or Decrease (-)
Program Requirements (Total)	8,494,534	8,471,501	-23,033
Program Requirements (Service Account)	(8,494,534)	(8,471,501)	(-23,033)
Program Requirements (Reimbursable)	110,000	123,806	+13,806
Appropriation (Adjusted)	8,604,534	8,595,307	-9,227

Explanation of Changes in Financing
(\$ in Thousands)

The Fiscal Year 1996 program has changed since the presentation of the FY 1997 budget as noted below:

1. Program Requirements (Total). There has been a net decrease to the appropriation (adjusted) of \$9,227, as a result of changes in program requirements as noted below.
2. Program Requirements (Service Account). There has been a net increase to the appropriation (adjusted) of \$23,033. This net change is comprised of an increase in program requirements (\$23,033). These changes included a rescission to the FY 1996 program approved in the FY 1997 DoD Appropriations Act (-\$4,500), a rescission for Administrative and Personal Services (-\$6,739), a rescission to finance F-16 sales to Jordan (-\$45,000) based on reduced inflation rates, reductions reflected on the FY 1996 DoD Omnibus Reprogramming Action to specific programs (-\$10,600) and a general reduction based on lower inflation rates (-\$2,506), a Supplemental Appropriation added funds to the Shallow Water MCM Demonstrations program (+\$10,100), four transfers into the appropriation from a DoD central transfer account were effected to support the RDT&E Counter Drug program added funds (+\$30,265), a transfer to consolidated the Non-Lethal Weapons Technology added funds (+\$4,590), and the withdrawal of proposed rescissions to specific programs.

3. Program Requirements (Reimbursable). There has been a net increase to the appropriation of \$13,808, as a result of changes in reimbursable program requirements (\$13,806).

Comparison of FY 1996 Program Requirements as reflected
in the FY 1997 Budget with FY 1996 Program Requirements
as shown in the FY 1998 Budget

Summary of Requirements (\$ In Thousands)

	Total Program Requirements per FY 1997 Budget	Total Program Requirements per FY 1998 Budget	Increase (+) or Decrease (-)
01 - Basic Research	377,362	371,516	-5,846
02 - Applied Research	541,372	537,711	-3,661
03 - Advanced Technology Development	444,655	472,184	+27,529
04 - Demonstration and Validation (DEM/VAL)	1,718,754	1,712,926	-5,828
05 - Engineering and Manufacturing Development (EMD)	2,396,003	2,344,798	-51,205
06 - RDTE Management Support	571,115	684,676	+113,561
07 - Operational Systems Development	2,370,501	2,347,690	-22,811
Total Fiscal Year Program	8,494,534	8,471,501	-23,033

Explanation by Budget Activity
(\$ In Thousands)

01. Basic Research (-\$5,846) - Changes to this budget activity resulted from a rescission for Administrative and Personal Services (-\$1,262), a rescission to finance F-16 sales to Jordan (-\$2,004) based on reduced inflation rates, a transfer to support the Small Business Innovative Research (SBIR) program (-\$1,935), and other changes in program requirements which required minor reprogrammings (-\$645).

02. Applied Research (-\$3,661) - Changes to this budget activity resulted from a rescission for Administrative and Personal Services (-\$353), a rescission to finance F-16 sales to Jordan (-\$2,945) based on reduced inflation rates, a

transfer to support the Small Business Innovative Research (SBIR) program (-\$8,371), and other changes in program requirements which required minor reprogrammings (+\$8,008).

03. Advanced Technology Development (+\$27,529) - Changes to this budget activity resulted from a rescission for Administrative and Personal Services (-\$1,844), a rescission to finance F-16 sales to Jordan (-\$2,528) based on reduced inflation rates, a transfer to support the Small Business Innovative Research (SBIR) program (-\$5,291), two reductions reflected on the FY 1996 DoD Omnibus Reprogramming Action against the Advanced Technology Transition program (-\$4,800) and a general reduction based on lower inflation rates (-\$1,200), and other changes in program requirements which required minor reprogrammings (-\$3,108). Additionally, a Supplemental Appropriation added funds to the Shallow Water MCM Demonstrations program (+\$10,100) and a proposed rescission to the AARGM program was withdrawn (+\$36,300).

04. Demonstration and Validation (DEM/VAL) (-\$5,828) - Changes to this budget activity resulted from a rescission for Administrative and Personal Services (-\$1,587), a rescission to finance F-16 sales to Jordan (-\$9,144) based on reduced inflation rates, a transfer to support the Small Business Innovative Research (SBIR) program (-\$15,807), a reduction reflected on the FY 1996 DoD Omnibus Reprogramming Action based on lower inflation rates (-\$343), and other changes in program requirements which required minor reprogrammings (+\$16,463). Additionally, a transfer to consolidated the Non-Lethal Weapons Technology added funds (+\$4,590).

05. Engineering and Manufacturing Development (EMD) (-\$51,205) - Changes to this budget activity resulted from a rescission for Administrative and Personal Services (-\$517), a rescission to finance F-16 sales to Jordan (-\$12,682) based on reduced inflation rates, a transfer to support the Small Business Innovative Research (SBIR) program (-\$42,566), a reduction reflected on the FY 1996 DoD Omnibus Reprogramming Action against the New Design SSN Development program (-\$5,800), and other changes in program requirements which required minor reprogrammings (+\$10,360).

06. RDTE Management Support (+\$113,561) - Changes to this budget activity resulted from a rescission for Administrative and Personal Services (-\$273), a rescission to finance F-16 sales to Jordan (-\$3,063) based on reduced inflation rates, a transfer to support the Small Business Innovative Research (SBIR) program (+\$109,696), and other changes in program requirements which required minor reprogrammings (+\$7,201).

07. Operational Systems Development (-\$22,811) - Changes to this budget activity resulted from a rescission for Administrative and Personal Services (-\$903), a rescission to finance F-16 sales to Jordan (-\$12,634) based on reduced inflation rates, a transfer to support the Small Business Innovative Research (SBIR) program (-\$32,250), and other changes in program requirements which required minor reprogrammings (-\$2,789). Additionally, four transfers into the appropriation from a DoD central transfer account were effected to support the RDT&E Counter Drug program added funds (+\$30,265). Additionally, a rescission was effected in the FY 1997 DoD Appropriations Act (-\$4,500).

Comparison of FY 1997 Financing as reflected
in FY 1997 Budget with 1997 Financing as
Shown in the FY 1998 Budget

	(\$ In Thousands)			
		Financing per FY 1997 Budget	Financing Per FY 1998 Budget	Increase (+) or Decrease (-)
Program Requirements (Total)		7,334,734	7,855,754	+521,020
Program Requirements (Service Account)		(7,334,734)	(7,855,754)	(+521,020)
Program Requirements (Reimbursable)		110,000	121,831	+11,831
Appropriation (Adjusted)		7,444,734	7,977,585	+532,851

Explanation of Changes in Financing
(\$ in Thousands)

The Fiscal Year 1997 program has changed since the presentation of the FY 1997 budget as noted below:

1. Program Requirements (Total). There has been a net increase to the appropriation (adjusted) of \$532,851, as a result of changes in program requirements as noted below.
2. Program Requirements (Service Account). There has been a net increase to the appropriation (adjusted) of \$521,020, resulting from changes in program requirements as a result of Congressional appropriation changes in the FY 1997 DoD Appropriations Act. These changes included a general undistributed RDT&E reduction of 2 percent (-\$164,179)(Section 8136), a general undistributed reduction of 2 percent (-\$164,179) to finance Defense Business Operating Fund (DBOF) operating shortfalls (Section 8120), an undistributed reduction for Federally Financed Research and Development Centers (FFRDC)(-\$3,822)(Section 8037(e)), an undistributed reduction for non-Federally Financed Research and Development Centers (non-FFRDC)(-\$13,299)(Section 8037(h)), a rescission to finance force protection requirements (-\$7,713)(Section 8138), and net changes to specific program changes (+\$874,212).

3. Program Requirements (Reimbursable). There has been a net increase to the appropriation of \$11,831, as a result of changes in reimbursable program requirements (\$11,831).

Comparison of FY 1997 Program Requirements as reflected
in the FY 1997 Budget with FY 1997 Program Requirements
as shown in the FY 1998 Budget

Summary of Requirements (\$ in Thousands)

	Total Program Requirements per FY 1997 Budget	Total Program Requirements per FY 1998 Budget	Increase (+) or Decrease (-)
01 - Basic Research	387,213	352,146	-35,067
02 - Applied Research	463,465	534,805	+71,340
03 - Advanced Technology Development	449,342	501,133	+51,791
04 - Demonstration and Validation (DEM/VAL)	1,740,955	1,930,143	+189,188
05 - Engineering and Manufacturing Development (EMD)	2,048,657	2,143,869	+95,212
06 - RDTE Management Support	558,440	538,596	-19,844
07 - Operational Systems Development	1,686,662	1,855,062	+168,400
Total Fiscal Year Program	7,334,734	7,855,754	+521,020

Explanation by Budget Activity
(\$ in Thousands)

01. Basic Research (-\$35,067) - Changes to this budget activity resulted from the following Congressional undistributed reductions reflected in the FY 1997 DoD Appropriations Act. These changes included a general undistributed RDT&E reduction of 2 percent (-\$7,344) (Section 8136), a general undistributed reduction of 2 percent (-\$7,344) to finance Defense Business Operating Fund (DBOF) operating shortfalls (Section 8120), an undistributed reduction for Federally

Financed Research and Development Centers (FFRDC)(-\$34)(Section 8037(e)), a rescission to finance force protection requirements (-\$345)(Section 8138). Congress also specifically reduced the Defense Research Sciences program (-\$20,000).

02. Applied Research (+\$71,340) - Changes to this budget activity resulted from the following Congressional undistributed reductions reflected in the FY 1997 DoD Appropriations Act. These changes included a general undistributed RDT&E reduction of 2 percent (-\$11,155)(Section 8136), a general undistributed reduction of 2 percent (-\$11,155) to finance Defense Business Operating Fund (DBOF) operating shortfalls (Section 8120), an undistributed reduction for Federally Financed Research and Development Centers (FFRDC)(-\$214)(Section 8037(e)), an undistributed reduction for non-Federally Financed Research and Development Centers (non-FFRDC)(-\$212)(Section 8037(h)), a rescission to finance force protection requirements (-\$524)(Section 8138). Congress also specifically added funds to start or continue 26 specific initiatives (+\$94,600).
03. Advanced Technology Development (+\$51,791) - Changes to this budget activity resulted from the following Congressional undistributed reductions reflected in the FY 1997 DoD Appropriations Act. These changes included a general undistributed RDT&E reduction of 2 percent (-\$10,450)(Section 8136), a general undistributed reduction of 2 percent (-\$10,450) to finance Defense Business Operating Fund (DBOF) operating shortfalls (Section 8120), an undistributed reduction for Federally Financed Research and Development Centers (FFRDC)(-\$272)(Section 8037(e)), an undistributed reduction for non-Federally Financed Research and Development Centers (non-FFRDC)(-\$348)(Section 8037(h)), a rescission to finance force protection requirements (-\$491)(Section 8138). Congress also specifically added funds to start or continue 15 specific initiatives (+\$106,400), while reducing one program (-\$34,424). Additionally, changes in program requirements required minor reprogrammings (+\$1,826).
04. Demonstration and Validation (DEM/VAL) (+\$189,188) - Changes to this budget activity resulted from the following Congressional undistributed reductions reflected in the FY 1997 DoD Appropriations Act. These changes included a general undistributed RDT&E reduction of 2 percent (-\$40,282)(Section 8136), a general undistributed reduction of 2 percent (-\$40,282) to finance Defense Business Operating Fund (DBOF) operating shortfalls (Section 8120), an undistributed reduction for Federally Financed Research and Development Centers (FFRDC)(-\$859)(Section 8037(e)), an undistributed reduction for non-Federally Financed Research and Development Centers (non-FFRDC)(-\$1,546)(Section 8037(h)), a rescission to finance force protection requirements (-\$1,891)(Section 8138). Congress also specifically added funds to start or continue 20 specific initiatives (+\$270,551), while reducing three programs (-\$6,144).

Additionally, funds were increased in support of the Near Term Mine Warfare Plan (+\$6,285), as well as other changes in program requirements which required minor reprogrammings (+\$3,356).

05. Engineering and Manufacturing Development (EMD) (+\$95,212) - Changes to this budget activity resulted from the following Congressional undistributed reductions reflected in the FY 1997 DoD Appropriations Act. These changes included a general undistributed RDT&E reduction of 2 percent (-\$44,947)(Section 8136), a general undistributed reduction of 2 percent (-\$44,947) to finance Defense Business Operating Fund (DBOF) operating shortfalls (Section 8120), an undistributed reduction for Federally Financed Research and Development Centers (FFRDC)(-\$282)(Section 8037(e)), an undistributed reduction for non-Federally Financed Research and Development Centers (non-FFRDC) (-\$6,522)(Section 8037(h)), a rescission to finance force protection requirements (-\$2,116)(Section 8138). Congress also specifically added funds to start or continue 35 specific initiatives (+\$243,700), while realigning one program (-\$25,000) and reducing two programs (-\$11,700). Additionally, funds were decreased in support of the Near Term Mine Warfare Plan (-\$6,285), as well as other changes in program requirements which required minor reprogrammings (-\$6,689).

06. RDTE Management Support (-\$19,844) - Changes to this budget activity resulted from the following Congressional undistributed reductions reflected in the FY 1997 DoD Appropriations Act. These changes included a general undistributed RDT&E reduction of 2 percent (-\$11,274)(Section 8136), a general undistributed reduction of 2 percent (-\$11,274) to finance Defense Business Operating Fund (DBOF) operating shortfalls (Section 8120), an undistributed reduction for Federally Financed Research and Development Centers (FFRDC)(-\$1,956)(Section 8037(e)), an undistributed reduction for non-Federally Financed Research and Development Centers (non-FFRDC) (-\$1,111)(Section 8037(h)), a rescission to finance force protection requirements (-\$528)(Section 8138). Congress also specifically added funds to start or continue 3 specific initiatives (+\$4,500). Additionally, changes in program requirements required minor reprogrammings (+\$1,799).

07. Operational Systems Development (+\$168,400) - Changes to this budget activity resulted from the following Congressional undistributed reductions reflected in the FY 1997 DoD Appropriations Act. These changes included a general undistributed RDT&E reduction of 2 percent (-\$38,727)(Section 8136), a general undistributed reduction of 2 percent (-\$38,727) to finance Defense Business Operating Fund (DBOF) operating shortfalls (Section 8120), an undistributed reduction for Federally Financed Research and Development Centers (FFRDC)(-\$205)(Section 8037(e)), an undistributed reduction for non-Federally Financed Research and Development Centers (non-FFRDC)(-\$3,560)(Section 8037(h)), a rescission to finance force protection requirements (-\$1,817)(Section 8138). Congress also

specifically added funds to start or continue 19 specific initiatives (+\$257,929), while reducing two programs (-\$5,700). Additionally, changes in program requirements required minor reprogrammings (-\$793).

FY 1998/99 PRESIDENT'S BUDGET
COMBATING TERRORISM FUNDING SUMMARY
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, NAVY
(Dollars in Millions)

	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
BUDGET ACTIVITY 6: RDT&E Management Support				
0605861N RDT&E,N Science and Technology Management	.372	.577	.269	.297
0605862N RDT&E,N Instrumentation Modernization	.125	.178	.080	.080
0605864N Test and Evaluation Support	3.400	3.500	3.500	3.100
Total, RDT&E,N	3.897	4.255	3.849	3.477

Civilian Personnel:Full-Time Equivalents (FTEs)

USDH	0	0	0	0
FNDH	0	0	0	0
FNIH	0	0	0	0

Civilian End-Strength

USDH	0	0	0	0
FNDH	0	0	0	0
FNIH	0	0	0	0

Military Personnel:

Active Military End-Strength (Total)	0	0	0	0
Active Military Active-Strength (Total)	0	0	0	0
Reserve Military End-Strength (Total)	0	0	0	0
Reserve Military Active-Strength (Total)	0	0	0	0

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0604256N

PROGRAM ELEMENT TITLE: Threat Simulator Development

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
E0602 Electronic Warfare Environment Simulation (ECHO)	18,245	12,566	4,519	4,454	18,182	18,433	18,836	19,276	CONT.	CONT.
E0672 Effectiveness of Navy Electronic Warfare Systems (ENEWS)	9,989	10,008	8,341	10,556	13,713	13,072	13,347	13,656	CONT.	CONT.
TOTAL	28,234	22,574	12,860	15,010	31,895	31,505	32,183	32,932	CONT.	CONT.

(U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This is a continuing program that consolidates the design, fabrication and integration of Naval Electronic Warfare (EW) threat simulators for increased managerial emphasis and coordination. These simulator development efforts provide realistic Developmental and Operational Test and Evaluation (DT&E/OT&E) environments to test Tri-Services EW systems and defensive tactics. These projects develop former Soviet and Free-World Anti-Air and Anti-Ship weapon systems simulators in accordance with the Services requirements.

(U) The E0602 Project, EW Environment Simulation (ECHO) provides airborne system component level Test and Evaluation (T&E) at the Electronic Combat Simulation and Evaluation Laboratory (ECSEL), Naval Air Warfare Center Weapons Division (NAVAIRWARCENWPNDIV), Point Mugu, CA. ECHO also provides a secure anechoic closed loop T&E facility for fully integrated, aircraft-installed systems testing at the EW Integrated Systems Test Laboratory (EWISTL) at the Naval Air Warfare Center Aircraft Division (NAVAIRWARCENACDIV), Patuxent River, MD. Included in this Project is the T&E of airborne systems and tactics in flight, against the open air range at the Electronic Combat Range (ECR) complex located at the Naval Air Warfare Center Weapons Division (NAVAIRWARCENWPNDIV), China Lake, CA.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0604256N

PROGRAM ELEMENT TITLE: Threat Simulator Development

(U) The E0672 Project, Effectiveness of Navy EW Systems (ENEWS), is a Department of the Navy (DON) unique project that supports testing of Ship Self Defense efforts. ENEWS provides T&E of surface and subsurface shipboard systems and tactics in digitally modeled battle scenarios at the component, fully integrated single ship, multi-ship and full-up multi-platform battle group levels. ENEWS also provides a secure anechoic closed loop T&E facility specifically designed to test shipboard systems at the stand alone component or fully integrated systems level. The last and largest portion of this project addresses the flyable Infrared and Radio Frequency simulators flown on specially configured NP-3D aircraft to provide at-sea open air T&E of systems and tactics. All ENEWS assets are developed and maintained by the Naval Research Laboratory (NRL), Washington, DC.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RDT&E MANAGEMENT SUPPORT because it supports the operations and installations required for general research, T&E, and development use.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0604256N

PROGRAM ELEMENT TITLE: Threat Simulator Development

PROJECT NUMBER: E0602

PROJECT TITLE: ECHO

(U) COST (Dollars in thousands)

PROJECT

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
E0602 Electronic Warfare Environment Simulation (ECHO)	18,245	12,566	4,519	4,454	18,182	18,433	18,836	19,276	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The objective of this project is development of necessary simulation facilities and approaches to allow determination of the effectiveness of EW in real world engagement situations and to support the introduction of modern, effective systems into Naval Aviation. The heavy use of test resources by all Services demonstrates the importance of these assets. The Navy has been very successful in executing all of its major programs, and to date has had no major technical problems.

(U) The EW Environment Simulation (ECHO) project is unique in that it is the only program within the Department of Defense (DOD) which develops and provides Naval anti-air warfare threat assets for Testing and Evaluation (T&E) and is a critical part of the Office of the Secretary of Defense (OSD) Test Resource Master Plan. The OSD Master Plan employs many ECHO project resources for planning, analysis, testing and verification of airborne EW equipment.

(U) This project directly supports the T&E requirements for the following programs such as the High Speed Anti-Radiation Missile, ALR-67(V)2,3,4, ALQ-126B, AN/ALQ-156, Advanced Airborne Expendable Decoy (AAED), EW Advanced Technology (EWAT), Integrated Defensive Electronic Countermeasures (IDECM), AVR-2, AAR-47, ALE-50, as well as other Tri-Service EW systems with initial operational capability dates in the 1990's.

(U) This project provides for the development of an Integrated Air Defense T&E capability to be fielded at each of the three sites comprising the Navy's Tri-Center complex: NAVAIRWARCENWPNDIV, China Lake and Point Mugu in CA, and NAVAIRWARCENACDIV, Patuxent River, MD.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0604256N

PROJECT NUMBER: E0602

PROGRAM ELEMENT TITLE: Threat Simulator Development

PROJECT TITLE: ECHO

(U) Navy Air Defense Threat Simulator resource requirements are coordinated through the OSD CROSSBOW committee to avoid unwarranted duplication of effort among the services. The Navy Tri-Center approach to T&E resource development ensures project efficiency by cost reductions achievable through common development efforts which provide consistent, repeatable test results between test centers.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$6,202) Continued Weapons Systems - J-Band Advanced Technology Simulators (JBATS).
- (U) (\$208) Completed Command and Control Systems - C2 Group 2.
- (U) (\$4,558) Continued Multispectral Systems - Multispectral Anti-Air Test System (MATS).
- (U) (\$100) Continued Validation and Updates - Simulator Evaluation (SIMEVAL).
- (U) (\$638) Continued Validation and Updates - Radar Updates.
- (U) (\$450) Continued Validation and Updates - Missile/Gun Updates.
- (U) (\$350) Continued Validation and Updates - Validation.
- (U) (\$965) Continued ECHO technical and engineering support.
- (U) (\$285) Continued ECHO System Engineering activity.
- (U) (\$665) Continued ECHO Test Requirements activity.
- (U) (\$1,183) Continued to maintain the EW threat simulator inventory of electronic equipment and instrumentation.
- (U) (\$2,641) Support of Project MEMPHIS.

2. (U) FY 1997 PLAN:

- (U) (\$100) Continue Validation and Updates - SIMEVAL.
- (U) (\$1,320) Continue Validation and Updates - Radar Updates.
- (U) (\$839) Continue Validation and Updates - Missile/Gun Updates.
- (U) (\$425) Continue Validation and Updates - Validation.
- (U) (\$700) Continue ECHO technical and engineering support.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0604256N

PROJECT NUMBER: E0602

PROJECT TITLE: ECHO

PROGRAM ELEMENT TITLE: Threat Simulator Development

- (U) (\$478) Continue ECHO System Engineering activity.
- (U) (\$492) Continue ECHO Test Requirements activity.
- (U) (\$2,220) Continue Weapon Systems - JBATS.
- (U) (\$500) Complete Multispectral Systems - MATS.
- (U) (\$3,650) Initiate and complete IBIS Hammer.
- (U) (\$457) Initiate Ultraviolet (UV) Stimulator.
- (U) (\$1,143) Initiate I-23 Advanced Capability.
- (U) (\$242) Portion of program reserved for Small Business Innovative Research assessment in accordance with 15 U.S.C. 638.

3. (U) FY 1998 PLAN:

- (U) (\$100) Continue Validation and Updates - SIMEVAL.
- (U) (\$220) Continue Validation and Updates - Radar Updates.
- (U) (\$200) Continue Validation and Updates - Validation.
- (U) (\$1,095) Continue ECHO technical and engineering support.
- (U) (\$220) Continue ECHO System Engineering activity.
- (U) (\$355) Continue ECHO Test Requirements activity.
- (U) (\$1,719) Complete Weapon Systems - JBATS.
- (U) (\$610) Complete I-23 Advanced Capability.

4. (U) FY 1999 PLAN:

- (U) (\$100) Continue Validation and Updates - SIMEVAL.
- (U) (\$894) Continue Validation and Updates - Radar Updates.
- (U) (\$450) Continue Validation and Updates - Missile/Gun Updates.
- (U) (\$300) Continue Validation and Updates - Validation.
- (U) (\$1,181) Continue ECHO technical and engineering support.
- (U) (\$484) Continue ECHO System Engineering activity.
- (U) (\$1,045) Continue ECHO Test Requirements activity.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0604256N PROJECT NUMBER: E0602
 PROGRAM ELEMENT TITLE: Threat Simulator Development PROJECT TITLE: ECHO

B. (U) PROGRAM CHANGE SUMMARY:

(U) FY 1997 President's Budget:	FY 1996 18,772	FY 1997 13,102	FY 1998 16,146	FY 1999 18,269
(U) Adjustments from FY 1997 PRESBUDG:	-527	-536	-11,627	-13,815
(U) FY 1998 President's Budget Submit:	18,245	12,566	4,519	4,454

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: The FY 1996 decrease of -\$527 million reflects a Jordanian Recision adjustment of -\$047 million, a Small Business Innovation Research transfer of -\$305 million and a transfer of -\$13 million from Project Memphis. The FY 1997 decrease of -\$536 million reflects -\$262 million for Navy Working Capital Working Fund (NWCFF) surcharge, -\$262 million for general reduction and -\$012 million for budgetary restoration. The FY 1998 decrease of -\$11,627 million reflects -\$11,100 million adjustment to defer new equipment acquisition pending a reassessment of the T&E facilities and equipment requirements (Vision 21 study); -\$371 million for modeling and simulation adjustments -\$104 million for minor pricing adjustments and -\$52 million for NWCFF adjustments. The FY 1999 decrease of -\$13,815 million reflects -\$13,200 million adjustment to defer new equipment acquisition pending a reassessment of the T&E facilities and equipment requirements (Vision 21 study); -\$404 million for modeling and simulation adjustments, -\$256 million for minor pricing adjustments and +\$045 million for NWCFF adjustments.

(U) Schedule: Due to the adjustments in FY 1997, the threat simulators validation schedule will slip by one year. Due to the equipment deferrals in FY 1998 and FY 1999 the following projects have been cancelled: Weapon Systems - Ground Mounted Seeker and Grey Crotale Next Generation (NG), Low Band Radar, ACETEF Multispectral, and Advanced Emitter Simulators. I-Hawk Spread Spectrum and Bi-static Capability, APS-116 Radar, I-30 Advanced Capability, and Foreign Military Acquisition Opportunity (FMAO) 5.0 Foreign Equipment have been deleted from Validation and updates - Radar Updates and Missile/Gun Updates

(U) Technical: Not applicable.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0604256N

PROJECT NUMBER: E0602

PROGRAM ELEMENT TITLE: Threat Simulator Development

PROJECT TITLE: ECHO

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E: Not applicable.

D. (U) SCHEDULE PROFILE: Not applicable.

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DATE: February 1997

FY 1998 RDT&E, N PROGRAM ELEMENT/PROJECT COST BREAKDOWN

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0604256N PROJECT NUMBER: E0602
 PROGRAM ELEMENT TITLE: Threat Simulator Development PROJECT TITLE: ECHO

A. (U) PROJECT COST BREAKDOWN: (\$ in thousands)

Project Cost Categories	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
a. Hardware Development	8,534	5,570	1,174	664
b. Software Development	3,338	2,343	919	480
c. System Engineering	600	600	363	484
d. System Integration	400	1,400	217	200
e. Validation	450	750	300	400
f. Configuration Management	150	150	150	150
g. Program Management Support	427	911	888	1,041
h. Miscellaneous (Requirements)	522	600	508	1,035
i. MRTFB Requirements	1,183	0	0	0
j. Project MEMPHIS	2,641	0	0	0
k. SBIR Assessment		242		
Total	18,245	12,566	4,519	4,454

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DATE: February 1997

FY 1998 RDT&E,N PROGRAM ELEMENT/PROJECT COST BREAKDOWN

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0604256N PROJECT NUMBER: E0602
 PROGRAM ELEMENT TITLE: Threat Simulator Development PROJECT TITLE: ECHO

B. (U) BUDGET ACQUISITION HISTORY AND PLANNING INFORMATION (\$ in thousands)

PERFORMING ORGANIZATIONS

Contractor/ Contract Government Method/ Performing Fund Type Activity Vehicle	Award/ Oblig Date	Perform Activity EAC	Project Office EAC	Total FY 1995 & Prior	FY 1996 Budget	FY 1997 Budget	FY 1998 Budget	FY 1999 Budget	Complete	To Complete	Total Program
Product Development											
MM/NAVSUP SS-CPFF-PD	10/89	39,655	39,655	39,655	0	0	0	0	0	0	39,655
EWA/NAVSUP C-CPFF-PD	10/94	11,782	11,782	6,046	3,670	1,066	1,000	0	0	0	11,782
WHITT/CL SS-CPFF-PX	5/87	35,977	35,977	35,977	0	0	0	0	0	0	35,977
VIASAT/NSUPSS-CPFF-PD	4/93	4,903	4,903	4,903	0	0	0	0	0	0	4,903
ASDI/CL SS-FFP-PX	5/91	1,561	1,561	1,561	0	0	0	0	0	0	1,561
NAWC-WD/CL WX	10/97	18,165	18,165	18,165	8,991	4,551	2,131	2,094	CONT.	CONT.	1,561
MISCELLANEOUS (EFFORTS < \$2M EACH)											
		6,743	6,743	6,743	1,761	3,057	1,388	2,360	CONT.	CONT.	1,561
Support and Management											
MRTFB Requirements WX	5/96	4,139	4,139	4,139	1,183	0	0	0	0	0	5,322
Project MEMPHIS MP	4/96	0	0	0	2,640	0	0	0	0	0	2,640
Proj IBIS Hammer MP	4/97	0	0	0	0	3,650	0	0	0	0	3,650
MISCELLANEOUS (EFFORTS < \$2M EACH)											
		619	619	619	0	0	0	0	0	0	619

Test and Evaluation: Not Applicable

GOVERNMENT FURNISHED PROPERTY: Not Applicable

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DATE: February 1997

FY 1998 RDT&E,N PROGRAM ELEMENT/PROJECT COST BREAKDOWN

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0604256N PROJECT NUMBER: E0602
 PROGRAM ELEMENT TITLE: Threat Simulator Development PROJECT TITLE: ECHO

	Total FY 1995 & Prior	FY 1996 Budget	FY 1997 Budget	FY 1998 Budget	FY 1999 Budget	To Complete	Total Program
Subtotal Production Development	113,050	14,422	8,674	4,519	4,454	Cont.	Cont.
Subtotal Support and Management	4,758	3,823	3,650	0	0	0	12,231
Subtotal Test and Evaluation	0	0	0	0	0	0	0
SBIR Assessment			242				242
Total Project	117,808	18,244	12,566	4,519	4,454	Cont.	Cont.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0604256N PROJECT NUMBER: E0672
 PROGRAM ELEMENT TITLE: Threat Simulator Development PROJECT TITLE: ENEWS

(U) COST (Dollars in thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
E0672 Effectiveness of Navy Electronic Warfare Systems (ENEWS)	9,989	10,008	8,341	10,556	13,713	13,072	13,347	13,656	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The objective of the Effectiveness of Navy EW Systems (ENEWS) project is the development and application of necessary simulation assets to determine the effectiveness of EW in real-world engagement situations and primarily supports the introduction of modern, effective shipboard EW systems, and tactics for the surface Navy. The heavy use of ENEWS resources by NAVSEA and other developers speaks to the overall importance of these assets. The project provides support for EW system design, Development Test (DT), Operational Test (OT), and the development of tactics. Its quick reaction capabilities have had great impact on crisis situations such as the Falklands conflict, the Iran Harpoon threat, the Persian Gulf crisis, and Operation Desert Shield/Storm.

(U) The primary threat to surface ships is Anti-Ship Missile (ASM) systems. The ENEWS project is unique in that it is the only project within the Department of Defense (DOD) dedicated to developing and providing assets to test and evaluate the effectiveness of shipboard EW systems and tactics against ASMs.

(U) The ENEWS project is a critical part of the OSD Test Resource Master Plan. This plan employs many of the ENEWS assets for planning, analysis, testing and verification of shipboard EW systems and tactics. As part of its continuing activities, ENEWS has provided T&E/DT&E/OT&E support to Combat Systems At Sea Qualification Testing (CSSQT) for CG-47, DDG-51 and CV/CVN class ships as well as SLQ-32 PHASE improvements. DT and OT support will be provided for the SLQ-32 PHASE improvements, SLQ-32 (V)1-5, Rapid Anti-ship Integrated Defense System (RAIDS), OUTLAW BANDIT systems, Multiband Anti-ship Cruise Missile Defense Tactical EW System (MATES), and other Ship self-defense initiatives including RDT&E 6.3A Advanced Technology Demonstrations.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0604256N

PROJECT NUMBER: E0672

PROGRAM ELEMENT TITLE: Threat Simulator Development

PROJECT TITLE: ENEWS

(U) Computer simulation and modeling, hardware in the loop (HITL) test facilities, and ASM simulators flown on a specially configured NP-3D aircraft are the major program assets. Resources are used in combination to measure EW system effectiveness in a cost efficient manner.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$750) Continued Computer Simulation (COMSIM) System Readiness.
- (U) (\$600) Continued COMSIM Intelligence Upgrades.
- (U) (\$938) Continued COMSIM New Developments.
- (U) (\$3,200) Continued Radio Frequency Simulation (RFSIM) Simulator Readiness.
- (U) (\$1,403) Continued RFSIM Intelligence Upgrades.
- (U) (\$743) Continued RFSIM New Developments.
- (U) (\$1,179) Continued Infrared Simulation (IRSIM) Readiness.
- (U) (\$480) Continued IRSIM Intelligence Upgrades.
- (U) (\$696) Continued IRSIM New Development.

3. (U) FY 1997 PLAN:

- (U) (\$550) Continue COMSIM System Readiness.
- (U) (\$475) Continue COMSIM Intelligence Upgrades
- (U) (\$1,070) Continue COMSIM New Developments.
- (U) (\$2,265) Continue RFSIM Simulator Readiness.
- (U) (\$1,859) Continue RFSIM Intelligence Upgrades.
- (U) (\$1,433) Continue RFSIM New Developments.
- (U) (\$1,270) Continue IRSIM Readiness.
- (U) (\$300) Continue IRSIM Intelligence Upgrades.
- (U) (\$742) Continue IRSIM New Developments.
- (U) (\$44) Portion of Program reserved for Small Business Innovation Research assessment in accordance with 15 U.S.C. 638.

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BUDGET ACTIVITY: 6 FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997
 PROGRAM ELEMENT: 0604256N PROJECT NUMBER: E0672
 PROGRAM ELEMENT TITLE: Threat Simulator Development PROJECT TITLE: ENEWS

4. (U) FY 1998 PLAN:

- . (U) (\$575) Continue COMSIS System Readiness.
- . (U) (\$525) Continue COMSIS Intelligence Upgrades
- . (U) (\$712) Continue COMSIS New Developments.
- . (U) (\$2,331) Continue RFSIS Simulator Readiness.
- . (U) (\$1,731) Continue RFSIS Intelligence Upgrades.
- . (U) (\$499) Continue RFSIS New Developments.
- . (U) (\$1,280) Continue IRSIS Readiness.
- . (U) (\$320) Continue IRSIS Intelligence Upgrades.
- . (U) (\$368) Continue IRSIS New Developments.

5. (U) FY 1999 PLAN:

- . (U) (\$600) Continue COMSIS System Readiness.
- . (U) (\$600) Continue COMSIS Intelligence Upgrades
- . (U) (\$1,020) Continue COMSIS New Developments.
- . (U) (\$3,479) Continue RFSIS Simulator Readiness.
- . (U) (\$1,565) Continue RFSIS Intelligence Upgrades.
- . (U) (\$855) Continue RFSIS New Developments.
- . (U) (\$1,450) Continue IRSIS Readiness.
- . (U) (\$540) Continue IRSIS Intelligence Upgrades.
- . (U) (\$447) Continue IRSIS New Developments.

B. (U) PROGRAM CHANGE SUMMARY:

	FY 1996	FY 1997	FY 1998	FY 1999
(U) FY 1997 President's Budget:	<u>10,219</u>	<u>10,434</u>	<u>11,356</u>	<u>13,293</u>
(U) Adjustments from PRESBUDG:	-230	-426	-3,015	-2,737
(U) FY 1998 President's Budget Submit:	9,989	10,008	8,341	10,556

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0604256N

PROJECT NUMBER: E0672

PROGRAM ELEMENT TITLE: Threat Simulator Development

PROJECT TITLE: ENEWS

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: The FY 1996 decrease of -\$0.230 million reflects a -\$0.204 million Small Business Innovation Research adjustment, -\$0.014 million program adjustment and an additional -\$0.012 million Jordanian F-16 financing rescission adjustment. The FY 1997 net decrease of -\$0.426 million reflects a -\$0.208 million Navy Working Capital Fund (NWCFF) surcharge adjustment, -\$0.208 million general reduction adjustment, and -\$0.010 million for minor pricing adjustments. The FY 1998 net decrease of -\$3.015 million consists of a -\$2.300 million adjustment to defer new equipment acquisition pending a reassessment of T&E facilities and equipment requirements (Vision 21 study); -\$0.222 million for a program adjustment; -\$0.444 million for NWCFF carryover rate reduction and research lab rate adjustment, and -\$0.049 million for minor pricing adjustments. The FY 1999 net decrease of -\$2.737 million consists of a -\$1.900 million adjustment to defer new equipment acquisition pending a reassessment of T&E facilities and equipment requirements (Vision 21 study); -\$0.921 million for a program adjustment; +\$0.155 million for NWCFF carryover, rate reduction and research lab rate adjustments, and -\$0.071 million for minor pricing adjustments.

(U) Schedule: Due to the net funding adjustments in FY 1998 and FY 1999 IOC dates will slip for the Multifunctional Seeker Simulator, the Advanced Electronic Counter Countermeasures (ECCM) target discriminator, the Free World Multispectral Imager Seeker and the Victor II simulator from FY 2001 to FY 2002. The "next Generation IR Decoy" (Foxtrot Sim 2 Alg/Hdw) will slip from FY 1999 to FY 2000. Additionally, the following projects have been deleted: Design and Develop Validation, Advanced RF/IR Seeker Simulator, Frequency Agility Simulator; CTS Target Generation System, and the new ALQ-180 Processor.

(U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E: Not applicable.

D. (U) SCHEDULE PROFILE: Not applicable.

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DATE: February 1997

FY 1998 RDT&E,N PROGRAM ELEMENT/PROJECT COST BREAKDOWN

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0604256N PROJECT NUMBER: E0672
 PROGRAM ELEMENT TITLE: Threat Simulator Development PROJECT TITLE: ENEWS

A. (U) PROJECT COST BREAKDOWN: (\$ in thousands)

Project Cost Categories	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
a. Program Management Support	489	486	486	484
b. Research Personnel	6,967	6,524	6,204	7,443
c. Travel	223	230	210	220
d. Training	109	121	110	115
e. Developmental Support Equipment Acquisition	2,173	2,284	1,331	2,294
f. Miscellaneous	28	319	0	0
g. SBIR Assessment		44		
Total	9,989	10,008	8,341	10,556

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DATE: February 1997

FY 1998 RDT&E,N PROGRAM ELEMENT/PROJECT COST BREAKDOWN

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0604256N PROJECT NUMBER: E0672
 PROGRAM ELEMENT TITLE: Threat Simulator Development PROJECT TITLE: ENEWS

B. (U) BUDGET ACQUISITION HISTORY AND PLANNING INFORMATION (\$ in thousands)

PERFORMING ORGANIZATIONS

Contractor/ Contract Government Method/ Performing Fund Type Activity Vehicle	Award/ Oblig Date	Perform Activity EAC	Project Office EAC	Total FY 1995 & Prior	FY 1996 Budget	FY 1997 Budget	FY 1998 Budget	FY 1999 Budget	To Complete	Total Program
Product Development										
NRL	WX 10/97			109,441	9,472	9,159	7,855	10,072	CONT.	CONT.
Support and Management										
Miscellaneous (EFFORTS < \$2M EACH)										
				193	517	805	486	484	CONT.	CONT.
Test and Evaluation: Not Applicable										

GOVERNMENT FURNISHED PROPERTY: Not Applicable

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DATE: February 1997

FY 1998 RDT&E,N PROGRAM ELEMENT/PROJECT COST BREAKDOWN

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0604256N

PROJECT NUMBER: E0672

PROGRAM ELEMENT TITLE: Threat Simulator Development

PROJECT TITLE: ENEWS

	Total FY 1995 & Prior	FY 1996 Budget	FY 1997 Budget	FY 1998 Budget	FY 1999 Budget	To Complete	Total Program
Subtotal Production Development	109,441	9,472	9,159	7,855	10,072	CONT.	CONT.
Subtotal Support and Management	193	517	805	486	484	CONT.	CONT.
Subtotal Test and Evaluation	0	0	0	0	0	0	0
SBIR Assessment		0	44				44
Total Project	109,634	9,989	10,008	8,341	10,556	CONT.	CONT.

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DATE: February 1997

FY 1998 RDT&E,N PROGRAM ELEMENT/PROJECT COST BREAKDOWN

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0604256N

PROGRAM ELEMENT TITLE: Threat Simulator Development

PROJECT NUMBER: E0672

PROJECT TITLE: ENEWS

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0604258N

PROGRAM ELEMENT TITLE: Target Systems Development

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
A0609 Aerial Target Systems Development	8,762	8,433	33,321	37,034	24,069	25,324	24,127	25,742	Cont.	Cont.
A0610 Weapon Systems T&E Development/Procurement	13,833	18,637	14,043	16,690	28,104	14,568	16,618	14,160	Cont.	Cont.
S0612 Surface Targets Development	607	2,616	944	1,042	1,133	1,219	1,245	1,273	Cont.	Cont.
TOTAL	23,202	29,686	48,308	54,766	53,306	41,111	41,990	41,175	Cont.	Cont.

(U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program element funds the development and procurement of aerial and surface targets and associated Target Augmentation and Auxiliary Systems (TA/AS) necessary to duplicate or simulate threat characteristics in support of weapons systems test and evaluation and fleet training. Included within this program element are continued development of Navy QF-4S for conversions, continued support of the joint QF-4 full scale aerial target development program; BQM-74 improvements; subsonic subscale aerial target (SSAT), various TA/AS developments; development of the Aerial Target Launch Ship (ATLS) for VANDAL; SM-II target variant and the Harpoon anti-ship cruise missile as a target (A0609); conversion of QF-4S, procurement of MQM-8G(EER), development and procurement of TA/AS, and the Foreign Comparative Test of the Russian MA-31 air-to-surface missile for Navy Weapons Systems Test and Evaluation (A0610); and development of surface targets for test and evaluation, continued development of surface towed targets, improved target control system and an anti-radiation missile target (S0612).

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RDT&E MANAGEMENT SUPPORT because it supports the operations and installations required for general research and development use.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0604258N

PROGRAM ELEMENT TITLE: Target Systems Development

(U) COST (Dollars in thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
A0609 Aerial Target Systems Development	8,762	8,433	33,321	37,034	24,069	25,324	24,127	25,742	Cont.	Cont.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: Aerial Target Systems and associated target augmentation and auxiliary systems are developed in response to the need to test and provide training for Joint strike and littoral warfare systems required to defend fleet surface and air units in a hostile environment. The threat envelope covered extends from the surface to 100K feet for speeds in the low subsonic range to MACH 4.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$ 95) Completed BQM-74 improvements.
- (U) (\$5,317) Continued Non-Cooperative Airborne Vector Scorer (NAVS) Engineering & Manufacturing Development (EMD).
- (U) (\$ 120) Continued Target Augmentation/Auxiliary System (TA/AS) support.
- (U) (\$1,186) Continued Joint QF-4/ 4S development.
- (U) (\$1,280) Continued target support.
- (U) (\$ 664) Continued Modeling & Simulation (M&S).
- (U) (\$ 100) Reverted to sponsor for higher priority requirement.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0604258N

PROJECT NUMBER: A0609

PROGRAM ELEMENT TITLE: Target Systems Development

PROJECT TITLE: Aerial Targets System Development

2. (U) FY 1997 PLAN:

- (U) (\$ 915) Initiate the Subsonic Subscale Aerial Target (SSAT) program.
- (U) (\$ 850) Continue M&S.
- (U) (\$ 185) Continue TA/AS support
- (U) (\$2,533) Initiate integration of the Vandal target launcher onto the Aerial Target Launch Ship (ATLS).
- (U) (\$1,494) Continue MA-31 development to include extended range (transferred from A0610).
- (U) (\$2,379) Continue target support.
- (U) (\$ 77) Portion of program reserved for Small Business Innovation Research assessment in accordance with 15 U.S.C. 638.

3. (U) FY 1998 PLAN:

- (U) (\$ 986) Continue SSAT development.
- (U) (\$1,001) Continue M&S.
- (U) (\$3,691) Continue TA/AS development for aerial targets.
- (U) (\$1,591) Continue ATLS.
- (U) (\$4,078) Continue MA-31 development.
- (U) (\$4,930) Initiate development of the Harpoon missile as an aerial target.
- (U) (\$14,789) Continue development of the Standard Missile-II (SM-II) as a target variant. (Funding moved from program element 0604366N).

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FY 1998 RDT&E, N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0604258N

PROJECT NUMBER: A0609

PROGRAM ELEMENT TITLE: Target Systems Development

PROJECT TITLE: Aerial Targets System Development

- (U) (\$2,255) Continue target support.

4. (U) FY 1999 PLAN:

- (U) (\$5,304) Continue SSAT development.

- (U) (\$ 985) Continue M&S.

- (U) (\$3,053) Continue TA/AS development and initiate the development of Drone Radio Frequency Electronic Enhancement Mechanism.

- (U) (\$2,669) Complete ATLS.

- (U) (\$4,320) Continue MA-31 development

- (U) (\$4,979) Continue development of the Harpoon missile as an aerial target.

- (U) (\$12,945) Continue development of the SM-II missile as a target variant.

- (U) (\$2,779) Continue Target support.

B. (U) PROGRAM CHANGE SUMMARY:

(U) FY 1997 President's Budget:	FY 1996	FY 1997	FY 1998	FY 1999
	9,370	8,914	20,463	24,823
(U) Adjustments from PRESBUDG:	-608	-481	+12,858	+12,211
(U) FY 1998/99 President's Budget Submit:	8,762	8,433	33,321	37,034

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0604258N

PROJECT NUMBER: A0609

PROGRAM ELEMENT TITLE: Target Systems Development

PROJECT TITLE: Aerial Targets System Development

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: The decrease of \$608 thousand in FY 1996 represents a minor program adjustment, a reprogramming to Weapon System T&E targets (A0610) and the SBIR assessment. The FY 1997 net reduction of \$481 thousand is the result of NWCf and general reduction adjustments. The FY 1998 net increase of \$12,858 thousand reflects +\$15,000 thousand for the development of the SM-II target variance (funding moved from program element 0604366N), -\$1,100 thousand transfer of funds to A0610 for full scale aerial targets upgrades, -\$444 for Modeling & Simulation (M&S) and -\$598 thousand for NWCf and other minor program adjustments. In FY 1999, the increase of +\$12,211 thousand represents +\$13,000 thousand for continued development of the SM-II target variance (funding moved from program element 0604366N), -\$48 for M&S and -\$241 thousand for NWCf and other minor program adjustments.

(U) Schedule: Not applicable

(U) Technical: Not applicable

C. (U) OTHER PROGRAM FUNDING SUMMARY: (Dollars in thousands)

	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TO	TOTAL
	ACTUAL	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	COMPLETE	PROGRAM
									CONT.	CONT.
(U)	WPN # 11	69,982	71,335	81,975	86,665	99,257	104,587	116,547		

(U) RELATED RDT&E:

(U) PE 0204136N (F/A-18 Squadrons)

(U) PE 0205667N (F-14 Upgrade)

(U) PE 0207161N (Tactical Air Intercept)

(U) PE 0207163N (Advanced Medium Range Air-to-Air Missile)

(U) PE 0604372N (New Threat Upgrade)

(U) PE 0604755N (Ship Self Defense)

D. SCHEDULE PROFILE: N/A

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FY 1998 RDT&E, N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0604258N

PROJECT NUMBER: A0610

PROGRAM ELEMENT TITLE: Target Systems Development
PROJECT TITLE: Weapon Systems T&E Development/
Procurement

(U) COST (Dollars in thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
A0610 WEAPON SYSTEMS T&E DEVELOPMENT/PROCUREMENT	13,833	18,637	14,043	16,690	28,104	14,568	16,618	14,160	Cont.	Cont.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides for the development and procurement of aerial targets used solely for test and evaluation of Naval Weapons Systems which closely replicate current and projected threats to fleet units in the Joint Strike and the Littoral Warfare environments. This replication must include characteristics related to size, performance envelope, and electromagnetic and infrared signatures. As threats change, changes must be made to keep the targets as threat representative as possible. This is done in response to changes in the requirements of the developers of naval weapons systems.

B. (U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$ 200) Supported 2 QF-4N targets.
- (U) (\$ 2,450) Completed QF-4S development, converted and supported 1 F-4S aircraft into a QF-4S target.
- (U) (\$ 6,486) First increment for procurement of 24 Vandals.
- (U) (\$ 2,626) Continued development of Non-Cooperative Airborne Vector Scorer (NAVS) and supported the NAVS program.
- (U) (\$ 1,383) Supported Foreign Cooperative Testing Program of the Russian MA-31 for replicating supersonic sea skimming anti-ship cruise missiles. (Transferred to A0609 beginning in FY 1997)
- (U) (\$ 344) Continued aviation depot level repair work for QF-4N/QF-4S targets.
- (U) (\$ 344) Continued miscellaneous target support.

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FY 1998 RDT&E, N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0604258N

PROJECT NUMBER: A0610

PROGRAM ELEMENT TITLE: Target Systems Development PROJECT TITLE: Weapon Systems T&E Development/
Procurement

2. (U) FY 1997 PLAN:

- (U) (\$ 800) Support phase out efforts for the QF-4N targets.
- (U) (\$ 5,745) Support, upgrade universal control console (UCC) equipment, develop and fabricate avionics units and convert 5 F-4S aircraft into QF-4S targets.
- (U) (\$ 6,872) Second increment and support for procurement of Vandals.
- (U) (\$ 1,483) Development of the Vandal Home-on beacon.
- (U) (\$ 2,456) Complete NAVS Engineering and Manufacturing Development phase.
- (U) (\$ 671) Continue aviation depot level repair work for QF-4N/QF-4S targets.
- (U) (\$ 297) Continue miscellaneous target support.
- (U) (\$ 313) Portion of program reserved for Small Business Innovation Research (SBIR) assessment in accordance with U.S.C. 638.

3. (U) FY 1998 PLAN:

- (U) (\$10,549) Program, engineering and logistic support, procure kit material and convert 8 F-4S aircraft into QF-4S targets.
- (U) (\$ 2,900) Continue NAVS support/procurement.
- (U) (\$ 200) Continue VANDAL support.
- (U) (\$ 394) Continue target support.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0604258N

PROJECT NUMBER: A0610

PROGRAM ELEMENT TITLE: Target Systems Development
 PROJECT TITLE: Weapon Systems T&E Development/
 Procurement

4. (U) FY 1999 PLAN:

- (U) (\$15,334) Program, engineering, and logistic support; procure kit material and government furnished equipment; fabricate and install kits; and convert 8 F-4S aircraft into QF-4S targets.
- (U) (\$ 872) Continue NAVS support.
- (U) (\$ 200) Continue VANDAL support.
- (U) (\$ 284) Continue target support.

B. (U) PROGRAM CHANGE SUMMARY:

	FY 1996	FY 1997	FY 1998	FY 1999
(U) FY 1997 President's Budget:	<u>13,599</u>	<u>19,472</u>	<u>6,863</u>	<u>6,973</u>
(U) Adjustments from PRESBUDG:	+234	-835	+7,180	+9,717
(U) FY 1998/99 President's Budget Submission:	13,833	18,637	14,043	16,690

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: The net increase of +\$234 thousand in FY 1996 represents a minor program adjustment, the SBIR assessment and the reprogramming of funds from Aerial Target Systems Development (A0609). The FY 1997 net reduction of \$835 thousand is the result of NCWF and general reduction adjustments. The \$7,180 thousand increase in FY 1998 includes a +\$1,100 thousand transfer from A0609 for full scale aerial targets upgrades, +\$6,000 thousand to fund the full scale aerial target program, - \$183 thousand for Modeling & Simulation(M&S), and +\$263 thousand for NCWF and rate adjustments. The \$9,717 thousand increase in FY 1999 includes +\$14,400 thousand to fund the full scale aerial target program, -\$4,622 to delay joint QF-4 program, - \$154 thousand for M&S, and +\$93 thousand for NCWF and other program adjustments.

(U) Schedule: Not applicable.

(U) Technical: Not applicable.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0604258N

PROJECT NUMBER: A0610

PROGRAM ELEMENT TITLE: Target Systems Development PROJECT TITLE: Weapon Systems T&E Development/
Procurement

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E:

(U) PE 0204136N	(F/A-18 Squadrons)
(U) PE 0205667N	(F-14 Upgrade)
(U) PE 0207161N	(Tactical Air Intercept)
(U) PE 0207163N	(Advanced Medium Range Air-to-Air Missile)
(U) PE 0604372N	(New Threat Upgrade)
(U) PE 0604755N	(Ship Self Defense)

D. (U) SCHEDULE PROFILE: N/A

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BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0604258N FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997
 PROJECT NUMBER: S0612
 PROGRAM ELEMENT TITLE: Target Systems Development PROJECT TITLE: Surface Targets Development

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
S0612 Surface Targets Development	607	2,616	944	1,042	1,133	1,219	1,245	1,273	Cont.	Cont.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project develops seaborne targets systems and their related target augmentation systems in support of air-to-surface/surface-to-surface weapons test and evaluation and fleet training.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$ 40) Commenced Next Generation Target Control System (NGTCS) Integration with Command and Control Augmentation.
- (U) (\$ 87) Completed requirements analysis.
- (U) (\$ 225) Completed 40 Meter Meter Mobile Ship Target (MST) documentation/design development.
- (U) (\$ 100) Continued Weapons System/Emitter. Target Augmentation System (TAS) Upgrade (Multi-mode TAS).
- (U) (\$ 155) Commenced Tow Target Avionics/Electronics development.

2. (U) FY 1997 PLAN:

- (U) (\$ 120) Continue NGTCS Integration with Command and Control Augmentation.
- (U) (\$2,120) Develop 40 Meter MST Test & Evaluation Master Plan (TEMP) and other MS II documentation and procure engineering and manufacturing model for testing.
- (U) (\$ 90) Continue Weapons System/Emitter. TAS Upgrade (Signature Evaluation and Control).

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0604258N

PROGRAM ELEMENT TITLE: Target Systems Development

PROJECT NUMBER: S0612

PROJECT TITLE: Surface Targets Development

DATE: February 1997

- (U) (\$ 80) Commence development of Modeling and Simulation (M&S) applications.
- (U) (\$ 150) Complete Tow Target Avionics/Electronics development. Procure engineering and manufacturing High Speed Anti-Radiation Missile/Infra Red (HARM/IR) platform for TAS integration and testing.
- (U) (\$ 56) Portion of program reserved for Small Business Innovation Research (SBIR) assessment in accordance with u.s.c. 638.

3. (U) FY 1998 PLAN:

- (U) (\$ 29) Commence requirements study update.
- (U) (\$ 235) Continue 40 Meter MST II documentation development and engineering/manufacturing development testing.
- (U) (\$ 110) Continue Weapons System/Emitter, TAS Upgrade.
- (U) (\$ 60) Continue M&S application development.
- (U) (\$ 310) Continue NGTCS development.
- (U) (\$ 200) Commence Portable Target Control System Development.

4. (U) FY 1999 PLAN:

- (U) (\$ 50) Continue requirements study update.
- (U) (\$ 150) Complete 40 Meter MST.
- (U) (\$ 128) Continue Weapons System/Emitter, TAS Upgrade.
- (U) (\$ 74) Continue M&S application.
- (U) (\$ 250) Complete NGTCS development.

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FY 1998 RDT&E, N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0604258N PROJECT NUMBER: S0612
 PROGRAM ELEMENT TITLE: Target Systems Development PROJECT TITLE: Surface Targets Development

- (U) (\$ 390) Continue Portable Test Control System Development.

B. (U) PROGRAM CHANGE SUMMARY:

(U) FY 1997 President's Budget:	FY 1996	FY 1997	FY 1998	FY 1999
	613	2,734	961	1,050
(U) Adjustments from PRESBUDG:	-6	-118	-17	-8
(U) FY 1998/99 President's Budget Submit:	607	2,616	944	1,042

(U) CHANGE SUMMARY EXPLANATION:

- (U) Funding: Reductions in FY 1996 result from the Jordan Recision and SBIR transfer. The decreases for FY 1997, FY 1998 and FY 1999 are due to NWCF rate and general R&D reductions.

- (U) Schedule: Not Applicable

- (U) Technical: Not Applicable

C. (U) OTHER PROGRAM FUNDING SUMMARY: (Dollars in thousands)

	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TO	TOTAL
ACTUAL	4,205	0	4,289	0	0	0	0	0	0	8,494
OPN LINE 551800										

- (U) RELATED RDT&E: Not applicable.

- D. (U) SCHEDULE PROFILE: Not applicable.

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BUDGET ACTIVITY: 6
 FY 1998 RDT&E,N PROGRAM ELEMENT/PROJECT COST BREAKDOWN
 DATE: February 1997

PROGRAM ELEMENT: 0604258N
 PROJECT NUMBER: A0609
 PROGRAM ELEMENT TITLE: Target Systems Development
 PROJECT TITLE: AERIAL TARGETS
 SYSTEMS DEVELOPMENT

A. (U) PROJECT COST BREAKDOWN: (\$in thousands)

Project Cost Categories	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
a. Hardware Development	3,860	3,100	15,527	19,933
b. Systems Engineering	1,265	1,092	4,147	7,964
c. Integrated Logistics Support	350	130	678	660
d. Test and Evaluation	450	0	7,913	2,835
e. Configuration Management	0	0	305	345
f. Contractor Engineering Support	1,339	1,912	2,476	2,840
g. Government Engineering Support	1,266	2,017	1,985	2,237
h. Travel	132	105	290	220
i. SBIR Assessment		77		
j. Reverted to Sponsor	100			
Total	8,762	8,433	33,321	37,034

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BUDGET ACTIVITY: 6
 FY 1998 RDT&E, N PROGRAM ELEMENT/PROJECT COST BREAKDOWN
 PROGRAM ELEMENT: 0604258N
 PROJECT NUMBER: A0609
 DATE: February 1997
 PROGRAM ELEMENT TITLE: Target Systems Development
 PROJECT TITLE: AERIAL TARGETS
 SYSTEMS DEVELOPMENT

B. (U) BUDGET ACQUISITION HISTORY AND PLANNING INFORMATION (\$ in thousands)

PERFORMING ORGANIZATIONS

Contractor/ Government Performing Activity Product Development Allied Signal Mishwakua, IN MQM-8G(EER) Northrop El Segundo, CA BQM-74 Phase I Motorola Phoenix, AZ NAVS Allied Signal ATLS (Integrn) McDonnell Douglas St. Louis, MO MA-31 Standard Missile Company SSST/TBMT TBD Harpoon TBD SSAT NAWC (QF-4S/ Joint)	Contract Method/ Fund Typ Vehicle	Award/ Oblig Date	Perform Activity EAC	Project Office EAC	Total FY 95 Prior	FY 1996 Budget	FY 1997 Budget	FY 1998 Budget	FY 1999 Budget	To Complete	Total Program
	S/CPFF	9/93	5,837	5,837	5,837	0	0	0	0	0	5,837
	S/CPFF	8/95	832	832	832	0	0	0	0	0	832
	C/CPFF	9/93	14,057	14,057	10,016	4,0410	0	0	0	14,057	
	S/CPFF	2/97	7,650	7,650	0	0	2,000	650	2,000	3,000	7,650
	S/CPFF	3/97	20,809	20,809	0	0	1,100	3,038	3,420	13,251	20,809
	TBD	10/97	23,484	23,484	0	0	0	12,674	10,810	0	23,484
	TBD	TBD	13,500	13,500	0	0	0	4,500	4,500	4,500	13,500
	TBD	TBD	11,979	11,979	0	0	0	0	3,878	8,101	11,979
	WX	10/94			1,968	0	0	0	0	0	1,968
Contract Less Than \$2.0M											
NAWCND (Misc)	RX	Var			1,067	0	0	1,371	360	Cont	Cont
NAWCAD (Misc)	WX	Var			6,649	1,195	581	502	475	Cont	Cont
NAWCND (Misc)	WX	Var				1,635	2,763	5,339	7,455	Cont	Cont
HQ/NSWC (Misc)	WX	Var						50	50	Cont	Cont

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FY 1998 RDT&E,N PROGRAM ELEMENT/PROJECT COST BREAKDOWNDATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0604258N

PROJECT NUMBER: A0609

PROGRAM ELEMENT TITLE: Target Systems Development

PROJECT TITLE: AERIAL TARGETS

SYSTEMS DEVELOPMENT

Contractor/ Government Performing Activity	Contract Method/ Fund Typ Vehicle	Award/ Oblig Date	Perform Activity EAC	Project Office EAC	Total FY 95 & Prior	FY 1997			FY 1998			FY 1999			To Complete		Total Program	
						Budget	Cont	Cont	Budget	Cont	Cont	Budget	Cont	Cont				
Support and Management																		
HQ/NAWC (Misc)		Var.			2,693	1,339		1,912		1,949		2,295		Cont	Cont	Cont		
HQ/NSWC (Misc)		Var.								527		545		Cont	Cont			
Test and Evaluation																		
HQ/NAWC (Misc)		Var.			457	450		0		2,091		1,008		Cont	Cont	Cont		
HQ/NSWC (Misc)		Var.								630		238		Cont	Cont			
Subtotal Product Development																		
Subtotal Support and Management																		
Subtotal Test and Evaluation																		
Reverted to Sponsor																		
SBIR Assessment								77										77
TOTAL					29,519	8,762		8,433		33,321		37,034		Cont	Cont			Cont

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FY 1998 RDT&E, N PROGRAM ELEMENT/PROJECT COST BREAKDOWN DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0604258N PROJECT NUMBER: A0610
 PROGRAM ELEMENT TITLE: Target Systems Development PROJECT TITLE: WEAPON SYSTEMS
 T&E DEV/PROCUREMENT

A. (U) PROJECT COST BREAKDOWN: (\$in thousands)

Project Cost Categories	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
a. Hardware Develop/Procurement	8,245	12,238	5,603	9,054
b. Material	485	163	1,325	500
c. Systems Engineering	848	2,845	2,776	3,442
d. Integrated Logistics Support	445	934	1,354	1,100
e. Test and Evaluation	0	0	0	0
f. Configuration Management	0	300	600	200
g. Contractor Engineering Support	696	514	655	428
h. Government Engineering Support	3,004	1,250	1,642	1,877
i. Travel	110	80	88	89
j. SBIR Assessment		313		
Total	13,833	18,637	14,043	16,690

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BUDGET ACTIVITY: 6
 FY 1998 RT&E, N PROGRAM ELEMENT/PROJECT COST BREAKDOWN
 PROGRAM ELEMENT: 0604258N
 PROJECT NUMBER: A0610
 PROGRAM ELEMENT TITLE: Target Systems Development
 PROJECT TITLE: WEAPON SYSTEMS
 T&E DEV/PROCUREMENT
 DATE: February 1997

B. (U) BUDGET ACQUISITION HISTORY AND PLANNING INFORMATION (\$In thousands)

PERFORMING ORGANIZATIONS		Award/ Oblig Date	Perform Activity EAC	Project Office EAC	Total FY 1996 & Prior	FY 1996		FY 1997 Budget	FY 1998		FY 1999 Budget	To Complete	Total Program
Contract Government/ Performing Activity Product Development Cambridge	Method/ Fund Typ Vehicle					Budget	Budget		Budget	Budget			
England (ARMS)	S/FFP	7/92	4,748	4,748	0	0	0	0	0	0	0	4,748	
Allied Signal	C/CPFF	12/95	13,562	13,562	0	6,130	7,432	0	0	0	0	13,562	
Motorola	C/CPFF	9/93	4,503	4,503	0	2,115	988	1,400	0	0	0	4,503	
TRACOR (AF)	C/CPFF		300	300	300	0	0	0	0	0	0	300	
NAWCWD (QF-4N/S)	WX		5,971	5,971	1,016	2,997	2,997	1,965	1,707	0	0	300	
NADEP CHPT (QF-4N/S)	WX		14,628	14,628	1,451	2,833	2,833	8,333	9,687	0	0	300	
Contract Less Than \$2.0M												Cont	
HQ/NAWC (MISC)	WX	Var.	2,271	2,271	2,425	2,557	2,557	1,690	4,868	0	0	Cont	
NAWC	RX	10/96	1,138	1,138	0	1,003	1,003	0	0	0	0	Cont	
Support and Management		Var.	1,535	1,535	696	514	514	655	428			Cont	
HQ/NAWC (MISC)												Cont	
Test and Evaluation												Cont	
Subtotal Product Development												Cont	
Subtotal Support and Management												Cont	
Subtotal Test and Evaluation												Cont	
SBIR Assessment												313	
Total Project			30,591	30,591	13,833	18,637	18,637	14,043	16,690			Cont	

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BUDGET ACTIVITY: 6 FY 1998 RDT&E,N PROGRAM ELEMENT/PROJECT COST BREAKDOWN DATE: February 1997

PROGRAM ELEMENT: 0604258N PROJECT NUMBER: S0612

PROGRAM ELEMENT TITLE: Target Systems Development PROJECT TITLE: Surface Targets Development

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0604759N

PROGRAM ELEMENT TITLE: Major T&E Support

(U) COST (Dollars in Thousands)

PROJECT

NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
W2195 T&E Investment	48,872	38,950	33,236	18,000	53,049	54,182	55,333	56,604	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project improves visibility of Test and Evaluation (T&E) resources across the Services for Major T&E investment funding. These funds correct major deficiencies, improve T&E capabilities, and increase T&E support effectiveness. The T&E Investment project provides support for the Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation Center (NAVUNSEAWARCEN DET AUTEC), Andros Island, Bahamas; the Naval Air Warfare Center Weapons Division (NAVNAIRWARCENWPNDIV), Point MUGU, CA and China Lake, CA; and the Naval Air Warfare Center Aircraft Division (NAVNAIRWARCENACDIV), Patuxent River, MD.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: Budget Activity 6: This program is funded under Research, Development, Test and Evaluation management support because it supports the operations and installations required for general research and development.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$6,638) NAVUNSEAWARCEN DET AUTEC. Completed Integrated Processing and Communication System project. Initiated the Replace In-Water Hydrophones project. Continued countermeasures for new and existing technologies. Initiated an Instrumentation Component Replacement (ICR) program.

- (U) (\$17,274) NAVNAIRWARCENWPNDIV. Continued to modernize core instrumentation capability. Continued upgrade of six Kineto tracking mounts with (B-mod) infrared sensor and video track capability. Initiated four (7,8,9,10) Kineto tracking mount upgrades. Continued Global Positioning System (GPS) integration into range data links and data processing. Integrated Range Application Joint Program Office Global Positioning System (RAJPO GPS) Data Link Systems at North and Sea

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0604759N PROJECT NUMBER: W2195
 PROGRAM ELEMENT TITLE: Major T&E Support PROJECT TITLE: T&E Investment

Ranges (China Lake and Point Mugu). Achieved initial operating capability (IOC) early in FY 1996. Continued second and third of five Land Range radar upgrades to control consoles and pedestals. Provided radar service life extension: Upgraded one radar and mobilized one FPS-16 radar for San Nicolas Island. Continued Electronic Combat Range (ECR) post test analysis and data products hardware and software upgrades. Completed replacement of the high-maintenance CYBER mainframe computers with low-cost distributed microcomputer network. Continued upgrades to the Land Range Control Center Integration and Processing System. Completed digitization of analog telemetry (TM) data to eliminate analog microwave. Initiated removal of analog microwave and range internet to Vandenberg Air Force Base (AFB). Continued to improve and secure communication, digital switching, cable plant, and data processing capabilities. Completed digital switch at Land Range. Completed ECR range communications systems upgrades to digital switching, data transmission, and hub architecture. Initiated replacement of flight termination antennas. Initiated modernization upgrades to Integrated Target Control Systems (ITCS) until Next Generation Target Control System (NGTCS). Continued implementation of environmental requirements for new and existing technologies. Initiated high rate TM data acquisition and processing upgrades. Initiated and completed upgrades to increase threat radar signal density at ECR.

- (U) (\$9,677) NAVAIRWARCENACDIV. Continued ICR efforts on existing flight test and ground systems to maintain core capabilities. Continued upgrades of dynamic avionics measurement capabilities. Completed initial Electromagnetic Environmental Effects (E3) test capability improvements. Continued upgrades to range flight test secure communication and high definition video, tracking, and acquisition computation systems. Continued improvements to T&E data processing and communication of data with external activities. Continued implementation of requirements of new and existing technologies. Continued Electromagnetic transient T&E improvements. Initiated Modeling and Simulation for T&E Investments. Initiated the SAMSON demonstration project.
- (U) (\$6,290) GPS. Continued to procure and integrate the Tri-service RAJPO GPS system equipment. Continued engineering support toward two years of Full Rate Production beginning mid FY 1996. Completed procurement of Large Area Tracking Range (LATR) Global Positioning System equipment for NAVUNSEAWARCEN DET AUTEC.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0604759N

PROJECT NUMBER: W2195

PROGRAM ELEMENT TITLE: Major T&E Support PROJECT TITLE: T&E Investment

- (U) (\$4,994) Portable Tracking System (PTS). Continued to monitor the procurement of major hardware in support of PTS. Continued signal processor and software development.
- (U) (\$3,999) Continued to provide maintenance and operational support for MRTFB. These funds provided essential test capabilities to meet acquisition program workload.

2. (U) FY 1997 PLAN:

- (U) (\$9,536) NAVUNSEAWARCEN DET AUTEC. Complete Countermeasure Resistant Tracking project. Continue Advanced Noise measurement project. Continue the Replace In-Water Hydrophones project. At the start of this program, the Tracking Hydrophones in the Tongue of the Ocean were 34 years old. The new in-water tracking technology will make this a cost-effective replacement approach. This program will avoid catastrophic failures of existing equipment, thereby preventing loss of in-water tracking capabilities. Cable will run to Site 1, reducing down range site activity, and reducing data communication from down range sites to command and controls at the main base. Complete requirements for new and existing technologies being installed on the range. Continue ICR efforts. Continue Advanced Noise Measurement project.
- (U) (\$4,857) NAVAIRWARCENACDIV. Continue ICR efforts on existing flight test and ground test systems to maintain core capabilities. Continue upgrade of dynamic avionics measurement program. Complete environmental requirements for new and existing technologies. Continue the SAMSON program. Continue Modeling and Simulation for T&E. Continue upgrades to tracking and data acquisition and computation systems.
- (U) (\$15,397) NAVAIRWARCENWPNDIV. Continue to modernize core instrumentation capability. Complete upgrade of four (7,8,9, 10) Kineto tracking mounts with video track capability. Continue radar service life extension upgrades on third of seven FPS-16 radars, while mobilizing the second (upgraded in FY 1996) FPS-16 for San Nicolas Island. Initiate upgrades of third radar for San Nicolas Island. Continue integration of GPS RAJPO equipment into Range systems. Initiate development of GPS support capability. Complete second and continue third of five Land Range radar upgrades to control consoles and pedestals. Continue ECR post test analysis and data products hardware and software upgrades. Continue upgrades to the Land Range control Center Integration and

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FY 1998 RDT&E, N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0604759N

PROJECT NUMBER: W2195

PROGRAM ELEMENT TITLE: Major T&E Support PROJECT TITLE: T&E Investment

Processing System. Complete phase I of removal of analog microwave and range internet to Vandenberg AFB. Initiate Air Surveillance Radar replacement for San Nicolas Island. Continue to improve and secure communication, cable plant, and data processing capabilities. Continue communication and control and radio communication improvements. Complete replacement of flight termination antennas. Continue modernization upgrades to ITCS. Complete environmental requirements for new and existing technologies.

• (U) (\$5,189) GPS. Continue to procure and integrate the Tri-service RAJPO GPS system equipment. Continue to provide engineering support during second year of Full Rate Production, leading to final full rate production equipment delivery at end of FY 1997.

• (U) (\$3,226) Portable Tracking System (PTS). Continue to monitor the procurement of major hardware in support of PTS. Continue signal processor and software development. Complete PTS.

(U) (\$745) Portion of program reserved for Small Business Innovation Research assessment in accordance with 15 U.S.C. 638.

3. (U) FY 1998 PLAN:

• (U) (\$11,099) NAVUNSEAWARCEN DET AUTEC. Continue Advanced Noise Measurement project. Continue the Tracking Hydrophone Replacement project. Continue ICR program.

• (U) (\$17,456) NAVAIRWARCENWPNDIV. Continue to modernize core instrumentation capability. Initiate upgrade of eight (11,12,13,14,15,16,17,18) Kineto tracking mounts with video capability. Continue service life extension: Complete radar service life extension upgrades on third of seven FPS-16 radars. Complete integration of GPS RAJPO equipment into Range systems. Continue development of GPS support capability. Complete third and initiate fourth of five Land Range radar upgrades to control, consoles and pedestals. Complete ECR post test analysis and data products hardware and software upgrades. Complete upgrades to the Land Range Control Center Integration and Processing System. Continue to improve and secure communication, cable plant, and data processing capabilities. Continue Air Surveillance Radar replacement for San Nicolas Island. Complete final phase of analog microwave and range internet removal to Vandenberg AFB. Continue communication and control and radio communication improvements. Continue high rate TM data acquisition and processing upgrades.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0604759N PROJECT NUMBER: W2195
PROGRAM ELEMENT TITLE: Major T&E Support PROJECT TITLE: T&E Investment

- (U) (\$4,681) NAVAIRWARCENACDIV. Continue ICR efforts on existing flight test and ground test systems to maintain core capabilities. Continue upgrade of dynamic avionics measurement capabilities. Continue improvement to range command, control, tracking, and data acquisition and computation systems. Continue Modeling and Simulation for T&E.
- 4. (U) FY 1999 PLAN:
 - (U) (\$5,807) NAVUNSEAWARCEN DET AUTEC. Complete the Tracking Hydrophone Replacement project. Continue ICR efforts.
 - (U) (\$6,960) NAVAIRWARCENWPNDIV. Continue to modernize core instrumentation capability. Complete upgrade of eight (11,12,13,14, 15,16,17, 18) Kineto tracking mounts with video capability. Complete development of GPS support capability. Continue Air Surveillance Radar replacement for San Nicolas Island. Continue to improve and secure communication, cable plant, and data processing capabilities. Continue communication and control and radio communication improvements.

- (U) (\$5,233) NAVAIRWARCENACDIV. Continue upgrade of dynamic avionics measurement capabilities. Complete improvement to range command and control systems. Continue upgrades to tracking and data acquisition and computation systems. Continue Modeling and Simulation for T&E.

B. (U) PROGRAM CHANGE SUMMARY: (Dollars in Thousands)

	FY 1996	FY 1997	FY 1998	FY 1999
(U) 1997 President's Budget:	49,027	40,612	44,331	51,704
(U) Adjustments from PRESBUDG:	-155	-1,662	-11,095	-33,704
(U) FY 1998/99 President's Budget Submit:	48,872	38,950	33,236	18,000

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0604759N

PROJECT NUMBER: W2195

PROGRAM ELEMENT TITLE: Major T&E Support

PROJECT TITLE: T&E Investment

(U) CHANGE SUMMARY EXPLANATION: (Dollars in Thousands)

(U) Funding: FY 1996 decrease reflects \$57 thousand for the Jordanian F-16 financing rescission, and \$98 thousand for the Small Business Innovation Research assessment. FY 1997 decrease of \$1,662 thousand reflects Congressional undistributed reductions. FY 1998 decrease reflects the transfer of \$9,000 thousand for the Large Anechoic Chamber project to the Military Construction, Navy appropriation; \$82 thousand for inflation adjustments; \$4,355 thousand to defer Major Test and Evaluation Investments, partially offset by an increase of \$360 thousand for environmental compliance projects. The net reduction is partially offset by a \$1,500 thousand increase for modeling and simulation and a \$482 thousand increase for Navy Working Capital Funds(NWCF)rate adjustments. FY 1999 decrease reflects \$34,317 thousand for deferral of Test and Evaluation new starts; \$1,054 thousand for T&E Investment adjustments; \$88 thousand for NWCF rate adjustments; \$67 thousand for inflation; and \$178 thousand for environmental compliance; these decreases are partially offset by a \$2,000 thousand increase for modeling and simulation.

(U) Schedule: Not applicable.

(U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E: PE 0605864N: Test and Evaluation Support (Navy)
PE 0605807F: Test and Evaluation Support (Air Force)

D. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0604759N

PROJECT NUMBER: W2195

PROGRAM ELEMENT TITLE: Major T&E Support PROJECT TITLE: T&E Investment

A. (U) PROJECT COST BREAKDOWN: (\$ in thousands)

Project Cost Categories	FY 1996	FY 1997	FY 1998	FY 1999
a. Advanced Weapon Noise Measurement	953	2,178	751	
b. Countermeasure Resistant Track	900	2,281		
c. Down Range Site Reduction	2,625			
d. Dynamic Avionics Measurements	3,000	2,115	2,000	2,000
e. ECR Data Processing Upgrade	400	1,188	1,525	
f. Environmental Investment	5,623	4,059		
g. Fiber Optic Upgrade	968	984	205	
h. GPS LATR	2,617			
i. GPS RAJPO	3,673	5,189	20	10
j. Instrumentation Component Replacement	4,924	3,977	4,725	0
k. Portable Tracking System	4,994	3,226		
l. Range Op System	2,330	90	550	1,000
m. Range Telemetry System	2,440	1,547	2,798	3,525
n. Data Presentation Upgrade (Sea Range)	91	1,627	2,000	
o. Service Life Extension of AN/FPS-16 Radars	2,521	274	1,000	
p. Tracking Hyrophone Replacement	100	4,002	8,000	5,700
q. Tracking Mounts	1,917	1,964	4,736	1,478
r. Modeling and Simulation in T&E	300	400	1,800	2,500
s. Various T&E Investments (less than \$1 million)	8,496	3,104	3,126	1,787
t. SBIR Assessment		745		
Total	48,872	38,950	33,236	18,000

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FY 1998 RDT&E, N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0604759N

PROJECT NUMBER: W2195

PROGRAM ELEMENT TITLE: Major T&E Support PROJECT TITLE: T&E Investment

B. (U) BUDGET ACQUISITION HISTORY AND PLANNING INFORMATION (\$ in thousands)

PERFORMING ORGANIZATIONS

Contractor/ Contract Government Method/ Performing Fund Type Activity Vehicle	Award/ Oblig Date	Perform Activity EAC	Project Office EAC	Total FY 1995 & Prior	FY 1996 Actual	FY 1997 Budget	FY 1998 Budget	FY 1999 Budget	To Complete	Total Program
Product Development										
AUTEC	WX	10/98	TBD	TBD	45,461	14,249	12,762	11,099	5,807	CONT.
NAWCWD	WX	10/98	TBD	TBD	94,650	24,946	20,586	17,456	6,960	CONT.
NAWCAD	WX	10/98	TBD	TBD	64,504	9,677	4,857	4,681	5,233	CONT.

Support and Management: Not Applicable

Test and Evaluation: Not Applicable

GOVERNMENT FURNISHED PROPERTY: Not Applicable

	Total FY 1995 & Prior	FY 1996 Actual	FY 1997 Budget	FY 1998 Budget	FY 1999 Budget	To Complete	Total Program
Subtotal Production Development	204,615	48,872	38,950	33,236	18,000	CONT.	CONT.
SBIR Assessment			745				
Total Project	48,872	38,950	33,236	18,000	CONT.	CONT.	204,615

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DATE: February 1997

FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605152N

PROGRAM ELEMENT TITLE: Studies and Analysis Support, Navy

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
L2097 Manpower, Personnel, and Training	262	240	252	291	298	305	312	319	CONT.	CONT.
M0106 Naval Medical Support Capability	104	96	103	119	121	124	127	130	CONT.	CONT.
R0132 CNO Program Analysis and Evaluation	1,600	232	262	308	316	323	330	337	CONT.	CONT.
R0133 National Academy of Sciences/Naval Studies Board	1,476	2,134	2,376	2,397	2,410	2,408	2,460	2,516	CONT.	CONT.
R0147 Operational Strategic and Tactical Effectiveness Analysis	381	355	403	471	482	492	503	515	CONT.	CONT.
R2040 Foreign Ship and Submarine Vulnerability Program	0	0	0	0	0	0	0	0	0	2,403
S2233 Naval Surface Warfare Studies	1,737	1,607	1,951	2,185	2,240	2,286	2,329	2,378	CONT.	CONT.
W2092 Naval Aviation Studies	1,998	2,015	3,408	3,493	2,030	2,050	2,086	2,140	CONT.	CONT.
TOTAL	7,558	6,679	8,755	9,264	7,897	7,988	8,147	8,335	CONT.	CONT.

(U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program provides analytical support to the Secretary of the Navy and the Chief of Naval Operations as a basis for major policy, planning and acquisition program execution decisions. It supports research and development strategy development and planning. It supports studies in the areas of manpower, personnel, training, and aviation. It also develops analytical tools for evaluating effectiveness of U.S. weapons against potential foreign threat ships and submarines.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RDT&E MA NAGEMENT SUPPORT because it supports the operations and installations required for general research and development use.

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DATE: February 1997

FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605152N PROJECT NUMBER: L2097
 PROGRAM ELEMENT TITLE: Studies and Analysis Support, Navy PROJECT TITLE: Manpower, Personnel and Training

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE PROGRAM	TOTAL PROGRAM CONT.
L2097 Manpower, Personnel and Training	262	240	252	291	298	305	312	319	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Chief of Naval Personnel has an ongoing need for direct analyses of Navy manpower and personnel (MP) policies and program planning. This project provides an essential management tool to: (a) assess the effectiveness of existing MP policies and programs, (b) identify needs for new policies and programs (c) determine the required manpower and training mix relative to changing demographic, societal and legislative/regulatory trends, and to evolving strategic and geopolitical factors, (d) study the impact of MP programs on Navy accession, retention, and performance, and (e) develop, validate and/or refine a broad range of MP forecasting models. The program permits Navy to more effectively utilize Research and Development expertise to respond to emerging MP problems.

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$55K) Conducted a study comparing the ability requirements implied by the accession plan with the qualifications for assignment to A-school.
- (U) (\$96K) Started a manpower modeling and simulation study to accurately determine shipboard manpower requirements.
- (U) (\$41K) Conducted an analysis and validation of the precision of the Onboard All Year Model in predicting outyear PCS cost moves requirements.
- (U) (\$50K) Conducted analysis of Navy Violence Control and Prevention programs.
- (U) (\$20K) Initiated survey and study to support the Chief of Naval Operations' (CNO) Homesteading/Homebasing Initiative.

2. (U) FY 1997 PLAN:

- (U) (\$87K) Conduct study to determine Time-on-Station metric for Permanent Change of Station (PCS) cost control.
- (U) (\$65K) Conduct Analysis of Aviation Career Incentive Pay (ACIP) to access continuation of bonus pay.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605152N

PROGRAM ELEMENT TITLE: Studies and Analysis
Support, Navy

PROJECT NUMBER: L2097

PROJECT TITLE: Manpower, Personnel and Training

- (U) (\$68K) Conduct study to determine realistic accession quality requirements.
- (U) (\$28K) Conduct study to evaluate appropriate multiple Armed Services Vocational Aptitude Battery (ASVAB) cut-score requirements for "A" Schools.
- (U) (-\$10K) Undistributed adjustment for NWCF Surcharge and General reductions.
- (U) (\$2K) Portion of program reserved for Small Business Innovation Research assessments in accordance with 15 USC 638.

3. (U) FY 1998 PLAN:

- (U) (\$75K) Support efforts to redefine and establish career paths for Navy enlisted personnel similar to the Navy officer career paths.
- (U) (\$75K) Continue to examine cultural diversity and the impact it will have on readiness and effectiveness.
- (U) (\$54K) Continue to support study efforts to accurately determine manpower requirements at sea and shore.
- (U) (\$50K) Support efforts to improve upon Navy family issues and their impact on retention and readiness.
- (U) (-\$2K) Undistributed adjustment for NWCF carryover and rates.

4. (U) FY 1999 PLAN:

- (U) (\$100K) Support studies requirements generated by the Bureau of Naval Personnel's move to Millington, TN - impact on personnel communication, and organizational issues.
- (U) (\$100K) Continue to support studies directed at improving manning and manpower determination issues.
- (U) (\$93K) Support Quality of Life study requirements and the impact quality of life has on retention and readiness.
- (U) (-\$2K) Undistributed adjustment for NWCF carryover and rates.

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DATE: February 1997

FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605152N

PROJECT NUMBER: L2097

PROGRAM ELEMENT TITLE: Studies and Analysis Support, Navy
PROJECT TITLE: Manpower, Personnel and Training

B. (U) PROGRAM CHANGE SUMMARY:

	FY 1996	FY 1997	FY 1998	FY 1999
(U) FY 1997 President's Budget:	266	250	254	293
(U) Adjustments from FY 1997 PRESBUDG:	-4	-10	-2	-2
(U) 1998/99 President's Budget:	262	240	252	291

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: Reductions of (-4K) in FY96, (-10K) in FY97, (-2K) in FY98, and (-2K) in FY 99 are due to Navy Working Capital Fund (NWCFF) rate adjustments and SBIR assessments.

(U) Schedule: Not applicable.

(U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E:

(U) PE 0603707N (Manpower, Personnel, and Training Advanced Technology Development)
(U) PE 0604703N (Manpower, Personnel, Training, Simulation and Human Factors)
(U) PE 0602234N (Materials, Electronics and Computer Technology)

D. (U) SCHEDULE PROFILE: Not applicable.

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DATE: February 1997

FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605152N

PROJECT NUMBER: M0106

PROGRAM ELEMENT TITLE: Studies and Analysis Support, Navy Medical Support Capability
Navy

(U) COST (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
M0106 Naval Medical Support Capability	104	96	103	119	121	124	127	130	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides validated data to identify the root causes of problems and to optimize services associated with the health care delivery to Navy and Marine Corps personnel afloat and in contingency operations. This usually requires database and model development and statistical analyses of inter-related requirements or operational variables, and their impact on performance. The analysis of these variables requires a combination of medical/technical knowledge and operational perspectives.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

2. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$79K) Entered the data from survey returned by women who visited any of three major Naval hospitals in 1993 as pregnant active-duty Navy women. Commenced analysis of survey data to assess risk-factor information, pregnancy outcome, gestational age, and birth weight. Produced technical report on the analysis of the hospitalization data of all hospitalized pregnancy conclusions of Navy women in Navy military treatment facilities (MTFs) between 1982 and 1992. Results included the determination of pregnancy outcome rates in Navy enlisted women, and the identification of Els as high-risk group for early fetal death outcomes.
- (U) (\$25K) In response to an inquiry by RADM N.K. Dysart, Director of the Medical Resources, Plans and Policy Division, Officer of the Chief of Naval Operations, a study was undertaken to examine the relationship between back disorders and aircraft type flown by Navy aviators. Physical examination records of 7,675 Navy pilots and aircrew members provided by Naval Aerospace Medical Institute were analyzed. Results found that aircrew members were more likely to have diagnosed back disorders than pilots for both fixed and rotary wing aircraft and that flight was found for a relationship between aircraft type and diagnosed back problems among pilots. This report is under pre-publication review.

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DATE: February 1997

FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605152N PROJECT NUMBER: M0106
 PROGRAM ELEMENT TITLE: Studies and Analysis Support, PROJECT TITLE: Navy Medical Support Capability
 Navy

3. (U) FY 1997 PLAN:
 - (U) (\$96K) Establish a database from multiple sources and examine the relationships between completed suicides, gestures, and attempts, and organizational and environmental factors in the Navy and Marine Corps to identify risk factors and opportunities for intervention.
4. (U) FY 1998 PLAN:
 - (U) (\$103K) Establish a database from multiple sources and examine the relationship between alcohol use/abuse and accidents, emphasizing the cost incurred and man days lost.
5. (U) FY 1999 PLAN:
 - (U) (\$119K) Examine the relationships between chemical, radiological and biological occupational exposures such as lead and organic solvent use and reproductive health among Navy and Marine Corps active-duty women.

B. (U) PROGRAM CHANGE SUMMARY:

	FY 1996	FY 1997	FY 1998	FY 1999
(U) FY 1997 President's Budget:	<u>105</u>	<u>100</u>	<u>103</u>	<u>119</u>
(U) Adjustments from FY 1997 PRESBUDG:	-1	-4	0	0
(U) 1998/99 President's Budget:	104	96	103	119

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605152N

PROJECT NUMBER: M0106

PROGRAM ELEMENT TITLE: Studies and Analysis Support, Navy Medical Support Capability
Navy

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: Reductions of \$1 thousand in FY96 and \$4 thousand in FY97 are the result of minor pricing adjustments.

(U) Schedule: Not applicable.

(U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E: Not applicable.

D. (U) SCHEDULE PROFILE: Not applicable.

(U) COST: (Dollars in Thousands)

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605152N

PROJECT NUMBER: R0132

PROGRAM ELEMENT TITLE: Studies and Analysis
Support, Navy

PROJECT TITLE: CNO Program Analysis and Evaluation

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
R0132										
CNO Program Analysis and Evaluation		232	262	308	316	323	330	337	CONT.	CONT.
	1,600									

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides analytical support to the Chief of Naval Operations and the Secretary of the Navy in evaluation of overall balance within total Navy programs. This includes such tasks as: (a) evaluation of force capabilities and requirements; (b) analysis of effectiveness of systems under development; (c) Secretary of Defense directed independent cost and effectiveness analyses of major Navy programs; and (d) items of Congressional interest as they relate to Navy programs. Deliverables consist of formal, structured documents containing or leading to conclusions and/or recommendations as well as the development and maintenance of databases and models. The use of databases and models is driven by the need to objectively and continually assess the impact of reduced funding and/or force drawdown upon Navy programs. They provide Navy planners and decision makers with objective, empirical data with which to make determinations regarding program planning and evaluation of issues. The models funded by this account are the primary tools used to formulate program balance in the assessment process (particularly the Readiness, Support and Infrastructure Assessments and the Investment Balance Review). The analyses based on these models form the heart of the Investment Balance Review, allowing the Navy to formulate and cost-out alternative force structure, manpower, infrastructure and readiness programs.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:
 - (U) (\$200) Maintained the Aviation Readiness model and the Ships Resource-to-Readiness model
 - (U) (\$1,400) Provided Navy's share of costs for development of an electronic desk reference set for the exchange of information to support the entire acquisition community. Components included an information reference application, a catalog of software tools, and an acquisition management forum.
2. (U) FY 1997 PLAN:
 - (U) (\$206) Maintain the Aviation Readiness model and the Ships Resource-to-Readiness model

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605152N PROJECT NUMBER: R0132
 PROGRAM ELEMENT TITLE: Studies and Analysis PROJECT TITLE: CNO Program Analysis and Evaluation
 Support, Navy

- (U) (\$26) Continue to conduct studies and analyses to support the Navy's Assessment process.
- 3. (U) FY 1998 PLAN:
 - (U) (\$213) Maintain the Aviation Readiness model and the Ships Resource-to-Readiness model.
 - (U) (\$49) Continue to conduct studies and analyses to support the Navy's Assessment process.
- 4. (U) FY 1999 PLAN:
 - (U) (\$218) Maintain the Aviation Readiness model and the Ships Resource-to-Readiness model.
 - (U) (\$90) Continue to conduct studies and analyses to support the Navy's Assessment process.

B. (U) PROGRAM CHANGE SUMMARY:

	FY 1996	FY 1997	FY 1998	FY 1999
(U) FY 1997 President's Budget:	262	258	264	310
(U) Adjustments from FY 1997 PRESBUDG:	+1,338	-26	-2	-2
(U) FY 1998/1999 President's Budget:	1,600	232	262	308

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 1996 adjustment is due to Jordanian rescission (-12), administrative and personal services rescission (-7), below threshold reprogramming for DOD Deskbook (+1,400), below threshold reprogramming for Strategic Studies Group (-50), and update to reflect actual execution (+7). FY1997 adjustment is due to Congressional Undistributed reductions (-26). FY1998 adjustment is due to NWCF adjustment (-1) and inflation (-1). FY1999 adjustment is due to Navy Working Capital Fund (NWCF) adjustment (-1) and inflation (-1).

(U) Schedule: Not applicable.

(U) Technical: Not applicable.

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DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605152N

PROJECT NUMBER: R0132

PROGRAM ELEMENT TITLE: Studies and Analysis
Support, Navy

PROJECT TITLE: CNO Program Analysis and Evaluation

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E:

(U) PE 0605154N (Center for Naval Analysis)

(U) PE 0605873M (Marine Corps Program Wide Support)

D. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605152N

PROGRAM ELEMENT TITLE: Studies and Analysis Support, Navy

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
R0133										
National Academy of Sciences/Naval Studies Board										
	1,476	2,134	2,376	2,397	2,410	2,408	2,460	2,516	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project supports the core program for the Naval Studies Board. As agreed upon between the Chief of Naval Operations (CNO) and the President of the National Academy of Sciences and with appropriate attention to the influence of the domestic economy, national objectives, social imperatives and anticipated military requirement, the Naval Studies Board will conduct and report upon surveys, investigations, and analyses in the field of scientific research and development applicable to the operation and function of the Navy. Reports consist of a briefing to the Assistant Secretary of the Navy (Research Development and Acquisition) (ASN (RD&A)) and the CNO and staff, and written technical reports.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$583) Continued research efforts and investigations in areas of interest to the Navy. Continued to support annual Navy authorized activities of importance, such as the Annual Classified Military Space Symposium and the Weinblum Memorial Lecture Series.
- (U) (\$893) Produced on-going investigations of significant importance to the Navy concerning technology of the future, selected from proposals received from CNO and ASN (RD&A).

2. (U) FY 1997 PLAN:

- (U) (\$600) Continue research efforts and investigations in areas of interest to the Navy. Continue to support annual Navy authorized activities of importance, such as the Annual Classified Military Space Symposium and the Weinblum Memorial Lecture Series.
- (U) (\$1,478) Produce investigations of significant importance to the Navy concerning technology of the future. Conduct two high payoff studies selected from proposals received from CNO and ASN(RD&A).
- (U) (\$56) Portion of entramural program reserved for Small Business Innovation Research assessment in accordance

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605152N

PROJECT NUMBER: R0133

PROJECT TITLE: Studies and Analysis
Support, Navy

PROJECT TITLE: National Academy of Sciences/Naval
Studies Board

with 15 U.S.C. 638.

3. (U) FY 1998 PLAN:

- (U) (\$621) Continue research efforts and investigations in areas of interest to the Navy. Continue to support annual Navy authorized activities of importance, such as the Annual Classified Military Space Symposium and the Weinblum Memorial Lecture Series.
- (U) (\$1,755) Produce investigations of significant importance to the Navy concerning technology of the future, selected from proposals received from CNO and ASN (RD&A).

4. (U) FY 1999 PLAN:

- (U) (\$637) Continue research efforts and investigations in areas of interest to the Navy. Continue to support annual Navy authorized activities of importance, such as the Annual Classified Military Space Symposium and the Weinblum Memorial Lecture Series.
- (U) (\$1,760) Produce investigations of significant importance to the Navy concerning technology of the future, selected from proposals received from CNO and ASN (RD&A)

B. (U) PROGRAM CHANGE SUMMARY:

(U) FY 1997 President's Budget:

FY 1996	FY 1997	FY 1998	FY 1999
1,957	2,375	2,388	2,419

(U) Adjustments from FY 1997 PRESBUDG:

-481	-241	-12	-22
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(U) FY 1998/1999 President's Budget:

1,476	2,134	2,376	2,397
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(U) CHANGE SUMMARY EXPLANATION:

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605152N

PROJECT NUMBER: R0133

PROJECT TITLE: National Academy of Sciences/Naval
Studies Board

(U) Funding: FY 1996 adjustment is due to Jordanian rescission (-2), administrative and personal services rescission (-23), SBIR assessment (-44), and update to reflect actual execution (-412). FY1997 adjustment is due to Congressional Undistributed reductions (-241). FY 1998 decrease is due to NWCf adjustment (-6) and inflation (-6). FY 1999 decrease is due to Navy Working Capital Fund (NWCf) adjustment (-13) and inflation (-9).

(U) Schedule: Not applicable.

(U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E: Not applicable.

D. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605152N

PROGRAM ELEMENT TITLE: Studies and Analysis Support, Navy

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
R0147 Operational Strategic and Tactical Effectiveness Analysis	381	355	403	471	482	492	503	515	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides the Chief of Naval Operations and the Secretary of the Navy direct analyses of Navy policy, strategy acquisition, and program planning in meeting the following objectives: (a) producing study results impacting upon important programs/issues; (b) identifying and evaluating policy and strategy alternatives and doctrine; and (c) evaluating the capabilities of programmed forces to accomplish missions assigned to the Navy. Deliverables consist of formal, structured documents containing or leading to conclusions and/or recommendations as well as the development and maintenance of databases and models. This project directly supports and is critical for conducting the Navy's joint mission assessments.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 PLAN:

. (U) (\$329) Conducted reviews of the Capability Resource Allocation Display (CAPRAD) Database and performed econometric/statistical analyses on the impact of changes resulting from downsizing and programmatic changes. Updated and revalidated the Integrated Program Assessment System (IPAS) and other models in order to run these programs using revised allocation displays.

. (U) (\$52) Conducted studies and provide enhancements to Integrated Theater Engagement Model (ITEM), the primary tool for campaign analysis for Assessments.

2. (U) FY 1997 PLAN:

. (U) (\$321) Conduct reviews of the CAPRAD Database and perform econometric/statistical analyses on the impact of changes resulting from downsizing and programmatic changes. Also update and revalidate the IPAS and other models in order to run these programs using revised allocation displays.

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DATE: February 1997

FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605152N

PROGRAM ELEMENT TITLE: Studies and Analysis
Support, Navy

PROJECT NUMBER: R0147

PROJECT TITLE: Operational Strategic and Tactical
Effectiveness

- (U) (\$20) Conduct studies and provide enhancements to ITEM, the primary tool for campaign analysis for Assessments.
- (U) (\$14) Portion of extramural program reserved for Small Business Innovation Research assessment in accordance with 15 U.S.C. 638.

3. (U) FY 1998 PLAN:

- (U) (\$345) Conduct reviews of the CAPRAD database and perform econometric/statistical analyses on the impact of changes resulting from downsizing and programmatic changes. Also update and revalidate the IPAS and other models in order to run these programs using revised allocation displays.
- (U) (\$58) Conduct studies and provide enhancements to ITEM, the primary tool for campaign analysis for Assessments.

4. (U) FY 1999 PLAN:

- (U) (\$353) Conduct reviews of the CAPRAD database and perform econometric/statistical analyses on the impact of changes resulting from downsizing and programmatic changes. Also update and revalidate the IPAS and other models in order to run these programs using revised allocation displays.
- (U) (\$118) Conduct studies and provide enhancements to ITEM, the primary tool for campaign analysis for Assessments.

B. (U) PROGRAM CHANGE SUMMARY:

	FY 1996	FY 1997	FY 1998	FY 1999
(U) FY 1997 President's Budget:	<u>403</u>	<u>393</u>	<u>405</u>	<u>474</u>
(U) Adjustments from FY 1997 PRESBUDG:	-22	-38	-2	-3
(U) FY 1998/1999 President's Budget:	381	355	403	471

(U) CHANGE SUMMARY EXPLANATION:

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BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605152N PROJECT NUMBER: R0147
PROGRAM ELEMENT TITLE: Studies and Analysis PROJECT TITLE: Operational Strategic and Tactical Support, Navy Effectiveness

(U) Funding: FY 1996 adjustment is due to Jordanian rescission (-1), SBIR assessment (-14), and update to reflect actual execution (-7). FY 1997 adjustment is due to Congressional Undistributed Reductions (-38). FY 1998 decrease is due to Navy Working Capital Fund (NWCf) adjustment (-1) and inflation (-1). FY 1999 decrease is due to NWCf adjustment (-1) and inflation(-2).

(U) Schedule: Not applicable.
(U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E:
(U) PE 0605154N (Center for Naval Analyses)
(U) PE 0605873M (Marine Corps Program Wide Support)

D. (U) SCHEDULE PROFILE: Not applicable.

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BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605152N

PROGRAM ELEMENT TITLE: Studies and Analysis
Support, Navy

PROJECT NUMBER: S2233

PROJECT TITLE: Naval Warfare Surface Studies

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGR
S2233	1,737	1,607	1,951	2,185	2,240	2,286	2,329	2,378	CONT.	CONT
Naval Surface Warfare Studies										

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides for analysis of the warfighting capability of Naval forces by examining specific selected numbers and mixes of surface combatants and other forces that are subjected to representative operational situations in a joint littoral environment. The U.S. strategic emphasis has shifted from global containment and warfighting to a global stability strategy with regional focus. As part of an overall effort at addressing future Naval force levels and capabilities, the Navy must assess the warfighting effectiveness of different mixes of surface combatants in battle groups operating in a littoral warfare environment and develop an investment strategy that supports the capabilities required. Required Operational Capabilities/Projected Operational Environment (ROC/POE) must be updated every two years or created for new ship classes. These ROC/POE's are vitally important in that mission requirements for ships drive equipment configurations, manning levels and associated shipboard accommodations, tailor ship and staff missions, capabilities, manning to new strategies, tactics, operational environments, and policies.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$1,737) Continued analyses to identify battle force capabilities considering various force mixes. These studies addressed the warfighting and national security policy and strategy requirements for effective, flexible and cost-efficient Naval Surface Warfare Forces, including the numbers and mixes of surface combatants and other forces that are subjected to representative operational situations in a joint littoral environment. Measures of Effectiveness were used in characterizing Naval Surface Warfare capabilities for battle space dominance and for power projection. The results were applied to campaign scenarios and operational situations to scope, focus and interpret the analyses. The results of these analyses were applied to the 21st century combatant (SC 21) Cost and Operational Effectiveness Analysis (COEA) and strategic planning and investment strategies for future Joint Littoral Warfare Naval Forces.

- (U) Obligations began in November 1995 and will complete June 1997.

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DATE: February 1997

FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605152N

PROJECT NUMBER: S2233

PROGRAM ELEMENT TITLE: Studies and Analysis
Support, Navy

PROJECT TITLE: Naval Warfare Surface Studies

2. (U) FY 1997 PLAN:

- (U) (\$1,573) Continue analyses of Naval Surface Warfare capabilities required for battle space dominance and power projection. Littoral warfare requirements will continue to shape the definition of surface ship capabilities. These studies will be aimed at obtaining the required capabilities in an affordable and effective surface fleet. Revise ROC/POE instructions.

- (U) (\$34) Portion of extramural program reserved for Small Business Innovation Research assessment in accordance with 15 U.S.C. 638.

- (U) Obligations will initiate in October 1996 and will complete September 1997.

3. (U) FY 1998 PLAN:

- (U) (\$1,951) Continue analyses to identify battle force capabilities considering various force mixes. These studies will address the warfighting and national security policy and strategy requirements for effective, flexible and cost-efficient Naval Surface Warfare Forces, including the numbers and mixes of surface combatants and other forces that are subjected to representative operational situations in a joint littoral environment. Measures of Effectiveness will be used in characterizing Naval Surface Warfare capabilities for battle space dominance and for power projection. The results will be applied to campaign scenarios and operational situations to scope, focus and interpret the analyses. The results of these analyses will be applied to strategic planning and investment strategies for future Joint Littoral Warfare Naval Forces. Obligations will initiate in October 1997 and will complete September 1998.

4. (U) FY 1999 PLAN:

- (U) (\$2,185) Continue analyses to identify battle force capabilities considering various force mixes. These studies will address the warfighting and national security policy and strategy requirements for effective, flexible and cost-efficient Naval Surface Warfare Forces, including the numbers and mixes of surface combatants and other forces that are subjected to representative operational situations in a joint littoral environment. Measures of Effectiveness will be used in characterizing Naval Surface Warfare capabilities for battle space dominance and for power projection. The results will be applied to campaign scenarios and operational situations to scope, focus and interpret the analyses. The results of these analyses will be applied to strategic planning and investment strategies for future Joint Littoral Warfare Naval Forces. Revise ROC/POE instructions. Obligations will initiate October 1998 and complete September 1999.

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DATE: February 1997

FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605152N PROJECT NUMBER: S2233
 PROGRAM ELEMENT TITLE: Studies and Analysis PROJECT TITLE: Naval Warfare Surface Studies
 Support, Navy

B. (U) PROGRAM CHANGE SUMMARY:

(U) FY 1997 President's Budget:	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
	1,767	1,677	1,709	1,951
(U) Adjustments from FY 1997 PRESUDG:	-30	-70	+242	+234
(U) FY 1998/1999 President's Budget:	1,737	1,607	1,951	2,185

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 96 decrease reflects minor pricing adjustments. FY 97 decrease reflects Congressional undistributed reductions. FY 98 and FY99 increases are due to SC21 Arsenal Ship Studies.
 (U) Schedule: Not applicable.
 (U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E: Not applicable.

A. (U) PROJECT COST BREAKDOWN: (\$ in thousands)

Project Cost Categories	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
a. Capabilities Analysis	1,737	1,607	1,951	2,185
Total	1,737	1,607	1,951	2,185

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605152N

PROJECT NUMBER: S2233

PROGRAM ELEMENT TITLE: Studies and Analysis

PROJECT TITLE: Naval Warfare Surface

Studies

Support, Navy

B. (U) BUDGET ACQUISITION HISTORY AND PLANNING INFORMATION (\$ in thousands)

PERFORMING ORGANIZATIONS

Contractor/ Government Performing Activity	Contract Method/ Fund Type Vehicle	Award/ Oblig Date	Perform Activity EAC	Project Office EAC	FY 1995 & Prior	FY 1996 Budget	FY 1997 Budget	FY 1998 Program	FY 1999 Budget	To Complete	Total Program
Product Development											
Various	WR	Various			830	350	180	385	433		
Various	RCP	Various			258	685	736	667	749		
Various	Competitive	Various			862	702	691	899	1,003	CONT.	CONT.

Support and Management

Test and Evaluation

GOVERNMENT FURNISHED PROPERTY Not Applicable.

	FY 1995 & Prior	FY 1996 Budget	FY 1997 Budget	FY 1998 Budget	FY 1999 Budget	To Complete	Total Program
Subtotal Product Development	1,950	1,737	1,607	1,951	2,185	CONT.	CONT.
Subtotal Support and Management							
Subtotal Test and Evaluation							
Total Project	1,950	1,737	1,607	1,951	2,185	CONT.	CONT.

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DATE: FEBRUARY 1997

FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605152N

PROGRAM ELEMENT TITLE: Studies and Analysis Support, Navy

(U) COST (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
W2092 Naval Aviation Studies	1,998	2,015	3,408	3,493	2,030	2,050	2,086	2,140	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project supports studies over a wide range of naval aviation issues that support the ongoing Joint Strike Assessment (JSA) guidelines. Results provide a basis for recommendations to the Chief of Naval Operations concerning major policy, planning, and acquisition program decisions. This effort is a management initiative which will allow allocation of study resources in a timely manner according to priorities. This ongoing program will continue to leverage more detailed program specific analysis in order to gain insight in acquisition of various weapon systems and their impact on force structure, manning levels, operational readiness and Carrier Air Wing effectiveness. This program will also support various Cost and Operational Effectiveness Analysis (COEA) Studies.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

(U) (\$300) Conducted analyses of joint theater ballistic missile defense operations in support of United States Commander in Chief, Pacific Forces Korea with Army, Air Force, Ballistic Missile Defense Office, Joint Transfer Missile Defense personnel utilizing the Weapons and Tactics Analysis Center (WEPTAC).

(U) (\$200) Initiated Tactical Imaging Reconnaissance and Surveillance study to define the Navy's plan to meet various operational goals of collecting and disseminating imagery for the next 25 years.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
DATE: FEBRUARY 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605152N

PROGRAM ELEMENT TITLE: Studies and Analysis Support, Navy

- (U) (\$698) Conducted the first phase of a two year effort to determine the mission requirements for a Common Support Aircraft (CSA) which will lead to a Milestone 0 decision.
- (U) (\$430) Conducted studies and supported the Joint Strike Assessment process including a study which analyzed alternatives for Naval Aviation squadron reorganization for the E-2/C-2, ES-3/S-3, FA-18 and P-3/EP-3/Reef Point communities, carrier sortie generation, FA-18E/F survivability.
- (U) (\$230) Conducted analyses of unified Commander in Chief's Theater Ballistic Missile Defense (TBMD) Attack Operations concepts as part of the Tri-Service TBMD Attack Operations leading to the development of a Navy concept of operations with the Navy Doctrine Command.
- (U) (\$140) Initiate an effort to analyze and develop a decision support tool, the Naval Aviation Training Support System (NATSS), which will interface with training and readiness databases to better allocate training resources.
- 2. (U) FY 1997 PLAN:
 - (U) (\$150) Continue and expand analyses of TACAIR and weapons effectiveness including tradeoffs of development and acquisition alternatives utilizing the WEPTAC modeling and simulation (M&S) facility. Perform sensitivity analyses utilizing additional M&S tools as required.
 - (U) (\$185) Continue and complete development of the flight hour program which supports the Naval Aviation Training Support System (NATSS).
 - (U) (\$400) Continue studies to support JSA issues for the current and follow-on cycle.
 - (U) (\$994) Continue and complete the CSA study leading to a Milestone 0 decision.
 - (U) (\$200) Continue and complete a Tactical Imaging Reconnaissance and Surveillance study to define the Navy's plan to meet various operational goals of collecting and disseminating imagery for the next 25 years.
 - (U) (\$55) Provide support for aviation related COEAs and studies within NAVAIR and OPNAV.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605152N

PROJECT NUMBER: W2092

PROGRAM ELEMENT TITLE: Studies and Analysis
Support, Navy

PROJECT TITLE: Naval Aviation Studies

- (U) (\$31) Portion of Program reserved for Small Business Innovation Research (SBIR) assessment in accordance with 15 U.S.C. 638.

3. (U) FY 1998 PLAN:

- (U) (\$702) Continue analyses of TACAIR and weapons effectiveness, including tradeoffs of development and acquisition alternatives utilizing the WEPTAC M&S facility. Perform sensitivity analyses utilizing additional M&S tools as required.
- (U) (\$505) Expand TBMD Attack Operations analyses to include Cruise Missile Defensive tactics and Operations.
- (U) (\$505) Continue studies to support JSA issues for the current and follow-on cycle.
- (U)(1,468) Conduct the first phase of a two year effort to determine the mission requirements for a Large Land Based Aircraft (LLBA) as a potentially common follow-on to the E-6, EP-3, P-3, C-130 and C-9 aircraft. This study will lead to a Milestone O decision.
- (U) (\$216) Initiate a low level, multi-year effort to develop a consistent methodology to quantify current and estimate future vertical lift mission effectiveness.
- (U) (\$12) Provide support for general aviation related COEAs and studies with NAVAIR and OPNAV.

4. (U) FY 1999 PLAN:

- (U) (\$603) Continue analyses of TACAIR and weapons effectiveness including tradeoffs of development and acquisition alternatives utilizing the WEPTAC M&S facility. Perform sensitivity analyses utilizing additional M&S tools as required.
- (U) (\$603) Expand TBMD Attack Operations analyses to include Cruise Missile Defensive tactics and operations.
- (U) (\$501) Continue studies to support JSA issues for the current and follow-on cycle.

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DATE: February 1997

FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605152N

PROJECT NUMBER: W2092

PROGRAM ELEMENT TITLE: Studies and Analysis
Support, Navy

PROJECT TITLE: Naval Aviation Studies

- (U) (\$1,458) Conduct the second phase of a two year effort to determine the mission requirements for a LLBA as a potentially common follow-on to the E-6, EP-3, P-3, C130 and C-9 aircraft. This study will lead to a Milestone 0 decision.
- (U) (\$221) Initiate a low level, multi-year effort to develop a consistent methodology to quantify current and estimate future vertical lift mission effectiveness.
- (U) (\$107) Provide support for general aviation related COEAs and studies within NAVAIR and OPNAV.

B. (U) PROGRAM CHANGE SUMMARY:

(U) FY 1997 President's Budget:	FY 1996 2,018	FY 1997 2,121	FY 1998 2,000	FY 1999 2,032
(U) Adjustments from Pres Budget:	-20	-106	+1,408	+1,461
(U) FY 1998/99 President's Budget:	1,998	2,015	3,408	3,493

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 1996 decrease reflects \$2 thousand for the F-16 Jordanian Rescission and \$18 thousand for the SBIR assessment. FY 1997 decrease reflects Congressional undistributed reductions. FY 1998 net increase includes \$1,500 thousand for the LLBA COEA, partially offset by decreases of \$70 thousand for Navy Working Capital Fund (NWCf) carryover and rates and \$22 thousand for repricing. The FY 1999 net increase includes \$1,500 thousand for the LLBA COEA, partially offset by decreases of \$14 thousand for NWCf carryover and rates and \$25 thousand for repricing.

(U) Schedule: Not applicable.

(U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

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DATE: February 1997

FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605152N

PROJECT NUMBER: W2092

PROGRAM ELEMENT TITLE: Studies and Analysis
Support, Navy

PROJECT TITLE: Naval Aviation Studies

(U) RELATED RDT&E: Not applicable.

D. (U) SCHEDULE PROFILE: Not applicable.

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DATE: February 1997

FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605152N PROJECT NUMBER: W2092
 PROGRAM ELEMENT TITLE: Studies and Analysis PROJECT TITLE: Naval Aviation Studies
 Support, Navy

A. (U) PROJECT COST BREAKDOWN: (\$ in thousands)

Project Cost Categories	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
a. Systems Engineering	1,748	1,733	2,931	3,004
b. Government Engineering Support	195	231	457	469
c. Travel	55	20	20	20
d. SBIR	0	31	0	0
Total	1,998	2,015	3,408	3,493

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605152N PROJECT NUMBER: W2092 DATE: February 1997
 PROGRAM ELEMENT TITLE: Studies and Analysis PROJECT TITLE: Naval Aviation Studies
 Support, Navy

B. (U) BUDGET ACQUISITION HISTORY AND PLANNING INFORMATION (\$ in thousands)

PERFORMING ORGANIZATIONS

Contractor/ Government Performing Activity	Contract Method/ Fund Type Vehicle	Award/ Oblig Date	Perform Activity EAC	Project Office EAC	Total FY 1995 & Prior	FY 1996 Actual	FY 1997 Budget	FY 1998 Budget	FY 1999 Budget	To Complete	Total Program
Product Development											
All efforts totalling less than \$2M (aggregate total) MISC											
					1611	1934	1995	3,388	3,473	CONT.	CONT.
Support and Management											
Travel					25	55	20	20	20	CONT.	CONT.
Test and Evaluation: Not applicable.											
GOVERNMENT FURNISHED PROPERTY Not Applicable.											

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

BUDGET ACTIVITY: 6	PROGRAM ELEMENT: 0605152N		PROJECT NUMBER: W2092		PROJECT TITLE: Naval Aviation Studies	
	PROGRAM ELEMENT TITLE: Studies and Analysis Support, Navy		FY 1995		FY 1996	
	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	To
	& Prior	Budget	Budget	Budget	Budget	Complete
Subtotal Product Development	1,611	1,943	1,964	3,388	3,473	CONT. CONT.
Subtotal Support and Management	25	55	20	20	20	CONT. CONT.
Subtotal Test and Evaluation	0	0	0	0	0	0 0
SBIR Assessment	0	0	31	0	0	0 31
Total Project	1,636	1,998	2,015	3,408	3,493	CONT. CONT.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605154N

PROGRAM ELEMENT TITLE: Center for Naval Analyses

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
C0031 Marine Corps Operations Analysis Group	4,322	3,942	4,399	4,468	4,526	4,569	4,684	4,847	CONT.	CONT.
R0148 Center for Naval Analyses, Navy	38,581	34,666	39,077	40,326	41,581	42,588	43,497	44,494	CONT.	CONT.
TOTAL	42,903	38,608	43,476	44,794	46,107	47,157	48,181	49,341	CONT.	CONT.

(U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Center for Naval Analyses (CNA) is the Department of the Navy's only Federally Funded Research and Development Center. CNA provides independent, objective, and expert analyses based on its unique access to sensitive data and hands-on exposure to fleet operations gained through its world-wide field program. CNA's continuing program of research is primarily concentrated along 10 categories of study called product areas. These product areas are structured to enhance CNA's focus of research and analysis upon the major present and future needs and issues of the Navy and the Marine Corps. Because of rapid advances in technology, changes in the fleet, the increasing complexity of weapon systems, and reductions in manpower, force structure, and budgets, the Navy and Marine Corps have a greater need for analyses that are both sophisticated and timely. CNA is highly qualified to meet that need.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RDT&E MANAGEMENT SUPPORT because it supports the operations and installations required for general research and development use.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605154N

PROGRAM ELEMENT TITLE: Center for Naval Analyses

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
C0031 Marine Corps Operations Analysis Group (MCOAG)	4,322	3,942	4,399	4,468	4,526	4,569	4,684	4,847	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program supports the Marine Corps' portion of the Center for Naval Analyses (CNA) Research Program under the auspices of the Department of the Navy (DON) Annual Study and Analysis Plan for CNA. It is managed as an element of the Marine Corps Studies System. This program provides independent research and analysis, those appropriate for a Federally Funded Research and Development Center, in the areas of cost and operational effectiveness analysis, manpower utilization, training, force structure, weapons systems analysis, operational tests, and field exercise support. This program also provides CNA field representative and scientific analyst support at major Marine Corps commands.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$1,934) Executed the approved Marine Corps portion of the DON FY 1996 Study and Analysis Plan for CNA including "Emerging" and "Quick Response" study and analysis requirements.
- (U) (\$1,513) Staffed six Field Representatives and nine Scientific Analysts.
- (U) (\$875) Continued four FY 1995 study and analysis projects.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605154N PROJECT NUMBER: C0031

PROGRAM ELEMENT TITLE: Center for Naval Analyses PROJECT TITLE: Marine Corps Operations Analysis Group

2. (U) FY 1997 PLAN:
 - (U) (\$1,237) Execute the approved Marine Corps portion of the DON FY 1997 Study and Analysis Plan for CNA including "Emerging" and "Quick Response" study and analysis requirements.
 - (U) (\$1,499) Staff six Field Representatives and nine Scientific Analysts.
 - (U) (\$1,206) Continue ten FY 1996 study and analysis projects.
3. (U) FY 1998 PLAN:
 - (U) (\$1,403) Execute the high priority projects in the approved Marine Corps portion of the DON FY 1998 Study and Analysis Plan for CNA including "Emerging" and "Quick Response" study and analysis requirements.
 - (U) (\$1,916) Staff six Field Representatives and nine Scientific Analysts.
 - (U) (\$1,080) Continue nine FY 1997 study and analysis projects.
4. (U) FY 1999 PLAN:
 - (U) (\$1,879) Execute the high priority projects in the approved Marine Corps portion of the DON FY 1998 Study and Analysis Plan for CNA including "Emerging" and "Quick Response" study and analysis requirements.
 - (U) (\$1,967) Staff six Field Representatives and nine Scientific Analysts.
 - (U) (\$622) Continue five FY 1997 study and analysis projects.

B. (U) PROGRAM CHANGE SUMMARY:

	FY 1996	FY 1997	FY 1998	FY 1999
(U) FY 1997 President's Budget:	<u>4,310</u>	<u>4,314</u>	<u>4,410</u>	<u>4,503</u>
(U) Adjustment from FY 1997 PRESBUDG:	+12	-372	-11	-35
(U) FY 1998/1999 PRESBUDG Submission:	4,322	3,942	4,399	4,468

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605154N PROJECT NUMBER: C0031
PROGRAM ELEMENT TITLE: Center for Naval Analyses PROJECT TITLE: Marine Corps Operations Analysis Group

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 1996 increase was due to internal adjustments. FY 1997 reduction was due to FFRDC Staff charge, NWCF surcharge, general reduction and budget resolutions. FY 1998 and FY 1999 reductions are due to inflation.

(U) Schedule: Not applicable.

(U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E:

(U) Project R0148, Center for Naval Analysis Group, CNA under this P.E.
(U) PE 0605873M (Marine Corps Program Wide Support)

D. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605154N

PROGRAM ELEMENT TITLE: Center for Naval Analyses

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
R0148	Center for Naval Analyses, Navy	38,581	34,666	39,077	40,326	41,581	42,588	43,497	44,494	CONT.
										CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project supports the Navy's portion of the Center for Naval Analyses (CNA) research program. CNA's study and analysis capabilities for the Navy cover 9 categories, or product areas, of research, including: 1) Manpower, Medical and Training; 2) Policy and Operations; 3) Infrastructure and Readiness; 4) Space and Electronic Warfare/Command, Control, Communications, and Computers/Intelligence and Information and Modeling and Simulation; 5) Systems and Force Structure; 6) Research, Development and Acquisition; 7) Field Program; 8) Scientific Analysts; and 9) Quick Response Projects. CNA's analyses have resulted in substantial improvements in force structure, fleet effectiveness, and significant cost avoidance.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$38,581) Addressed issues of major importance to Navy leadership in the above research areas. CNA's research program continued with efforts in 62 individual projects representing almost 30% of the funding. An additional 20% of CNA's funding supported analysts in field billets in over 40 locations around the world and at sea. Of the approximately 120 research projects ongoing at any given time, which span the nine different product areas, major emphasis was in the Policy and Operations, and the Systems and Force Structure product areas.

2. (U) FY 1997 PLAN:

- (U) (\$34,666) Address issues of major importance to Navy leadership in the above research areas. CNA's research program will be continually updated to support the Navy efficiently and effectively. Support for the CNA field

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605154N

PROGRAM ELEMENT TITLE: Center for Naval Analyses

PROJECT NUMBER: R0148

PROJECT TITLE: Center for Naval Analyses,
Navy

program, which assigns analysts to over 40 locations around the world and at sea, will continue to comprise approximately 22% of the funding. Additionally, emphasis will be in the Policy and Operations and System and Force Structure product areas.

3. (U) FY 1998 PLAN:

- (U) (\$39,077) Address issues of major importance to Navy leadership in the above research areas. CNA's research program will be continually updated to support the Navy efficiently and effectively. Support for the CNA field program, which assigns analysts to over 40 locations around the world and at sea, will continue to comprise approximately 22% of the funding. Additionally, emphasis will be in the Policy and Operations and System and Force Structure product areas.

4. (U) FY 1999 PLAN:

- (U) (\$40,326) Address issues of major importance to Navy leadership in the above research areas. CNA's research program will be continually updated to support the Navy efficiently and effectively. Support for the CNA field program, which assigns analysts to over 40 locations around the world and at sea, will continue to comprise approximately 22% of the funding. Additionally, emphasis will be in the Policy and Operations and System and Force Structure product areas.

B. (U) PROGRAM CHANGE SUMMARY:

(U) FY 1997 President's Budget:

(U) Adjustment from FY 1997 PRESBUDG:

(U) FY 1998/1999 PRESBUDG Submission:

FY 1996	FY 1997	FY 1998	FY 1999
<u>38,752</u>	<u>37,937</u>	<u>39,218</u>	<u>40,686</u>
-171	-3,271	-141	-360
38,581	34,666	39,077	40,326

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605154N

PROGRAM ELEMENT TITLE: Center for Naval Analyses

PROJECT NUMBER: R0148

PROJECT TITLE: Center for Naval Analyses,
Navy

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 1996 adjustment is due to Jordanian F-16 financing rescission (-44) and administrative and personal services rescission (-127). FY 1997 adjustment is due to Congressional Undistributed Reductions (-3,271). FY 1998 adjustment is due to internal Navy adjustments (-44) and inflation (-97). FY 1999 adjustment is due to NWCF and minor adjustments (-211) and inflation (-149).

(U) Schedule: Not applicable.

(U) Technical: Not applicable.

- C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.
(U) RELATED RDT&E:
(U) PE 0605152N (Studies and Analysis Support)

D. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605154N

PROGRAM ELEMENT TITLE: Center for Naval Analyses

PROJECT NUMBER: R0148

PROJECT TITLE: Center for Naval Analyses,
Navy

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605155N

PROGRAM ELEMENT TITLE: Fleet Tactical Development and Evaluation

(U) COST: (Dollars in thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE PROGRAM	TOTAL CONT.
R0151 Intertype Tactical Development and Evaluation	2,464	2,861	2,747	3,654	3,775	3,881	3,964	4,053	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program element supports all naval warfare task areas and provides technical and analytical support to the fleet operating forces to develop and evaluate tactics for newly evolving force structures, new and existing weapon system employment, and changing threat scenarios to improve and measure force readiness.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RDT&E MANAGEMENT SUPPORT because it supports the operations and installations required for general research and development use.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$430) Developed expeditionary warfare tactics against emerging threats and adapt blue water tactics to near land scenarios.
- (U) (\$340) Developed command, control, communications and computer intelligence (C4I)/command and control warfare (C2W) tactics to counter emerging threats.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605155N

PROGRAM ELEMENT TITLE: Fleet Tactical Development and Evaluation

PROJECT NUMBER: R0151

PROJECT TITLE: Intertype Tactical Development and Evaluation

- (U) (\$450) Developed Joint/Combined Force tactics to counter emerging threats.
 - (U) (\$157) Developed mine countermeasure tactics against specific emerging threat mines.
 - (U) (\$375) Developed combat identification (ID) tactics.
 - (U) (\$150) Developed Battle Damage Assessment tactics.
 - (U) (\$365) Developed Cooperative Engagement Concept (CEC)/theater air defense tactics.
 - (U) (\$197) Developed attack helicopter tactics.
2. (U) FY 1997 PLAN:
- (U) (\$73) Develop submarine coordinated localization/reconnaissance/attack tactics in the littoral.
 - (U) (\$160) Continue to develop surface to air missile effectiveness.
 - (U) (\$570) Continue to develop anti-diesel tactics.
 - (U) (\$259) Develop Amphibious Replacement Group tactics/amphibious operations.
 - (U) (\$665) Continue to develop Mine Counter Measures tactics.
 - (U) (\$220) Continue to develop integrated hardkill/electronic warfare tactics.
 - (U) (\$162) Develop combat air support in dynamic ground environment tactics.
 - (U) (\$77) Evaluate tactics for Global Positioning System delivery of MK-80 series weapons.
 - (U) (\$20) Complete development of P-3C Maverick employment tactics.
 - (U) (\$85) Develop SH-60B AAS-44 Forward Looking Infrared tactics.
 - (U) (\$225) Continue to develop helicopter expendable tactics.
 - (U) (\$78) Develop Multi-Carrier Group tactical procedures.
 - (U) (\$79) Develop Naval Surface Fire Support tactics.
 - (U) (\$155) Develop tactics for countering Anti-Ship Cruise Missile in the littoral.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605155N

PROJECT NUMBER: R0151

PROGRAM ELEMENT TITLE: Fleet Tactical Development and Evaluation

PROJECT TITLE: Intertype Tactical Development and Evaluation

- (U) (\$33) Portion of extramural program reserved for Small Business Innovation Research Assessment in accordance with 15 USC 638.

3. (U) FY 1998 PLAN:

- (U) (\$415) Continue development of expeditionary warfare tactics against emerging threats, adapting blue water tactics to near land scenarios.
- (U) (\$415) Continue development/evaluation of C4I/C2W.
- (U) (\$430) Continue development/evaluation of joint combined forces tactical procedures.
- (U) (\$415) Continue development/evaluation of mine countermeasures tactics.
- (U) (\$415) Continue development/evaluation of combat ID tactics.
- (U) (\$415) Continue development/evaluation of air defense/CEC tactics.
- (U) (\$242) Continue development/evaluation of helicopter tactics.

4. (U) FY 1999 PLAN:

- (U) (\$615) Continue development of expeditionary warfare tactics against emerging threats, adapting blue water tactics to near land scenarios.
- (U) (\$615) Continue development/evaluation of C2W/C4I.
- (U) (\$615) Continue development/evaluation of joint combined forces tactical procedures.
- (U) (\$615) Continue development/evaluation of mine countermeasures tactics.
- (U) (\$465) Continue development/evaluation of combat ID tactics.
- (U) (\$465) Continue development/evaluation of air defense/CEC tactics.
- (U) (\$264) Continue development/evaluation of helicopter tactics.

B. (U) PROGRAM CHANGE SUMMARY:

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605155N

PROJECT NUMBER: R0151

PROGRAM ELEMENT TITLE: Fleet Tactical Development and Evaluation

PROJECT TITLE: Intertype Tactical Development and Evaluation

(U) FY 1997 President's Budget:	FY 1996	FY 1997	FY 1998	FY 1999
	<u>2,522</u>	<u>2,998</u>	<u>3,103</u>	<u>3,688</u>
(U) Adjustments from FY 1997 PRESBUDG:	-58	-137	-356	-34
(U) FY 1998/1999 PRESBUDG Submission:	2,464	2,861	2,747	3,654

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 1996 adjustment is due to Jordanian F-16 financing rescission (-3), administrative and personal services (-22), SBIR assessment (-32) and update to reflect actual execution (-1). FY 1997 adjustment is due to Congressional Undistributed Reductions (-137). FY 1998 adjustment results from changes to the Navy Working Capital Fund (NWCf) and minor adjustments (-349) and inflation (-7). FY 1999 adjustment is due to NWCf and minor adjustments (-20) and inflation (-14).

(U) Schedule: Not applicable.
(U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.
(U) RELATED RDT&E:
(U) PE 0603711N (Fleet Tactical Development)

D. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605804N

PROGRAM ELEMENT TITLE: Technical Information Services

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
R0835 Technical Information Services										
R2296 2,054 Federal Laboratory Consortium	2,054	1,656	763	983	992	988	981	978	CONT.	CONT.
R2322 239 Acquisition Center of Excellence	239	0	0	0	0	0	0	0	0	239
S2257 0 Advanced Technical Information Systems	0	0	8,000	7,967	0	0	0	0	0	15,967
Total	2,293	4,533	8,763	8,950	992	988	981	978	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: Technical Information Services provides support to achieve development affordability of Navy systems and reduction of life-cycle costs through the facilitation of advanced technology associations between U.S. industry and the Navy. The goals for project R0835 are met through the following:

- (U) Navy leverage of the industry independent research and development science and technology base by facilitation of voluntary Technical Information Meetings between Navy, DOD components, and the private sector.
- (U) Support for the Navy Acquisition Research and Development Center to provide the private sector with information on Navy research and development requirements and advanced acquisition information.
- (U) Transfer of appropriate Navy-developed innovative concepts and inventions to the private sector for purposes of commercialization (Public Law 96-480, Federal Technology Transfer Act of 1986) through Cooperative Research and Development Agreements and Cooperative Agreements through Offices of Research and Technology Applications.

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BUDGET ACTIVITY: 6

FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

PROGRAM ELEMENT: 0605804N

PROGRAM ELEMENT TITLE: Technical Information Services

- (U) Promotion of advanced information acquisition and distribution techniques (in conjunction with the Defense Technical Information Center) to disseminate research, development, and technology transfer efforts of Navy components, including the networking of Navy components' technology transfer databases (Scientific and Technical Information Program).
- (U) Support for controlled access to, and exchange of, scientific and technical information by Navy/DOD components and present/potential contractors (Navy Potential Contractor Program).
- (U) This program also provides the DON interface to Director, Defense Research and Engineering, Office of Technology Transition for matters relating to policy and DOD reporting requirements for technology transfer.

(U) The Acquisition Center of Excellence program conducts the enabling research and development of the methods, processes and techniques that form the foundations for developing the databases, infrastructure, and tools that comprise the Simulation Based Acquisition (SBA) enterprise. The goals for project R2322 are met through the following:

- (U) Development of the SBA enterprise through the system engineering and test and evaluation required to achieve interoperability and focus of the legacy developments and new developments in databases, infrastructure, and tools.
- (U) Development of the advanced tools that can be used for evaluating alternate business strategies so that program managers may readily make informed and timely business strategy decisions.
- (U) Development of the methods, techniques, and the advanced tools associated with navigation, access, retrieval, and storage of diverse data types that exist in very large distributed databases so that program managers can rapidly find, develop, and assess information critical to program comprehension and decision making.
- (U) Development of the methods, techniques, and the advanced systems associated with the effects of information visualization, presentation and interaction in a learning environment for the purpose of enhancing the processes for evaluating, transforming, interacting, and communicating that information to a broad set of users.

(U) In FY 1997 this program element funds the Advanced Technical Information Systems (ATIS) project. ATIS is a component of the U.S. Navy's approach for implementing Computer-Aided Acquisition and Logistics Support technology and standards.

(U) This program element also funds the Federal Laboratory Consortium.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RDT&E MANAGEMENT SUPPORT because it supports the operations required for general research and development use.

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Exhibit R-2

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605804N PROJECT NUMBER: R0835
 PROGRAM ELEMENT TITLE: Technical Information Service PROJECT TITLE: Technical Information Services

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
R0835										
Technical Information Services										
	2,054	1,656	763	983	992	988	981	978	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program provides support to achieve development affordability of Navy systems and reduction of life-cycle costs through the facilitation of advanced technology associations between U.S. industry and the Navy. These goals are met through the following:

- (U) Navy leverage of the industry independent research and development science and technology base by facilitation of voluntary Technical Information Meetings between Navy, DOD components, and the private sector.
 - (U) Support for the Navy Acquisition Research and Development Center (NARDIC) to provide the private sector with information on Navy research and development requirements and advanced acquisition information.
 - (U) Transfer of appropriate Navy-developed innovative concepts and inventions to the private sector for purposes of commercialization (Public Law 96-480, Federal Technology Transfer Act of 1986) through Cooperative Research and Development Agreements and Cooperative Agreements (CRADAs) through Offices of Research and Technology Applications.
 - (U) Promotion of advanced information acquisition and distribution techniques (in conjunction with the Defense Technical Information Center (DTIC)) to disseminate research, development, and technology transfer efforts of Navy components including the networking of Navy components' technology transfer databases (Scientific and Technical Information Program (STIP)).
 - (U) Support for controlled access to, and exchange of, scientific and technical information by Navy/DOD components and present/potential contractors (Navy Potential Contractor Program (NPCP)).
- This program also provides the DON interface to Director, Defense Research and Engineering (DDR&E), Office of Technology Transition for matters relating to policy and DOD reporting requirements for technology transfer.

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BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605804N FY 1998/1999 RDT&E, N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

PROGRAM ELEMENT TITLE: Technical Information Service PROJECT NUMBER: R0835 PROJECT TITLE: Technical Information Services

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$2,054) Supported Navy affordability thrust by identification of industry science and technology projects that have technical development cost savings as a primary attribute, while maintaining or improving performance capabilities. Identified key product and process activities to enable technology insertion for affordability of systems. Created industry partnerships that improve affordability of Navy systems while maintaining/improving their capabilities, using the CRADA as a primary mechanism. Utilized the NARDIC as a primary mechanism for information dissemination to the private sector and begin efforts to incorporate the NPCP agreements in the networked technology transfer system currently under development. Applied advanced information dissemination techniques to continue the improvement of the Navy STIP. Completed the network of technology transfer databases for Navy laboratories and warfare centers, Office of Naval Research (ONR), and DOD. Initiated an in-depth study to assess cost effectiveness of the Navy technology transfer program.

2. (U) FY 1997 PLAN:

- (U) (\$1,642) Continue coordination efforts with Systems Commands, Program Executive Offices, Direct Reporting Program Managers, and Navy laboratories and warfare centers to leverage industry research and development efforts to meet Navy performance/affordability needs and promote submission of technical data by the private sector to the DTIC CD-ROM in order to help integrate defense production with the commercial industrial base. Support the NARDIC as the primary outreach resource to the private sector. Using the CRADA and Cooperative Agreement mechanisms, continue to create industry partnerships that allow technology insertion through the use of Integrated Process Product Development. Put into operation the networked technology transfer and NPCP database capability at the laboratory, the ONR, and DDR&E levels. Continue to improve the STIP database both in content and in level of usage by Government and/or Government-sponsored components, as part of the drive to reduce R&D costs of the Navy. Complete the in-depth study of cost effectiveness of the Navy technology transfer program.
- (U) (\$14) Portion of extramural program reserved for Small Business Innovation Research Assessment in accordance with 15 USC 638.

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BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605804N FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997
 PROGRAM ELEMENT TITLE: Technical Information Service PROJECT NUMBER: R0835
 PROJECT TITLE: Technical Information Services

3. (U) FY 1998 PLAN:

- (U) (\$763) Maintain coordination efforts with Systems Commands, Program Executive Offices, Direct Reporting Program Managers, and Navy laboratories and warfare centers to leverage industry research and development efforts to meet Navy performance/affordability needs and encourage submission of technical data by the private sector to the DTIC CD-ROM in order to help integrate defense production with the commercial industrial base. Support the NARDIC as the primary outreach resource to the private sector. Complete development of the networked technology transfer and NPCP database capability at the laboratory, the ONR, and DDR&E levels.

4. (U) FY 1999 PLAN:

- (U) (\$983) Maintain coordination efforts with Systems Commands, Program Executive Offices, Direct Reporting Program Managers, and Navy laboratories and warfare centers to leverage industry research and development effort to meet Navy performance/affordability needs and encourage submission of technical data by the private sector to the DTIC CD-ROM in order to help integrate defense production with the commercial industrial base. Support the NARDIC as the primary outreach resource to the private sector.

B. (U) PROGRAM CHANGE SUMMARY:

(U) FY 1997 President's Budget:	FY 1996 <u>1,965</u>	FY 1997 <u>1,725</u>	FY 1998 <u>1,833</u>	FY 1999 <u>2,145</u>
(U) Adjustments from FY 1997 PRESBUDG:	+89	-69	-1,070	-1,162
(U) FY 1998/1999 PRESBUDG Submission:	2,054	1,656	763	983
(U) CHANGE SUMMARY EXPLANATION:				

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605804N

PROGRAM ELEMENT TITLE: Technical Information Service

PROJECT NUMBER: R0835

PROJECT TITLE: Technical Information Services

(U) Funding: FY 1996 adjustment is due to Jordanian F-16 financing rescission (-2), SBIR assessment (-4) and update to reflect actual execution (+95). FY 1997 adjustment is due to Congressional Undistributed Reductions (-69). FY 1998 adjustment results from changes to Navy Working Capital Fund (NWCf) and other DON adjustments (-1,069) and inflation (-1). FY 1999 adjustment is due to NWCf and other DON adjustments (-1,158) and inflation (-4).

(U) Schedule: Not applicable.

(U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E: Not applicable.

D. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605804N

PROGRAM ELEMENT TITLE: Technical Information Services

PROJECT NUMBER: R2322

PROJECT TITLE: Acquisition Center of Excellence

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
R2322	0	0*	8,000	7,967	0	0	0	0	0	15,967

* Congress appropriated \$.5million in FY1997 for the ACE. These funds are currently budgeted in the Manufacturing Technology prog. (PE 0708011N, project R2322).

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program conducts the enabling research and development of the meth processes and techniques that form the foundations for developing the databases, infrastructure, and tools that comprise the Simulat Based Acquisition (SBA) enterprise. These development activities will be tested and deployed in the Acquisition Center of Excellence (ACE) and the associated geographically dispersed nodes on the Defense and National Information Infrastructures. The SBA enterprise allow program managers to reduce acquisition cycle time and reduce total life cycle costs by providing automation in support of developing and assessing alternative acquisition strategies as well as developing, deploying, and maintaining the product. The SBA enterprise will support Integrated Product Teams (IPTs) and concurrent processes embodied in Integrated Product and Process Development (IPPD) approaches. Additionally these activities will enable essential coalitions with other DoD components and the industrial base. These coalitions will focus the total technology development, enhance industrial partnering, and enable the desired technology trans. These goals will be met through the following Thrusts:

- (U) Thrust 1: Development of the SBA enterprise through the system engineering and test evaluation required to achieve interoperability and focus of the legacy developments and new developments in databases, infrastructure, and tools.
- (U) Develop and evaluate structured methods, smart product model structures, and concurrent processes which allow interoperability among legacy models and databases as well as advanced models and simulations.
- (U) Define and develop system specifications for development and evaluation of the SBA enterprise.
- (U) Develop these SBA techniques and evaluate their benefits through their use on pilot projects.

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Exhibit R-2

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605804N

PROGRAM ELEMENT TITLE: Technical Information Services

PROJECT NUMBER: R2322

PROJECT TITLE: Acquisition Center of Excellence

- (U) Analyze and evaluate advanced acquisition techniques to determine broad-based applicability and potential payoff.
- (U) Thrust 2: Development of the advanced tools that can be used for evaluating alternate business strategies so that program managers may readily make informed and timely business strategy decisions.
- (U) Develop tools and methods to enable dynamic business models which allow rapid evaluation of and insight to the critical drivers of an acquisition program. These tools will provide the assessment of cycle time drivers and the understanding necessary to conduct alternate process mappings.
- (U) Investigate and develop business strategy gaming techniques as they apply to evaluating process cost and risk tradeoff among alternative acquisition paths.
- (U) Investigate and develop dynamic system models based on Cost As an Independent Variable (CAIV) techniques allowing acquisition program managers to rapidly assess the impact of technical designs and programmatic decisions as related to aspects of lifecycle costs.
- (U) Design, develop, and evaluate the tool set and environment necessary to allow acquisition program managers to rapidly conduct IPPD acquisitions with IPTs.
- (U) Thrust 3: Development of the methods, techniques, and the advanced tools associated with navigation, access, retrieval, and storage of diverse data types that exist in very large distributed databases so that program managers can rapidly find, develop, and assess information critical to program comprehension and decision making.
- (U) Develop and evaluate the methods and advanced tools to allow rapid navigation, without information overload, through diverse subject matter databases within the Navy, DoD, academia and other data sources.
- (U) Develop methods and analyze process/performance metrics for real-time access of multimedia data for acquisition program managers.
- (U) Thrust 4: Development of the methods, techniques, and the advanced systems associated with the effects of mission visualization, presentation and interaction in a learning environment for the purpose of enhancing the processes for evaluating, transforming, interacting, and communicating that information to a broad set of users.
- (U) Design, develop, test and evaluate methods and processes which will lead to a cultural transition from a transactional management approach to a transformational approach for future acquisition program execution.

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BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605804N FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

PROGRAM ELEMENT TITLE: Technical Information Services PROJECT NUMBER: R2322 PROJECT TITLE: Acquisition Center of Excellence

- (U) Develop and apply cognitive immersion techniques to provide a visual enterprise management system capable of manifest the full data set (information and implications) to program managers to facilitate rapid understanding, communication, and decision making.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS: Not applicable.
2. (U) FY 1997 PLAN: Not applicable.

Congress appropriated \$.5million in FY1997 for the ACE. These funds are currently budgeted in the Manufacturing Technology program (PE 0708011N, project R2322).

3. (U) FY 1998 PLAN:
(U) (\$8,000)

- (U) Conduct system engineering and test and evaluation of the SBA enterprise.
- (U) Conduct development of the required structured methods, smart product model structures, and concurrent process conjunction with the efforts in DARPA, ONR, DMSO, DoNMSO, DISA, and industry.
- (U) Complete the draft system specifications for development and evaluation of the SBA enterprise.
- (U) Design component level experiments addressing the performance drivers associated with SBA techniques.
- (U) Conduct investigations of critical component technologies and tools and test and evaluate as appropriate.
- (U) Apply SBA techniques and evaluate their benefits through their use on pilot projects.
- (U) Develop experiments and metrics for these pilot projects.
- (U) Begin the analysis and evaluations of the SBA advanced acquisition techniques in a total acquisition sense to determine broad-based applicability and potential payoff for cost and cycle time reductions.
- (U) Maintain a database that documents the results, metrics, "world-class" strategies, "world-class" practices, and lessons learned.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605804N

PROGRAM ELEMENT TITLE: Technical Information Services

PROJECT NUMBER: R2322

PROJECT TITLE: Acquisition Center of Excellence

- (U) Provide the database to the supporting electronic repository.
- (U) Complete development and testing of the first generation dynamic business models which allow rapid evaluation and insight to the critical drivers of the acquisition programs.
- (U) Document the investigations and complete the development of the first generation dynamic system model(s) based CAIV techniques.
- (U) Complete development of the ACE information repository and the associated connections to the other DoD/DoN databases.
- (U) Develop process/performance metrics for real time access of multimedia data for acquisition program managers.
- (U) Define and execute acquisition exercises with program managers.
- (U) Establish and maintain a Program Manager's Assistance Group (PMAG) for any program manager requiring support.
- (U) Provide IPPD/IPT and SBA enterprise training to the program managers.

4. (U) FY 1999 PLAN: (U) (\$7,967)

- (U) Complete development of the SBA enterprise.
- (U) Complete development of the required structured methods, smart product model structures, and concurrent process in conjunction with the efforts in DARPA, ONR, DMSO, DONMSO, DISA, and industry.
- (U) Complete the final system specifications for development and evaluation of the SBA enterprise.
- (U) Continue development of component level experiments addressing the performance drivers associated with SBA techniques.
- (U) Continue investigations of critical component technologies and tools and test and evaluate as appropriate.
- (U) Continue development of metrics, experiments, and application of the SBA techniques to pilot projects.
- (U) Analyze and evaluate the SBA advanced acquisition techniques in a total acquisition sense to determine broad-b applicability and potential payoff for cost and cycle time reductions.
- (U) Maintain a database that documents the results, metrics, "world-class" strategies, "world-class" practices, and lessons learned.

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BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605804N DATE: February 1997
 PROGRAM ELEMENT TITLE: Technical Information Services PROJECT NUMBER: R2322
 PROJECT TITLE: Acquisition Center of Excellence

- (U) Provide the database to the supporting electronic repository.
- (U) Complete development and testing of the second generation dynamic business models which allow rapid evaluation and insight to the critical drivers of the acquisition programs.
- (U) Document the investigations and complete the development of the second generation dynamic system model(s) base CAIV techniques.
- (U) Develop process/performance metrics for real time access, retrieval, interaction, and communication required for acquisition program manager processes.
- (U) Continue to define and execute acquisition exercises with program managers.
- (U) Continue to provide PMAG for any program manager requiring support.
- (U) Continue to provide IPPD/IPT and SBA enterprise training will to the program managers.

B. (U) PROGRAM CHANGE SUMMARY:

(U) FY 1997 President's Budget:	FY 1996	FY 1997	FY 1998	FY 1999
	0	0	0	0
(U) Adjustments from FY 1997 PRESBUDG:	0	0	+8,000	+7,967
(U) FY 1998/1999 PRESBUDG Submission:	0	0	8,000	7,967

(U) CHANGE SUMMARY EXPLANATION:

- (U) Funding: Recent approaches to acquisition streamlining have revealed the importance of continuous reform if the service to achieve the capability of deploying new technology broadly and in an affordable manner.
- (U) Schedule: Not applicable.
- (U) Technical: Not applicable.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605804N PROJECT NUMBER: R2322

PROGRAM ELEMENT TITLE: Technical Information Services PROJECT TITLE: Acquisition Center of Excellence

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E: Not applicable.

D. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605853N

PROGRAM ELEMENT TITLE: Management, Technical International Support

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY1996 ACTUAL	FY1997 ESTIMATE	FY1998 ESTIMATE	FY1999 ESTIMATE	FY2000 ESTIMATE	FY2001 ESTIMATE	FY2002 ESTIMATE	FY2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
R0115** SACLANT Anti-Submarine Warfare (ASW) Research Center 231		-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
R0149 International Cooperative RDT&E 1,673	1,755	1,798	2,198	2,304	2,350	2,409	2,464		CONT.	CONT.
R1767 Naval War College/Center for Naval Warfare Studies 1,931	1,525	1,591	1,647	1,682	1,710	1,747	1,786		CONT.	CONT.
X2221* Assessment Program 11,014	11,983	11,630	13,000	13,341	13,668	13,962	13,694		CONT.	CONT.
X2222 Naval Modeling and Simulation 2,651	4,409	9,286	10,066	12,568	13,480	12,822	12,981		CONT.	CONT.
TOTAL	17,500	19,672	24,305	26,911	29,895	31,208	30,940	30,925	CONT.	CONT.

* Project X1991 (P.E. 0603763N) and Projects R0231, R0905, and X1795 (P.E. 0605853N) were consolidated into new project X2221 in FY 1996.

** Funds transferred to Project R0149 in FY 1996

(U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program provides management and technical support for several national and international projects.

(U) Project R0115 provided for the salary and administrative costs to maintain the U.S. scientific staff assigned to the Supreme Allied Commander Atlantic, Undersea Research Center (SACLANTCEN), La Spezia, Italy. Additionally, R0115 supported

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605853N

PROGRAM ELEMENT TITLE: Management, Technical International Support

collaboration between U.S./SACLANTCEN scientists, the lease/loan of equipment, and the purchase of expendables to support the Centre's scientific program.

(U) Project R0149 provided program management, execution, and support to implement a broad range of cooperative naval research and development (R&D) initiatives with allied and friendly nations. Potential cooperative programs were pursued to fulfill established operational requirements, enhance U.S./allied interoperability and standardization, obtain unique foreign technologies, and reduce U.S. developmental and production costs. Such efforts resulted in:

- * (U) Development and negotiation of approximately 25 international RDT&E Memoranda of Understanding with allied and friendly nations.

- * (U) Management of over 300 information exchange agreements.

- * (U) Participation in armaments cooperation fora including the Conference of NATO Armaments Directors groups (e.g., the NATO Naval Armaments Group), Senior National Representative (SNR) consultation, and the Technical Cooperative Program.

(U) Project R1767 supports the Naval War College (NWC) in formulating and developing strategy and campaign alternatives. Under this project, the NWC provides continuing support to the Chief of Naval Operations Strategic Studies Group, the Center for Naval Warfare Studies, and other CNO, UNIFIED, and Fleet CINC projects in the area of multi-national cooperation and command, control, communications and intelligence.

(U) Project X2221 Funds were consolidated from Project X1991 (P.E. 0603763N) and Projects R0231, R0905, and X1795 (P.E. 0605853N) into this new project in FY 1996. Project X2221 provides analytical and management support for the Planning and Programming process. This project supports the development of annual Joint Mission Area/Support Area/Investment Balance Review/Joint Warfighting Capability assessments which provide the analytical underpinnings and basis for programmatic decisions made by the Navy's top leadership.

(U) Project X2222 provides the overarching policy, coordination and technical support for Naval modeling and simulation. This project responds to Congressional guidance to improve modeling and simulation focus, coordination and oversight. It enhances development and execution of a coordinated Naval M&S program, including distributed simulation tool development, M&S incorporation with C4I systems and embedded training systems, and an orderly process of model Verification, Validation and Accreditation required by current directives.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: These programs are funded under RDT&E Management Support because it supports the operations and installations required for general research and development use.

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FY 1998 RDT&E, N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605853N

PROGRAM ELEMENT TITLE: Management, Technical International Support

(U) COST (Dollars in thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
R0149										
International Cooperative RDT&E										
	1,673	1,755	1,798	2,198	2,304	2,350	2,409	2,464	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides program management, execution, and support to implement a broad range of cooperative naval research and development (R&D) initiatives with allied and friendly nations. Potential cooperative programs are pursued to fulfill established operational requirements, enhance U.S./allied interoperability and standardization, obtain unique foreign technologies, and reduce U.S. developmental and production costs. Such efforts result in:

- *(U) Development and negotiation of approximately 25 International RDT&E Agreements with allied and friendly nations.
- *(U) Execution of over 300 information exchange annexes.
- *(U) Participation in armaments cooperation fora including the Conference of NATO Armaments Directors groups (e.g., the NATO Naval Armaments Group), Senior National Representative (SNR) meetings, the Technical Cooperative Program and Scientific Committee National Representatives meetings.
- *(U) Continued USN collaboration and participation in joint research initiatives with NATO Supreme Allied Command Atlantic, Undersea Research Centre (SACLANTCEN) in La Spezia, Italy.
- *(U) Participation in the Engineering and Scientist Exchange Program (ESEP).

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:
 - (U) (\$100) Supported DoN participation at SNR Conferences with allies for harmonization of requirements and identification of potential collaborative R&D projects.
 - (U) (\$350) Supported DoN participation in U.S./allied data exchange conferences to identify foreign technologies and R&D projects in which the Navy may desire to collaborate as well as on-going efforts to initiate/revise/terminate data exchange annexes (DEAs) to target new technologies and expand, where appropriate, to include exchanges with former Soviet Union (FSU) countries.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605853N

PROGRAM ELEMENT TITLE: Management, Technical
International Support

PROJECT NUMBER: R0149

PROJECT TITLE: International and
Cooperative RDT&E

- (U) (\$550) Updated and maintained the DoN data bases for drafting, negotiating, managing and tracking of proposed International Agreements (IAs) for "high leverage/high payoff" R&D technology base cooperative projects with key allies and friendly nations.
- (U) (\$142) Provided support to the Tri-Service Project Reliance International Programs Subpanel in identifying and pursuing cooperative opportunities with allies in critical technology areas.
- (U) (\$431) Maintained a level of Navy participation in the ESEP at approximately six scientists/engineers. Continued to conduct post-assignment analysis of scientists/engineers to better target assignments with emerging technologies and programs at foreign research establishments.
- (U) (\$100) Funded the efforts of Systems Command (SYSCOMs) and laboratories in researching and negotiating international cooperative programs.
- 2. (U) FY 1997 PLAN:
 - (U) (\$100) Continue to support DoN participation at SNR Conferences with allies for harmonization of requirements and identification of potential collaborative R&D projects.
 - (U) (\$400) Continue to support DoN participation in U.S./allied data exchange conferences to identify foreign technologies and R&D projects in which the Navy may desire to collaborate as well as on-going efforts to initiate/revise/terminate DEAs to target new technologies and expand, where appropriate, to include exchanges with FSU countries.
 - (U) (\$550) Continue to update and maintain the DoN data bases for drafting, negotiating, managing and tracking of proposed IAs for "high leverage/high payoff" R&D technology base cooperative projects with key allies and friendly nations.
 - (U) (\$ 26) Provide support to Acquisition Integrated Product Teams (IPTs) in evaluating international cooperative alternatives in development of DON programs as well as support to OSD International Cooperative Opportunities Groups (ICOG) regarding DON requirements and initiatives.
 - (U) (\$410) Maintain a level of Navy participation in the ESEP at approximately five scientists/engineers. Continue to conduct post-assignment analysis of scientists/engineers to better target assignments with emerging technologies and programs at foreign research establishments.
 - (U) (\$ 81) Continue to fund the efforts of SYSCOMs and laboratories in researching and negotiating international cooperative programs.
 - (U) (\$167) Continue to fund USN collaboration and participation in joint research initiatives with NATO SACLANTCEN in the areas of anti-submarine warfare (ASW), mine countermeasures (MCM), and littoral warfare research.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605853N

PROGRAM ELEMENT TITLE: Management, Technical
International Support

PROJECT NUMBER: R0149

PROJECT TITLE: International and
Cooperative RDT&E

- (U) (\$ 21) Portion of extramural program reserved for Small Business Innovation Research Assessment in accordance with 15 USC 638.
- 3. (U) FY 1998 PLAN:
 - (U) (\$100) Continue to support DoN participation at SNR Conferences with allies for harmonization of requirements and identification of potential collaborative R&D projects.
 - (U) (\$400) Continue to support DoN participation in U.S./allied data exchange conferences to identify foreign technologies and R&D projects in which the Navy may desire to collaborate as well as on-going efforts to initiate/revise/terminate DEAs to target new technologies and expand, where appropriate, to include exchanges with FSU countries.
 - (U) (\$570) Continue to update and maintain the DoN data bases for drafting, negotiating, managing and tracking of proposed IAs for "high leverage/high payoff" R&D technology base cooperative projects with key allies and friendly nations.
 - (U) (\$ 50) Provide support to Acquisition IPTs in evaluating international cooperative alternatives in development of DON programs as well as support to OSD ICOGs regarding DON requirements and initiatives.
 - (U) (\$411) Maintain a level of Navy participation in the ESEP at approximately six scientists/engineers. Continue to conduct post-assignment analysis of scientists/engineers to better target assignments with emerging technologies and programs at foreign research establishments.
 - (U) (\$100) Continue to fund the efforts of SYSCOMs and laboratories in researching and negotiating international cooperative programs.
 - (U) (\$167) Continue to fund USN collaboration and participation in joint research initiatives with NATO SACLANTCEN in the areas of ASW, MCM, and littoral warfare research.
- 4. (U) FY 1999 PLAN:
 - (U) (\$150) Continue to support DoN participation at SNR Conferences with allies for harmonization of requirements and identification of potential collaborative R&D projects.
 - (U) (\$450) Continue to support DoN participation in U.S./allied data exchange conferences to identify foreign technologies and R&D projects in which the Navy may desire to collaborate as well as on-going efforts to initiate/revise/terminate DEAs to target new technologies and expand, where appropriate, to include exchanges with FSU countries.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605853N

PROGRAM ELEMENT TITLE: Management, Technical
International Support

PROJECT NUMBER: R0149

PROJECT TITLE: International and
Cooperative RDT&E

- (U) (\$650) Continue to update and maintain the DoN data bases for drafting, negotiating, managing and tracking of proposed IAS for "high leverage/high payoff" R&D technology base cooperative projects with key allies and friendly nations.
- (U) (\$121) Provide support to Acquisition IPTs in evaluating international cooperative alternatives in development of DON programs as well as support to OSD ICOGs regarding DON requirements and initiatives.
- (U) (\$500) Maintain a level of Navy participation in the ESEP at approximately six scientists/engineers. Continue to conduct post-assignment analysis of scientists/engineers to better target assignments with emerging technologies and programs at foreign research establishments.
- (U) (\$150) Continue to fund the efforts of SYSCOMs and laboratories in researching and negotiating international cooperative programs.
- (U) (\$177) Continue to fund USN collaboration and participation in joint research initiatives with NATO SACLANTCEN in the areas of ASW, MCM, and littoral warfare research.

B. (U) PROGRAM CHANGE SUMMARY:

	FY 1996	FY 1997	FY 1998	FY 1999
(U) FY 1997 President's Budget:	1,702	1,861	1,928	2,275
(U) Adjustments from FY 1997 PRESBUDG:	- 29	-106	-130	-77
(U) FY 1998/1999 PRESBUDG Submission	1,673	1,755	1,798	2,198

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 1996 funding decrease is due to Jordanian F-16 financing rescission (-2), administrative and personal services rescission (-6), SBIR assessment (-13), and update to reflect actual execution (-8). FY 1997 funding decrease is due to Congressional Undistributed Reductions (-106). FY 1998 funding decrease is due to Repricing of International Programs (-64) and Navy Working Capital Fund (NWCF) and minor adjustments (-66). FY 1999 funding decrease is due to Repricing of International Programs (-59) and NWCF and minor adjustments (-18).

(U) Schedule: Not applicable.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605853N

PROGRAM ELEMENT TITLE: Management, Technical
International Support

PROJECT NUMBER: R0149

PROJECT TITLE: International and
Cooperative RDT&E

(U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E:

(U) PE 0603790D Nunn Araments Cooperation

(U) PE 0605130D Foreign Cooperative Testing

(U) PE 0603790N NATO Cooperative Research and Development

D. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605853N

PROGRAM ELEMENT TITLE: Management, Technical International Support

(U) COST: (Dollars in thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
R1767 Naval War College/Center for Naval Warfare Studies	1,931	1,525	1,591	1,647	1,682	1,710	1,747	1,786	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: Naval War College (NWC) research activities serve as a focal point, stimulus, and major source of strategic and campaign thought within the Navy. These efforts generate strategy and campaign alternatives, provide for evaluation through wargaming methodologies, and provide recommendations to the Chief of Naval Operations (CNO) and fleet commanders regarding the formulation and execution of strategy.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$1,275) Conducted strategic studies in response to SECNAV, CNO, UNIFIED, and Fleet CINC taskings in such areas as nuclear proliferation, multi-national cooperation options, U.N. Peacekeeping, Pacific Basin options, SECNAV/CNO POM, force structure and strategic games.
- (U) (\$ 600) Conducted major wargames culminating in Global '96.
- (U) (\$ 56) Provided for selected NWC students to conduct advanced research projects.

2. (U) FY 1997 PLAN:

- (U) (\$ 852) Conduct strategic studies in response to SECNAV, CNO, UNIFIED, and Fleet CINC taskings in such areas as expeditionary warfare, Russian naval military-to-military relations, and crisis management.
- (U) (\$ 615) Conduct major wargames culminating in Global '97.
- (U) (\$ 58) Provide for selected NWC students to conduct advanced research projects.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605853N

PROGRAM ELEMENT TITLE: Management, Technical
International Support

PROJECT NUMBER: R1767

PROJECT TITLE: Naval War College/
Center for Naval Warfare Studies

3. (U) FY 1998 PLAN:

- (U) (\$ 904) Conduct strategic studies in response to SECNAV, CNO, UNIFIED, and Fleet CINC taskings in such areas as peacekeeping and peace enforcement, environmental law and freedom of navigation, and direct fleet support.
- (U) (\$ 627) Conduct major wargames culminating in Global '98
- (U) (\$ 60) Provide for selected NWC students to conduct advanced research projects

4. (U) FY 1999 PLAN:

- (U) (\$ 935) Conduct strategic studies in response to SECNAV, CNO, UNIFIED, and Fleet CINC taskings in such areas as maritime strategy, decision support, and direct fleet support.
- (U) (\$ 650) Conduct major wargames culminating in Global '99.
- (U) (\$ 62) Provide for selected NWC students to conduct advanced research projects.

B. (U) PROGRAM CHANGE SUMMARY:

	FY 1996	FY 1997	FY 1998	FY 1999
(U) FY 1997 President's Budget:	1,961	1,628	1,648	1,666
(U) Adjustments from FY 1997 PRESBUDG:	-30	-103	-57	-19
(U) FY 1998/1999 PRESBUDG Submission:	1,931	1,525	1,591	1,647

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 1996 adjustment is due to Jordanian F-16 financing rescission (-4), administrative and personal services rescission (-5), and SBIR assessment (-21). FY 1997 adjustment is due to Congressional Undistributed Reductions (-103). FY 1998 funding decrease is due to NWC and minor adjustments (-51) and inflation (-6). FY 1999 funding decrease is due to NWC and minor adjustments (-10) and inflation (-9).

(U) Schedule: Not applicable.
(U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E: Not applicable.

D. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605853N

PROGRAM ELEMENT TITLE: Management, Technical International Support

(U) COST (Dollars in thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
X2221 Assessment Program	11,014	11,983	11,630	13,000	13,341	13,668	13,962	13,694	CONT.	CONT.

Project X1991 (P.E. 0603763N) and Projects R0231, R0905, and X1795 (P.E. 0605853N) were consolidated into project X2221 in FY 1996.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: X2221, Assessment Program consolidates analytical and management support to the Planning and Programming segments of the Navy Planning, Programming and Budgeting System (PPBS). This project supports the development of annual Joint Mission Area/Investment Balance Review assessments which provide analytical underpinnings and basis for programmatic decisions made by the Navy's top leadership during the Planning and Programming phases of the PPBS process. This program provides the Navy input to the VCJCS lead Joint Warfighting Capability Assessment process. Assessment program develops tools and analytical methodologies based on standards and technical recommendations as provided by the Naval Modeling and Simulation Program (X2222) and provides technical leadership for the analysis functional area of Naval Modeling and Simulation.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:
 - (U) (\$ 150) Developed, updated and maintained detailed level of Navy Standard scenarios based on Defense Planning Guidance.
 - (U) (\$8,297) Performed Joint Mission Area/Support Area Assessments to support the interactive Investment Balance Review process. Efforts include Joint Strike, Joint Surveillance, Strategic Deterrence, Forward Presence, Joint Littoral, Joint SEW/I, and Strategic Sealift/Protection and their integration into the Investment Balance Review. Provided Navy input to JWCA process.
 - (U) (\$1,465) Continued to develop and accredit Joint Mission Area/Support Area tools and improve analytic methodology.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605853N

PROGRAM ELEMENT TITLE: Management, Technical
International Support

PROJECT NUMBER: X2221

PROJECT TITLE: Assessment Program

- (U) (\$1,017) Used the standard simulation and database architecture developed by Naval Modeling & Simulation, rehosted legacy models into the new framework, vastly improving the utility of these tools to the assessment process. Developed new tools that utilized models in the standard simulation and databases architecture. Coordinated/supported Joint Analytical Model Improvement Program (JAMIP).
- (U) (\$ 85) Continued to research and implement essential fleet enhancements provided by CNO's Tactical Support Group.
- 2. (U) FY 1997 PLAN:
 - (U) (\$ 200) Develop, update and maintain detailed level Navy Standard scenarios based on Defense Planning Guidance.
 - (U) (\$8,798) Perform Joint Mission Area/Support Area assessments to support the interactive Investment Balance Review process. Efforts include Joint Strike, Joint Surveillance, Strategic Deterrence, Forward Presence, Joint Littoral, Joint SEW/I, and Strategic Sealift/Protection and their Integration into the Investment Balance Review. Provide Navy input to JWCA process.
 - (U) (\$1,569) Continue to develop and accredit Joint Mission Area/Support Area tools and improve analytic methodology.
 - (U) (\$1,188) Using the standard simulation and database architecture developed by Naval Modeling and Simulation rehost legacy models into the new framework, vastly improving the utility of these tools to the assessment process. Develop new tools that utilized models in the standard simulation and database architecture. Coordinate/support Joint Analytical Model Improvement Program (JAMIP).
 - (U) (\$ 228) Portion of extramural program reserved for Small Business Innovation Research assessment in accordance with 15 U.S.C. 638.
- 3. (U) FY 1998 PLAN:
 - (U) (\$ 189) Develop, update and maintain detailed level Navy Standard scenarios based on Defense Planning Guidance.
 - (U) (\$8,168) Perform Joint Mission Area/Support Area assessments to support the interactive Investment Balance Review process; efforts include Joint Strike, Joint Surveillance, Strategic Deterrence, Forward Presence, Joint Littoral, Joint SEW/I, and Strategic Sealift/Protection and their Integration into the Investment Balance Review. Provide Navy input to JWCA process.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605853N

PROJECT NUMBER: X2221

PROGRAM ELEMENT TITLE: Management, Technical

PROJECT TITLE: Assessment Program

International Support

- (U) (\$1,785) Continue to develop and accredit Joint Mission Area/Support Area tools and improve analytic methodology.
- (U) (\$1,488) Using the standard simulation and database architecture developed by Naval Modeling and Simulation to rehost legacy models into the new framework, vastly improving the utility of these tools to the assessment process. Develop new tools that utilize models in the standard simulation and database architecture. Coordinate/support Joint Analytical Model Improvement Program (JAMIP).

4. (U) FY 1999 PLAN:

- (U) (\$ 208) Develop, update and maintain detailed level Navy Standard scenarios based on Defense Planning Guidance.
- (U) (\$8,960) Perform Joint Mission Area/Support Area assessments to support the interactive Investment Balance Review process; efforts include Joint Strike, Joint Surveillance, Strategic Deterrence, Forward Presence, Joint Littoral, Joint SEW/I, and Strategic Sealift/Protection and their Integration into the Investment Balance Review. Provide Navy input to JWCA process.
- (U) (\$1,978) Continue to develop and accredit Joint Mission Area/Support Area tools and improve analytic methodology.
- (U) (\$1,854) Using the standard simulation and database architecture developed by Naval Modeling and Simulation to rehost legacy models into the new framework, vastly improving the utility of these tools to the assessment process. Develop new tools that utilize models in the standard simulation and database architecture. Coordinate/support Joint Analytical Model Improvement Program (JAMIP).

B. (U) PROGRAM CHANGE SUMMARY:

(U) FY 1997 President's Budget:	FY 1996	FY 1997	FY 1998	FY 1999
(U) Adjustments from FY 1997 PRESBUDG:	11,179	12,717	11,819	13,136
(U) FY 1998 President's Budget Submit:	-165	-734	-189	-136
	11,014	11,983	11,630	13,000

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 1996 funding change due to SBIR reduction (-120); Other minor Navy fiscal adjustments (-45). FY 1997 funding change due to Congressional Undistributed General Adjustments (-734). FY 1998 funding change due to NWC Rate

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Exhibit R-2

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605853N
PROGRAM ELEMENT TITLE: Management, Technical
International Support

PROJECT NUMBER: X2221
PROJECT TITLE: Assessment Program

Adjustment (-160); Inflation Adjustment (-29). FY 1999 funding change due to NWCF Rate Adjustment (-88); Inflation Adjustment (-48).

(U) Schedule: Not applicable.

(U) Technical: Not applicable

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable

(U) RELATED RDT&E: Not applicable

D. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605853N

PROGRAM ELEMENT TITLE: Management, Technical International Support

(U) COST (Dollars in thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
X2222	Naval Modeling and Simulation 2,651	4,409	9,286	10,066	12,568	13,480	12,822	12,981	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: X2222, Naval Modeling and Simulation provides the overarching policy, coordination and technical support for Naval Modeling & Simulation. This project responds to Congressional guidance to improve modeling and simulation focus, coordination and oversight. It coordinates the development and execution of Naval M&S program, including distributed simulation tool development, M&S incorporation with C4I systems and embedded training systems, and an orderly process of model Verification, Validation and Accreditation required by current directives. This effort funds the Naval Modeling and Simulation Technical Support Group. This program leverages, assembles and consolidates program-specific Modeling and Simulation capabilities developed by Program Managers, Naval Warfare Centers, Laboratories, Federally Funded Research and Development Centers, and contractors to evolve an integrated, interoperable core M&S capability for Navy. The coordination of Modeling and Simulation that results from this program are of significant benefit to training, acquisition, RDT&E and military operations.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:
 - (U) (\$ 464) Naval participation in the development and implementation of Distributed Interactive Simulation Industry standards and the application of distributed simulation in JTFX, ALSP and I/ITSEC, exercises and demos involving operational, research and development, training, and test and evaluation.
 - (U) (\$ 611) Naval Policy, coordination and technical support. Funded the Naval Modeling & Simulation Technical Support Group, which provided: the Naval Modeling and Simulation Catalog, Master Plan, and Investment Strategy; technical support to PEOs/DRPMs/Program Managers/Warfare Centers/Labs; and Naval technical interface to Industry, Joint, DOD, and other Services activities.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605853N

PROGRAM ELEMENT TITLE: Management, Technical
International Support

PROJECT NUMBER: X2222

PROJECT TITLE: Navy Modeling
and Simulation

- (U) (\$ 851) Development of standard simulation and database architecture for Naval Modeling & Simulation. Rehosted legacy models into the framework. Developed new model in the standard simulation and database architecture.
- (U) (\$ 500) Naval contribution to the Aggregate Level Simulation Protocol development including functional validation and Joint exercise participation. Included improvements to the Naval Wargaming Models to permit appropriate Joint participation.
- (U) (\$ 371) Development of the Verification, Validation and Accreditation (VVA) process. Implementation of the VVA process on new Naval Modeling & Simulation developments and Navy legacy models.
- (U) (\$- 146) Reflects an erroneous reduction which was the result of a double posting error for a BTR adjustment.
- 2. (U) FY 1997 PLAN:
 - (U) (\$ 550) Naval participation in the development and implementation of Distributed Interactive Simulation Industry standards and the application of distributed simulation to a wide variety of operational, research and development, training, test and evaluation exercises.
 - (U) (\$1,775) Naval Policy, coordination and technical support. Funds the Naval Modeling & Simulation Technical Support Group, which provides: annual updates to the Naval Modeling and Simulation Catalog, Master Plan and Investment Strategy; continuing technical support to PEOs/DRPMs/Program Managers/Warfare Centers/Labs; and continuing Naval technical interface to Industry, Joint, DOD, and other services activities. Funds Navy M&S War Room continuing focus of independent M&S initiatives into coherent process.
 - (U) (\$ 465) Naval contribution to the Aggregate Level Simulation Protocol development including functional validation and Joint exercise participation. Includes improvements to the Naval Wargaming Models to permit appropriate Joint participation.
 - (U) (1,190) Continue development of common services, tools and databases. Develop the Synthetic Battlespace, through an evolutionary process, integrating standards, standard models, standard data and connectivity to support all Naval Assessment, Training, Acquisition and Operational communities; continue rehosting of legacy models into the framework and development of new models in the standard simulation and database architecture; provide the necessary planning, coordination and technical expertise; provide comprehensive set of data needed to support M&S; Develop Virtual Repository for standard models and standard data. Plan coordinate and selectively build a contiguous M&S network structure based upon existing and growing DoD and commercial networks. Support development of multi-service common simulation framework and necessary infrastructure and tools.
- (U) (\$ 365) Continue development of the Verification, Validation and Accreditation (VVA) process. Continue implementation of the VVA process on new Naval Modeling & Simulation development and Navy legacy models.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605853N

PROGRAM ELEMENT TITLE: Management, Technical
International Support

PROJECT NUMBER: X2222

PROJECT TITLE: Navy Modeling
and Simulation

- (U) (\$ 64) Portion of extramural program reserved for Small Business Innovation Research assessment in accordance with 15 U.S.C 638.
- 3. (U) FY 1998 PLAN:
 - (U) (\$2,364) Naval participation in the development and implementation of Distributed Interactive Simulation Industry standards and the application of distributed simulation to a wide variety of operational, research and development, training, test and evaluation exercises.
 - (U) (\$2,866) Naval Policy, coordination and technical support. Funds the Naval Modeling & Simulation Technical Support Group, which provides: annual updates to the Naval Modeling and Simulation Catalog, Master Plan and Investment Strategy; continuing technical support to PEOs/DRPMs/Program Managers/Warfare Centers/Labs; and continuing Naval technical interface to Industry, Joint, DOD, and other services activities. Funds Navy M&S War Room continuing focus of independent M&S initiatives into coherent process.
 - (U) (\$3,204) Continue development of common services, tools and databases. Develop the Synthetic Battlespace, through an evolutionary process, integrating standards, standard models, standard data and connectivity to support all Naval Assessment, Training, Acquisition and Operational communities; continue rehosting of legacy models into the framework and development of new models in the standard simulation and database architecture; provide the necessary planning, coordination and technical expertise; provide comprehensive set of data needed to support M&S; Develop Virtual Repository for standard models and standard data. Plan coordinate and selectively build a contiguous M&S network structure based upon existing and growing DoD and commercial networks. Support development of multi-service common simulation framework and necessary infrastructure and tools (Oct 97 thru Sep 98).
 - (U) (\$ 852) Continue development of the Verification, Validation and Accreditation (VVA) process. Continue implementation of the VVA process on new Naval Modeling & Simulation development and Navy legacy models.
- 4. (U) FY 1999 PLAN:
 - (U) (\$2,444) Naval participation in the development and implementation of Distributed Interactive Simulation Industry standards and the application of distributed simulation to a wide variety of operational, research and development, training, test and evaluation exercises.
 - (U) (\$2,942) Naval Policy, coordination and technical support. Funds the Naval Modeling & Simulation Technical Support Group, which provides: annual updates to the Naval Modeling and Simulation Catalog, Master Plan and Investment Strategy; continuing technical support to PEOs/DRPMs/Program Managers/Warfare Centers/Labs; and continuing Naval technical interface to Industry, Joint, DOD, and other services activities. Funds Navy M&S War Room continuing focus of independent M&S initiatives into coherent process.
 - (U) (\$3,809) Continue development of common services, tools and databases. Develop the Synthetic Battlespace, through an evolutionary process, integrating standards, standard models, standard data and connectivity to support

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605853N

PROJECT NUMBER: X2222

PROGRAM ELEMENT TITLE: Management, Technical
International Support

PROJECT TITLE: Navy Modeling
and Simulation

all Naval Assessment, Training, Acquisition and Operational communities; continue rehosting of legacy models into the framework and development of new models in the standard simulation and database architecture; provide the necessary planning, coordination and technical expertise; provide comprehensive set of data needed to support M&S; Develop Virtual Repository for standard models and standard data. Plan coordinate and selectively build a contiguous M&S network structure based upon existing and growing DoD and commercial networks. Support development of multi-service common simulation framework and necessary infrastructure and tools (Oct 98 thru Sep 99).

- (U) (\$ 871) Continue development of the Verification, Validation and Accreditation (VVA) process. Continue implementation of the VVA process on new Naval Modeling & Simulation development and Navy legacy models.

B. (U) PROGRAM CHANGE SUMMARY:

	FY 1996	FY 1997	FY 1998	FY 1999
(U) FY 1997 President's Budget:	2,872	4,699	4,828	5,324
(U) Adjustments from FY 1997 PRESBUDG:	-221	-290	+4,458	+4,742
(U) FY 1998 President's Budget Submit:	2,651	4,409	9,286	10,066

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 1996 BTR to fund GFO cost growth (-70); SBIR Transfer (-5); Double posting error (-146). FY 1997 funding change due to Congressional Undistributed General Adjustments (-290). FY 1998 funding change due to increase to fund Navy M&S program (+5,150); NWCf rate adjustment (-164); C4I Program Reduction (-500); Inflation Adjustment (-23); other minor fiscal adjustments (-5). FY 1999 funding change due to increase to fund Navy M&S program (+5,150); NWCf rate adjustment (-65); C4I Program Reduction (-300); Inflation Adjustment (-37); other minor fiscal adjustments (-6).

(U) Schedule: Not applicable.

(U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E: Not applicable

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605853N

PROJECT NUMBER: X2222

PROGRAM ELEMENT TITLE: Management, Technical
International Support

PROJECT TITLE: Navy Modeling
and Simulation

D. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605856N

PROGRAM ELEMENT TITLE: Strategic Technical Support

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RDT&E MANAGEMENT SUPPORT because it supports the operations and installations required for general research and development use.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605856N

PROGRAM ELEMENT TITLE: Strategic Technical Support

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
R0128										
Management and Technical Support, Strategic										
864	864	1,030	1,190	1,341	1,416	1,423	1,437	1,531	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides for analysis of the warfighting capability of Naval undersea forces by examining specific selected numbers and mixes of undersea surveillance and submarine assets that are subjected to representative operational situations in a joint littoral and open ocean environment. Results provide a basis for recommendations to the Director, Undersea Warfare Division concerning major policy, planning and acquisition decisions. This ongoing program will leverage more detailed program specific analysis in order to gain insight in acquisition of various weapons and sensor systems and their impact on force structure, manning levels, and operational readiness. This program will also support various Cost and Operational Effectiveness Analysis studies and Joint Mission Assessments.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:
 - (U) (\$171) Continued to assess the strategic deterrence (conventional and nuclear) force structure, security, and capability in the Navy.
 - (U) (\$47) Assessed the impact of arms control negotiations on SSBN force structure, survivability, targeting, command, control and communications (C3) networking, and SSBN deployments.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605856N

PROGRAM ELEMENT TITLE: Strategic Technical Support

PROJECT NUMBER: R0128

PROJECT TITLE: Management and Technical Support, Strategic

- (U) (\$150) Began an analysis of the Third Battle of the Atlantic and the contributions by undersea forces to the end of the Cold War with the goal of understanding their successes and failures in order to more effectively utilize submarine and surveillance assets in the future.
- (U) (\$90) Analyzed the potential contributions of conventional warhead submarine-launched ballistic missiles and Army Tactical Missile System to joint land warfare.
- (U) (\$90) Performed an in-depth review of undersea warfare research and development requirements, past and current efforts, and proposed an investment strategy to maximize future capabilities while minimizing costs by leveraging other Navy programs, other services, and industry.
- (U) (\$316) Performed a technical and operational analysis of undersea surveillance and submarine assets under various operational scenarios to determine the optimum force mix and employment options for both open ocean and littoral anti-submarine warfare missions.
- 2. (U) FY 1997 PLAN:
 - (U) (\$175) Continue to assess the strategic deterrence (conventional and nuclear) force structure, security, and capability in the Navy.
 - (U) (\$150) Continue analysis of the Third Battle of the Atlantic and the contributions by undersea forces to the end of the Cold War with the goal of understanding their successes and failures in order to more effectively utilize submarine and surveillance assets in the future.
 - (U) (\$100) Perform analysis of submarine support to joint multi-warfare scenarios with the goal of understanding and demonstrating the contributions made by submarine to the Joint Task Force commander's overall battle plan.
 - (U) (\$90) Perform an in-depth review of undersea warfare research and development requirements, past and current efforts, and propose an investment strategy to maximize future capabilities while minimizing costs by leveraging other Navy programs, other services, and industry.
 - (U) (\$50) Assess the impact of arms control negotiations on SSBN force structure, survivability, targeting, C3 networking, and SSBN deployments.
 - (U) (\$228) Perform a technical analysis of passive active submarine sonar performance from the first principles of physics with the goal of determining where system improvements should be made to maximize performance increases in an affordable manner.
 - (U) (\$215) Perform technical and operational analysis of potential improvements or additions to submarine systems in order to understand their operational effectiveness as well as their impact on submarine design and overall ship performance and safety.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605856N

PROJECT NUMBER: R0128

PROGRAM ELEMENT TITLE: Strategic Technical Support PROJECT TITLE: Management and Technical Support, Strategic

- (U) (\$22) Portion of extramural program reserved for Small Business Innovation Research Assessment in accordance with 15 USC 638.

3. (U) FY 1998 PLAN:

- (U) (\$175) Continue to assess the strategic deterrence (conventional and nuclear) force structure, security, and capability in the Navy.
- (U) (\$150) Continue analysis of the Third Battle of the Atlantic and the contributions by undersea forces to the end of the Cold War with the goal of understanding their successes and failures in order to more effectively utilize submarine and surveillance assets in the future.
- (U) (\$150) Perform analysis of submarine support to joint multi-warfare scenarios with the goal of understanding and demonstrating the contributions made by submarines to the Joint Task Force commander's overall battle plan.
- (U) (\$149) Perform an in-depth review of undersea warfare research and development requirements, past and current efforts, and propose an investment strategy to maximize future capabilities while minimizing costs by leveraging other Navy programs, other services, and industry.
- (U) (\$75) Assess the impact of arms control negotiations on SSBN force structure, survivability, targeting, C3 networking, and SSBN deployments.
- (U) (\$331) Perform technical and operational analysis of potential improvements or additions to submarine systems in order to understand their operational effectiveness as well as their impact on submarine design and overall ship performance and safety.
- (U) (\$160) Perform a technical analysis of passive active submarine sonar performance from the first principles of physics with the goal of determining where system improvements should be made to maximize performance increases in an affordable manner.

4. (U) FY 1999 PLAN:

- (U) (\$200) Continue to assess the strategic deterrence (conventional and nuclear) force structure, security, and capability in the Navy.
- (U) (\$150) Perform analysis of submarine support to joint multi-warfare scenarios with the goal of understanding and demonstrating the contributions made by submarines to the Joint Task Force commander's overall battle plan.

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FY 1998/1999 RDT&E, N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605856N

PROJECT NUMBER: R0128

PROGRAM ELEMENT TITLE: Strategic Technical Support

PROJECT TITLE: Management and Technical Support, Strategic

- (U) (\$150) Perform an in-depth review of undersea warfare research and development requirements, past and current efforts, and propose an investment strategy to maximize future capabilities while minimizing costs by sharing other Navy programs, other services, and industry.
- (U) (\$100) Assess the impact of arms control negotiations on SSBN force structure, survivability, targeting, C3 networking, and SSBN deployments.
- (U) (\$741) Perform technical and operational analysis of potential improvements or additions to submarine systems in order to understand their operational effectiveness as well as their impact on submarine design and overall ship performance and safety.

B. (U) PROGRAM CHANGE SUMMARY

(U) FY 1997 President's Budget:	FY 1996 <u>874</u>	FY 1997 <u>1,145</u>	FY 1998 <u>1,194</u>	FY 1999 <u>1,353</u>
(U) Adjustments from FY 1997 PRESBUDG:	-10	-115	-4	-12
(U) FY 1998/1999 PRESBUDG Submission:	864	1,030	1,190	1,341

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 1996 adjustment is due to Jordanian rescission (-1), administrative and personal services rescission (-3), and SBIR assessment (-6). FY 1997 adjustment is due to Congressional Undistributed Reductions (-115). FY 1998 adjustment is due to internal NWCF and other minor adjustment (-1) and inflation (-3). FY 1999 adjustment is due to NWCF and other minor adjustments (-7) and inflation (-5).

(U) Schedule: Not applicable.

(U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E:

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605856N

PROGRAM ELEMENT TITLE: Strategic Technical Support

PROJECT NUMBER: R0128

PROJECT TITLE: Management and Technical Support, Strategic

(U) PE 0603311F (Advanced Strategic Missile System)
(U) PE 0605864F (Test and Evaluation)

D. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605856N

PROGRAM ELEMENT TITLE: Strategic Technical Support

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
Z1038	545	877	920	897	886	869	888	912	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: Provides for research and development of new data collection and analysis techniques in support of sensor and weapons system development; provides for responsive support to sensor and weapons development for enhanced signal exploitation and threat vulnerability characterization through technical analysis; develops exploitation techniques to determine the acoustic and non-acoustic vulnerabilities of diesel submarines in shallow water for regional conflict engagement planning; provides unique hardware and software development at the Office of Naval Intelligence (ONI).

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 PLAN:

- (U) (\$44) Supported data fusion proof concept effort [classified material deleted] requirements.
- (U) (\$200) Continued development of digital signal processing tools for the exploitation of [classified material deleted] of diesel submarines and sea-launched weapons (supports littoral warfare planning and Fleet readiness).

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605856N PROJECT NUMBER: Z1038
PROGRAM ELEMENT TITLE: Strategic Technical Support PROJECT TITLE: Acoustic and Non-Acoustic Analysis Support

- (U) (\$131) Developed the metrics and transitional functions to allow accurate target simulation modeling of threat submarines and sea launched weapons [classified material deleted]; developed the interfaces from a national database for [classified material deleted] to Navy and national simulators/facilities (supports RDT&E and Fleet training).
- (U) (\$160) Continued support to overseas [classified material deleted] sites; develop interfaces for electronic network transfer of [classified material deleted] signals for science and technology (S&T) studies at ONI (supports S&T studies for RDT&E community).
- (U) (\$10) Supported the operation of a [classified material deleted]

2. (U) FY 1997 PLAN:
- (U) (\$200) Continue development and implementation of digital signal processing tools for the exploitation of [classified material deleted] of diesel submarines and sea-launched weapons (supports littoral warfare planning and Fleet readiness).
 - (U) (\$271) Continue the development of metrics and transitional functions to allow accurate target simulation modeling of threat submarine and sea-launched weapons [classified material deleted]; continue the development of interfaces from the national database for [classified material deleted] to Navy and national simulators/facilities (support RDT&E and Fleet training).
 - (U) (\$156) Continue support to overseas [classified material deleted] sites; continue to develop interfaces for electronic/network transfer of [classified material deleted] signals for S&T studies at ONI (supports S&T studies for RDT&E community).
 - (U) (\$230) Initiate study to determine the application of advanced acoustic analysis methods. New techniques are needed to better [classified material deleted] platforms.
 - (U) (\$20) Initiate study to investigate [classified material deleted] programs.

3. (U) FY 1998 PLAN:
- (U) (\$215) Continue development of computer environments and expansion of subject material supporting on-line, on-demand access to threat characteristics and performance data supporting RDT&E modeling and simulation, and naval trainers.
 - (U) (\$220) Continue development and implementation of digital signal processing tools for the [classified material deleted] in support of littoral warfare planning and Fleet readiness.
 - (U) (\$100) Continue development and implementation of metrics and transitional functions to allow [classified material deleted].

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605856N PROJECT NUMBER: Z1038
 PROGRAM ELEMENT TITLE: Strategic Technical Support PROJECT TITLE: Acoustic and Non-Acoustic Analysis Support

- (U) (\$100) Resume research and implementation of [classified material deleted] the RDT&E and navy trainer community with accurate models to predict the signatures and strengths [classified material deleted]
- (U) (\$135) Resume development and refinement of [classified material deleted] in shallow water in support of littoral warfare planning and improved [classified material deleted] from potential threat submarines.
- (U) (\$150) Continue support to overseas [classified material deleted] sites; continue development of interfaces to facilitate data exchange and strengthen the [cooperative collection and data exchanges with foreign nation-partners] in undersea warfare.

4. (U) FY 1999 PLAN:

- (U) (\$100) Continue development of computer environments and expansion of subject material supporting on-line, on-demand access to threat characteristics and performance data supporting RDT&E modeling and simulation, and naval trainers.
- (U) (\$260) Continue development and implementation of digital signal processing tools for the [classified material deleted] in support of littoral warfare planning and Fleet readiness.
- (U) (\$100) Continue development and implementation of metrics and transitional functions to allow accurate target simulation modeling of threat submarine and sea-launched weapons [classified material deleted].
- (U) (\$100) Continue research and implementation of [classified material deleted] the RDT&E and navy trainer community with accurate models to predict the signatures and strengths [classified material deleted]
- (U) (\$200) Continue development and refinement of [classified material deleted] in shallow water in support of littoral warfare planning and improved [classified material deleted] from potential threat submarines.
- (U) (\$137) Continue support to overseas [classified material deleted] sites; continue development of interfaces to facilitate data exchange and strengthen the [classified material deleted] in undersea warfare.

B. (U) PROGRAM CHANGE SUMMARY

(U) FY 1997 President's Budget:	FY 1996	FY 1997	FY 1998	FY 1999
	545	914	924	910

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605856N PROJECT NUMBER: Z1038
PROGRAM ELEMENT TITLE: Strategic Technical Support PROJECT TITLE: Acoustic and Non-Acoustic Analysis Support

(U) Adjustments from FY 1997 PRESUDG:	0	-37	-4	-13
(U) FY 1998/1999 PRESUDG Submission:	545	877	920	897

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 1997 adjustment is due to Congressional Undistributed Reductions (-37). FY 1998 adjustment is due to NWCF and other minor adjustments (-2) and inflation (-2). FY 1999 adjustment is due to NWCF and other minor adjustments (-10) and inflation (3).

(U) Schedule: Not applicable.
(U) Technical: Not applicable.

C. OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E:

(U) PE 0604784N (Distributed Surveillance Systems)

D. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605856N

PROGRAM ELEMENT TITLE: Strategic Technical Support

PROJECT NUMBER: Z1038

PROJECT TITLE: Acoustic and Non-Acoustic
Analysis Support

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605861N

PROGRAM ELEMENT TITLE: RDT&E,N Science and Technology Management

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
M0104 NAVMED Management Support	6,671	4,888	5,266	5,469	5,602	5,714	5,810	5,911	CONT.	CONT.
R0135 ONR Science and Technology Management	52,262	50,066	52,325	51,194	52,628	53,846	55,057	56,243	CONT.	CONT.
X0832 Central Management Support	1,207	1,007	0	0	0	0	0	0	0	12,108
TOTAL	60,140	55,961	57,591	56,663	58,230	59,560	60,867	62,154	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program supports the Office of Naval Research (ONR), small non-overhead distributing Navy Research & Development (R&D) activities, and medical research laboratories. It pays salaries, rent, utilities, printing, supplies, materials, and other day-to-day costs that are necessary to support these Navy activities that administer and execute the Navy's R&D program. The vast majority of these costs are fixed costs which primarily support scientists and engineers working on the Navy Science and Technology Program. For overhead distributing activities, this program covers costs not chargeable to overhead or to customers.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RDT&E MANAGEMENT SUPPORT because it supports the operations and installations required for general research and development use.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

PROGRAM ELEMENT: 0605861N

PROGRAM ELEMENT TITLE: RDT&E,N Science and Technology Management

BUDGET ACTIVITY: 6

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
M0104										
NAVMEC Management Support										
	6,671	4,888	5,266	5,469	5,602	5,714	5,810	5,911	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project supports certain program-wide management and operational costs at the Naval Medical Research and Development Command and specified Naval Medical Research Laboratories that do not distribute overhead. Funds are used for general administrative expenses including salaries of support personnel, centralized technical services, common support costs under host-tenant agreements, routine maintenance and repair of building, and costs of laboratory support provided by other agencies/commands.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$6,671) Provided management support for operations at Naval Medical Research and Development Command Headquarters, three in-house laboratories and one detachment.

2. (U) FY 1997 PLAN:

- (U) (\$4,888) Provide management support for operations at Naval Medical Research and Development Command Headquarters, three in-house laboratories and one detachment.

3. (U) FY 1998 PLAN:

- (U) (\$5,266) Provide management support for operations at Naval Medical Research and Development Command Headquarters, three in-house laboratories and one detachment.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605861N

PROJECT NUMBER: M0104

PROGRAM ELEMENT TITLE: RDT&E,N Science and Technology Management

PROJECT TITLE: NAVMED Management Support

4. (U) FY 1999 PLAN:

- (U) (\$5,469) Provide management support for operations at Naval Medical Research and Development Command Headquarters, three in-house laboratories and one detachment.

B. (U) PROGRAM CHANGE SUMMARY:

(U) FY 1997 President's Budget:	FY 1996	FY 1997	FY 1998	FY 1999
	6,649	5,095	5,220	5,357
(U) Adjustment from FY 1997 PRESBUDG:	+22	-207	+46	+112
(U) FY 1998/1999 PRESIDENT'S BUDGET SUBMISSION:	6,671	4,888	5,266	5,469

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 1996 adjustment due to Jordanian F-16 financing rescission (-8) and actual execution adjustment (+30). FY 1997 program decreased due to Congressional Undistributed reductions (-207). FY 1998 increased due to Military and Civilian pay adjustment (+132), inflation adjustment (-7) and Navy Working Capital Fund (NWCf) and minor adjustments (-79). FY 1999 increased due to Military and Civilian Pay adjustment (+157) and NWCf and minor adjustments (-45).

(U) Schedule: Not applicable.

(U) Technical: Not applicable.

(U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) Related RDT&E:

(U) PE 0605862N (RDT&E,N Instrumentation Modernization) Funds investment items and general purpose equipment for activities supported by this project. All Navy medical research and development programs receive central management support under program element 0605861N.

(U) SCHEDULE PROFILE: Not applicable.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605861N

PROGRAM ELEMENT TITLE: RDT&E,N Science and Technology Management

(U) (COST): (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ESTIMATE	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
R0135 ONR Science and Technology Management	52,262	50,066	52,325	51,194	52,628	53,846	55,057	56,243	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project supports the Office of Naval Research (ONR) management and direction for the entire Navy Science and Technology program. ONR sponsors scientific advances which benefit all Joint Mission Areas/Support Areas, including Joint Strike and Joint Littoral Warfare, and supports the fleet's ability to operate from a position of technological superiority. Functions performed include (1) scientific and technical direction of the nationwide Category 6.1 basic research program with colleges, universities, non-profits and Navy laboratories and warfare centers; (2) scientific and technical direction of the 6.2 applied research program through the Navy's R&D laboratories and warfare centers and industry; (3) scientific and technical direction of the Navy advanced technology development program (Category 6.3) through the Navy Systems Commands, laboratories, warfare centers and industry; (4) management, resource formulation, program assessment, and contract negotiation/administration of the Navy basic research, applied research and advanced technology development program; (5) program management and administrative support to selected research programs of Ballistic Missile Defense Organization (BMDO), Defense Advanced Research Projects Agency (DARPA), and Chief of Naval Operations (CNO); and (6) coordination of the Navy's Technology Base program within the context of total DoD/Government (e.g. National Science Foundation, National Academy of Sciences) R&D initiatives in order to maximize scientific advances. This project also supports ONR management and direction for the following Navy-wide programs: Small Business Innovation Research (SBIR), Naval Research Advisory Committee, Navy Patent Program, Navy Historically Black Colleges and Universities Program, Navy Manufacturing Technology Program and the SSBN Survivability Program. In addition, this program supports ONR's Navy-wide responsibilities in the negotiation and establishment of indirect cost rates for DoD-assigned universities and performance of contract administration for all DoD contacts/grants at all colleges and universities. This project funds salaries, rent, utilities, supplies, and other fixed costs at ONR Headquarters and field offices.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605861N

PROJECT NUMBER: R0135

PROGRAM ELEMENT TITLE: RDT&E,N Science and Technology Management

PROJECT TITLE: ONR Science and Technology Management

(U) PROGRAM ACCOMPLISHMENTS AND PLANS

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$52,262) The project provided for basic costs of the ONR headquarters and its field activities in support of the entire Navy Science and Technology program. Specifically, it paid the salaries of scientific and engineering personnel who direct the execution of the Navy's basic research (Category 6.1), applied research (Category 6.2), and advanced technology development (Category 6.3) programs at the nation's universities/colleges, Navy laboratories and warfare centers, and private industry. In addition to its Navy Science and Technology mission, ONR provided important program management and administrative support to BMDO, DARPA, and CNO. Almost all the funds in this project were fixed costs, such as salaries, building rent, communications, etc. The project provided support to the ONR headquarters, the ONR European Office (London), the ONR Asian Office (Tokyo), and field detachments.

2. (U) FY 1997 PLAN:

- (U) (\$50,066) The project will continue to provide for basic costs of the ONR headquarters and its field activities in support of the entire Navy Science and Technology program. Specifically, it will pay the salaries of scientific and engineering personnel who direct the execution of the Navy's basic research (Category 6.1), applied research (Category 6.2), and advanced technology development (Category 6.3) programs at the nation's universities/colleges, Navy laboratories and warfare centers, and private industry. In addition to its Navy Science and Technology missions, ONR will provide important program management and administrative support to BMDO, DARPA, and CNO. Almost all the funds in this project will be fixed costs, such as salaries, building rent, communications, etc. The project will continue to provide support for the ONR headquarters, the ONR European Office (London), the ONR Asian Office (Tokyo), and field detachments.

3. (U) FY 1998 PLAN:

- (U) (\$52,325) The project will continue to provide for basic costs of the ONR headquarters and its field activities in support of the entire Navy Science and Technology program. Specifically, it will pay the salaries of scientific and engineering personnel who direct the execution of the Navy's basic research (Category 6.1), applied research (Category 6.2), and advanced technology development (Category 6.3) programs at the nation's universities/colleges, Navy laboratories and warfare centers, and private industry. In addition to its Navy Science and Technology mission, ONR will provide important management and administrative support to BMDO, DARPA, and CNO. Almost all the funds in this project will be fixed costs, such as salaries, building rent, communications, etc. The project will continue to provide support for the ONR headquarters, the ONR European Office (London), the ONR Asian Office (Tokyo), and field detachments.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605861N PROJECT NUMBER: R0135
 PROGRAM ELEMENT TITLE: RDT&E,N Science and Technology Management PROJECT TITLE: ONR Science and Technology Management

4. (U) FY 1999 PLAN:

- (U) (\$51,194) The project will continue to provide for basic costs of the ONR headquarters and its field activities in support of the entire Navy Science and Technology program. Specifically, it will pay the salaries of scientific and engineering personnel who direct the execution of the Navy's basic research (Category 6.1), applied research (Category 6.2), and advanced technology development (Category 6.3) programs at the nation's universities/colleges, Navy laboratories and warfare centers, and private industry. In addition to its Navy Science and Technology mission, ONR will provide important management and administrative support to BMDO, DARPA, and CNO. Almost all the funds in this project will be fixed costs, such as salaries, building rent, communications, etc. The project will continue to provide support for the ONR headquarters, the ONR European Office (London), the ONR Asian Office (Tokyo), and field detachments.

B. (U) PROGRAM CHANGE SUMMARY:

(U) FY 1997 President's Budget:	FY 1996	FY 1997	FY 1998	FY 1999
	<u>51,275</u>	<u>52,203</u>	<u>51,531</u>	<u>50,549</u>
(U) Adjustment from FY 1997 PRESBUDG:	+987	-2,137	+794	+645
(U) FY 1998/1999 PRESIDENT'S BUDGET SUBMISSION:	52,262	50,066	52,325	51,194

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 1996 increased as a result of the Jordanian F-16 financing rescission (-59); a Below Threshold Reprogramming (+921) and actual execution adjustment (+125). FY 1997 funding decreased due to Congressional Undistributed reductions (-2,137). FY 1998 funding increased as a result of Human Resources regionalization (HRM) savings (-39); HRM regionalization functional transfer (-76); Navy Working Capital Fund (NWCFF) and minor adjustments (-109); Science and Technology and inflation adjustments (-447); the Naval Industrial Resources Support Activity (NAVIRSA) functional transfer (+1,267) and Military and Civilian Pay adjustment (+198). FY 1999 funding increased as a result of HRM savings adjustment (-44); HRM regionalization functional transfer (-191); NWCFF and minor adjustments (-317); Science and Technology and inflation adjustments (-315); Military and Civilian Pay adjustment (+239) and the NAVIRSA functional transfer (+1,273).

(U) Schedule: Not applicable.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605861N

PROJECT NUMBER: R0135

PROGRAM ELEMENT TITLE: RDT&E,N Science and Technology
Management

PROJECT TITLE: ONR Science and Technology
Management

(U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not Applicable.

(U) Related RDT&E:

(U) Program Element 0605862N (RDT&E,N Instrumentation Modernization) Funds investment items for the activities covered in this project.

D. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605861N

PROGRAM ELEMENT TITLE: RDT&E,N Science and Technology
Management

PROJECT NUMBER:

R0135

PROJECT TITLE:

ONR Science and Technology
Management

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605862N

PROGRAM ELEMENT TITLE: RDT&E,N Instrumentation Modernization

(U) COST: (Dollars in Thousands)

PROJECT

PROJECT NUMBER & TITLE	FY 1996 ESTIMATE	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
M0105	NAVMED Instrumentation and Material Support									
	3,371	1,894	2,740	2,772	2,762	2,744	2,802	2,866	CONT.	CONT.
R0137	ONR Science & Technology Instrumentation Modernization									
	1,012	1,000	1,042	1,240	1,272	1,301	1,329	1,359	CONT.	CONT.
W0566	NAVAIR Environmental Compliance									
	7,126	3,052	4,764	4,532	4,604	4,167	4,253	4,350	CONT.	CONT.
TOTAL	11,509	5,946	8,546	8,544	8,638	8,212	8,384	8,575	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program element funds investment costs at certain Navy research, development, test, and evaluation laboratories and facilities. These laboratories and other facilities are involved in diverse activities such as: medical research, including research on new methods of combat casualty care; energy conservation; weapons testing; and a number of other programs. This program provides for research equipment in support of multiple program requirements at the Medical Research Laboratories, supports environment protection and energy conservation projects at Naval Air Warfare Centers, and provides equipment for the Office of Naval Research (ONR) headquarters and field offices/detachments.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RDT&E,N MANAGEMENT SUPPORT because it supports the operations and installations required for general research and development use.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605862N

PROGRAM ELEMENT TITLE: RDT&E,N Instrumentation Modernization

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ESTIMATE	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE PROGRAM	TOTAL PROGRAM CONT.
M0105 NAVMED Instrumentation and Material Support	3,371	1,894	2,740	2,772	2,762	2,744	2,802	2,866	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This continuing modernization effort funds the procurement of new and replacement general purpose analytical and research support equipment, facility repairs, minor construction, alterations, equipment installation, and first destination transportation cost of newly purchased equipment for the Naval Medical Research and Development Command (NMRDC) Headquarters, eight Medical Research laboratories, and three detachments.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$1,952) Provided technologically advanced equipment and replacement of obsolete research equipment. Supported collateral equipment for Army and Naval Dental Research collocated at Great Lakes, Illinois and replaced flood damaged equipment at Naval Medical Research Unit #2 in Jakarta, Indonesia.
- (U) (\$1,419) Provided support to facilities upgrades to install fire safety equipment, installed electrical system upgrade and generator overhaul, and repaired High Voltage Air Conditioning system duct work. Provided minor construction to correct facilities deficiencies.

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BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605862N PROJECT NUMBER: M0105 DATE: February 1997
FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
PROGRAM ELEMENT TITLE: RDT&E,N Instrumentation PROJECT TITLE: NAVMED Instrumentation and Material Support
Modernization

2. (U) FY 1997 PLAN:
 - (U) (\$961) Continue to provide new cutting edge research equipment and timely replacement of obsolete equipment too costly to repair and maintain.
 - (U) (\$933) Continue to provide support to physical plant facility areas needing major repair, minor construction, rehabilitation to meet mission requirements as well as meeting environmental compliance and pollution abatement standards.
3. (U) FY 1998 PLAN:
 - (U) (\$1,390) Continue to provide support for technologically advanced research equipment for data acquisition, automated sampling, and real time statistical analysis of biomedical research data utilizing data information systems integral with new equipment. Continue to replace obsolete research equipment.
 - (U) (\$1,350) Continue to provide support to physical plant facility areas needing major repair, minor construction, rehabilitation to meet mission requirements as well as meeting environmental compliance and pollution abatement standards. Support American Association for the Accreditation of Laboratory Animal Care (AAALAC) accredited laboratories to maintain AAALAC accreditation status.
4. (U) FY 1999 PLAN:
 - (U) (\$1,685) Continue to provide support for technologically advanced research equipment for data acquisition, automated sampling, and real time statistical analysis of biomedical research data utilizing data information systems integral with new equipment. Continue to replace obsolete research equipment.
 - (U) (\$1,087) Continue to provide support to physical plant facility areas needing major repair, minor construction, rehabilitation to meet mission requirements as well as meeting environmental compliance and pollution abatement standards.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605862N PROJECT NUMBER: M0105
 PROGRAM ELEMENT TITLE: RDT&E,N Instrumentation Modernization PROJECT TITLE: NAVMED Instrumentation and Material Support

B. (U) PROGRAM CHANGE SUMMARY:

	FY 1996	FY 1997	FY 1998	FY 1999
(U) FY 1997 President's Budget:	<u>3,422</u>	<u>1,974</u>	<u>2,817</u>	<u>2,799</u>
(U) Adjustments from FY 1997 PRESBUDG:	-51	-80	-77	-27
(U) FY 1998/1999 PRESIDENT'S BUDGET SUBMISSION:	3,371	1,894	2,740	2,772

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 1996 decreased due to Jordanian F-16 financing rescission (-4); SBIR assessment (-17) and actual execution adjustment (-30). FY 1997 program decreased due to Congressional Undistributed reductions (-80). FY 1998 funding decreased due to inflation (-7) and Navy Working Capital Fund (NWCf) and minor adjustments (-70). FY 1999 funding decreased due to inflation (-10) and NWCf and minor adjustment (-17).

(U) Schedule: Not applicable.

(U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) Related RDT&E:

(U) Program Element 0605861N, RDT&E,N Science and Technology Management and Navy medical research and development programs.

D. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605862N
PROGRAM ELEMENT TITLE: RDT&E,N Instrumentation
PROJECT NUMBER: R0137
PROJECT TITLE: ONR Science and Technology
Instrumentation Modernization

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ESTIMATE	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
R0137 ONR Science & Technology Instrumentation Modernization	1,012	1,000	1,042	1,240	1,272	1,301	1,329	1,359	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project purchases ADP and general support equipment for the Office of Naval Research (ONR) headquarters, International field offices, and nationwide field detachments.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:
 - (U) (\$1,012) Purchased ADP and general support equipment for ONR headquarters, international field offices, and nationwide field detachments.
2. (U) FY 1997 PLAN:
 - (U) (\$974) Will purchase ADP and general support equipment for ONR headquarters, international field offices, and nationwide field detachments.
 - (U) (\$26) Portion of extramural program reserved for Small Business Innovation Research assessment in accordance with 15 U.S.C. 638.
3. (U) FY 1998 PLAN:
 - (U) (\$1,042) Will purchase ADP and general support equipment for ONR headquarters, international field offices, and nationwide field detachments.
4. (U) FY 1999 PLAN:

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605862N PROJECT NUMBER: R0137
 PROGRAM ELEMENT TITLE: RDT&E,N Instrumentation Modernization PROJECT TITLE: ONR Science and Technology Instrumentation Modernization

- (U) (\$1,240) Will purchase ADP and general support equipment for ONR headquarters, international field offices, and nationwide field detachments.

B. (U) PROGRAM CHANGE SUMMARY:

	FY 1996	FY 1997	FY 1998	FY 1999
(U) FY 1997 President's Budget:	<u>1,059</u>	<u>1,041</u>	<u>1,072</u>	<u>1,252</u>
(U) Adjustments from FY 1997 PRESBUDG:	-47	-41	-30	-12
(U) FY 1998/1999 President's Submission:	1,012	1,000	1,042	1,240

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 1996 funding decreased due to Jordanian F-16 financing rescission (-1); SBIR assessment (-23) and actual execution adjustment (-23). FY 1997 funding decreased due to Congressional Undistributed Reductions (-41). FY 1998 funding decreased due to inflation adjustment (-3) and Navy Working Capital Fund (NWCf) and minor adjustments (-27). FY 1999 funding decreased due to inflation adjustment (-5) and NWCf and minor adjustments (-7).

(U) Schedule: Not applicable.

(U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) Related RDT&E:

(U) Program Element 0605861N, RDT&E,N Science and Technology Management and Navy R&D science and technology programs.

D. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605862N

PROGRAM ELEMENT TITLE: RDT&E,N Instrumentation Modernization

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ESTIMATE	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
W0566 NAVAIR Environmental Compliance	7,126	3,052	4,764	4,532	4,604	4,167	4,253	4,350	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This continuing project supports environmental compliance and pollution prevention related efforts at the Navy Major Range Test Facility Bases (MRTFB). The Navy MRTFB environmental projects include ongoing efforts to comply with Federal, State, and local environmental requirements.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$7,126) Continued replacing aging and deteriorating underground fuel storage tanks at MRTFB facilities. Continued Polychlorinated Bi-Phenol (PCB) replacement projects. Prepared and implemented various endangered species risk management plans. Provided asbestos studies and removal and disposal of contamination at MRTFB facilities. Performed maintenance and operations support at MRTFB facilities. Performed pipeline lead detection, oil and water separation inspection.

2. (U) FY 1997 PLAN:

- (U) (\$3,052) Perform underground storage tank monitoring, remediation projects, and hazardous waste disposal. Provide cleanup of oil spills; alleviate illicit discharges; perform studies; perform removal and disposal; perform unexploded ordnance cleanup and removal of lead. Provide various waste water pretreatment options to MRTFB facilities and perform endangered species inventories. Initiate cultural resource studies at China Lake.

3. (U) FY 1998 PLAN:

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605862N

PROGRAM ELEMENT TITLE: RDT&E,N Instrumentation Modernization

- (U) (\$4,764) Perform soil waste management cleanups, underground storage tank remediations and replacements, and conversions of Class I ozone depleting substance (ODS) air conditioning and refrigeration equipment. Continue cultural resource studies, unexploded ordnance cleanup, and endangered species inventories.

4. (U) FY 1999 PLAN:

- (U) (\$4,532) Install noxious emission controls. Perform solid waste management cleanups, underground storage tank remediations and replacements, and conversions of Class I ODS air conditioning and refrigeration equipment. Continue cultural resource studies, unexploded ordnance cleanup and endangered species inventories.

B. (U) PROGRAM CHANGE SUMMARY:

(U) FY 1997 President's Budget:	FY 1996 <u>7,035</u>	FY 1997 <u>3,181</u>	FY 1998 <u>5,398</u>	FY 1999 <u>4,416</u>
(U) Adjustments from FY 1997 PRESBUDG:	+91	-129	-634	+116
(U) FY 1998/1999 PRESIDENT'S BUDGET SUBMISSION:	7,126	3,052	4,764	4,532

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 1996 funding reflects a increase due to Jordanian F-16 financing rescission (-8); SBIR assessment (-76) and actual execution adjustment (+175). FY 1997 reflects a decrease due to Congressional Undistributed Reductions (-129). FY 1998 funding reflects a decrease due to a MRTFB environmental funding adjustment (-400); Navy Working Capital Fund (NWCf) and minor adjustments (-223) and inflation adjustment (-11). FY 1999 funding reflects a net increase due to inflation adjustment (-17) and NWCf and minor adjustments (-45); and MRTFB environmental adjustment (+178).

(U) Schedule: Not applicable.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605862N

PROGRAM ELEMENT TITLE: RDT&E,N Instrumentation Modernization

(U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) Related RDT&E:

(U) Program Element 0604759N, Major Test and Evaluation Investment

(U) Program Element 0605864N, Test and Evaluation Support

D. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605862N

PROGRAM ELEMENT TITLE: RDT&E,N Instrumentation Modernization

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605863N

PROGRAM ELEMENT TITLE: RDT&E,N Ship and Aircraft Support

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
S0354 RDT&E Ships Support 12,070		12,502	13,727	13,500	13,474	13,354	13,640	13,966	CONT.	CONT.
W0568 RDT&E Aircraft Flight Hours 10,326		5,661	8,723	10,803	10,926	11,120	11,356	11,597	CONT.	CONT.
W0569 RDT&E Aircraft Support 37,310		30,090	26,146	31,310	30,696	30,591	31,661	32,764	CONT.	CONT.
TOTAL	59,706	48,253	48,596	55,613	55,096	55,065	56,657	58,327	CONT.	CONT.

(U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This continuing program provides support for ships and platforms required to accommodate Research, Development, Test and Evaluation (RDT&E) of new systems. The RDT&E ship and aircraft inventory is required to adequately test new and improved weapon systems, stay current with threats, and increase warfighting capability of the fleet. The program provides integrated logistics support for aircraft at selected field activities; provides depot-level rework of aircraft, engines, and components for the Navy inventory of RDT&E aircraft; and provides support ships and aircraft bailed to contractors for Navy RDT&E projects. Costs covered under this element include aircrew training and proficiency, fuel, supplies, equipment, modification, repair, Aviation Depot Level Repairables, Special Flight Test Instrumentation Pool equipment, overhaul of ships and aircraft, as well as organizational, intermediate, and depot maintenance of ships and aircraft in the Navy RDT&E inventory.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RDT&E MANAGEMENT SUPPORT because it supports the operations and installations required for general research and development use.

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FY 1998 RDT&E, N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605863N

PROGRAM ELEMENT TITLE: RDT&E, N Ship and Aircraft Support

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TO		TOTAL PROGRAM
	ACTUAL	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	COMPLETE	CONT.	
S0354 RDT&E Ships Support	12,070	12,502	13,727	13,500	13,474	13,354	13,640	13,966	13,966	13,640	13,354	13,640	13,966	13,966	13,640	13,354	13,966	13,966	13,966

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: S0354, RDT&E Ships Support. This project provides for operation and maintenance of platforms used as Sea Based Test Sites in support of the Navy Research, Development, Test, and Evaluation (RDT&E) program. These are the USS DOLPHIN (AGSS-555) and the Floating Instrumentation Platform (FLIP). Ex-USS DECATUR (DDG-31) is being supported by this line as the Self-Defense Test Ship (SDTS). Testing aboard these platforms reduces the number of fleet units required to support RDT&E efforts. In the case of the SDTS, it provides the capability of testing self-defense weapons systems to within their minimum ranges. A major cost of this project is regularly scheduled ship maintenance. The USS DOLPHIN (AGSS-555) is beginning a phased maintenance program. The remainder of the funds are used for purchase of supplies and equipment, fuel and petroleum products, repairs, and supporting modifications. Most costs are fixed and are associated with simply having these platforms in the inventory. A lesser portion of the costs varies with the tempo and type of ship operations and provides for systems improvements and replacement planning. The nature of the operation is determined by the overall Navy/DOD R&D testing program.

(U) USS DOLPHIN will support live fire lethality testing and system operability testing of the MK 50, MK 46, and MK 48 ADCAP torpedoes. In addition, the SEAWOLF Material Qualification Program, Surface Ship Torpedo Defense, and the Advanced Sea/Air/Land (SEAL) Delivery Program Mobile Inshore Warfare Unit Arrays and the Sea-based Weapons and Tactics School (SWATS) are supported by USS DOLPHIN.

(U) The current and projected Anti-Ship Cruise Missile (ASCM) threats require self-defense weapons systems capable of adequately countering ASCMs into the year 2000 and beyond. The National Defense Authorization Act for FY 87, section 910, "Testing of Certain Weapons Systems and Munitions," requires live-fire lethality testing of manned weapons systems. Operational and safety constraints limit realistic live-fire lethality testing with U.S. Navy ships and thus drive the requirement for having an afloat, unmanned, remotely controlled SDTS. Ex-USS DECATUR has been converted to the SDTS. SDTS plans call for testing Close-In-Weapons System (CIWS), North Atlantic Treaty Organization (NATO) Sea Sparrow Missile System (NSSMS), Ship Self-Defense System (SSDS), Rolling Airframe Missile (RAM), SLQ-32(V3), and future short range Anti-Air Warfare systems against realistic threat presentation in an at-sea environment.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605863N

PROJECT NUMBER: S0354

PROGRAM ELEMENT TITLE: RDT&E,N Ship and Aircraft Support PROJECT TITLE: RDT&E Ships Support

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$9,020) USS DOLPHIN completed support for AN/BQS-15 EC17 testing for the SSN688 installation. The USS DOLPHIN also supported the All-Optical Deployed System (ADS) testing, Surface Ship Torpedo Defense (SSTD) experiments, MK 50 Live-Fire testing, MK 46 Ship Life Extension Program (SLEP) testing, mobile Inshore Warfare Unit Array Development, Naval Research Lab (NRL) Satellite Linked Vertical Line Array testing, SWATs exercises, NAVSEA permanent magnet motor efforts, Navy Research and Development laser imaging programs, and the Advanced Seal Delivery System (ASDS). USS DOLPHIN began a Restricted Availability (RAV) 1 in the fourth quarter FY96 through first quarter FY97 in homeport using Naval shipyard tiger teams and local contractors. Efficiencies gained by doing work in homeport reduce deferral work to 10 percent of original plan.

- (U) (\$550) FLIP continued to conduct undersea acoustic research relevant to anti-submarine warfare with emphasis on the shallow water environment. Additionally, the FLIP was employed in support of geophysics, meteorology, physical oceanography, and non-acoustic anti-submarine warfare. Dry-dock inspection was completed January 1996. Completed disposal of Oceanographic Research Buoy (ORB).

- (U) (\$2,500) Ex-DECATUR/SDTS conducted live fire operations at Naval Air Warfare Center Weapons Division (NAVAIRWARCENWPNDIV) Point Mugu CA. CIWS testing continued, including Block IA Development, Testing Certification, and Block 1B Development testing. Naval Surface Warfare Center Division (NAVSURFWARCENDIV) Port Hueneme, CA planned, scheduled, and performed combat systems operations and maintenance onboard the SDTS.

- (U) Funding was initiated 11/95 and obligated by 9/30/96.

2. (U) FY 1997 PLAN:

- (U) (\$9,816) USS DOLPHIN continues to support MK 50/ADCAP Torpedo Guidance Advanced Technology Demonstrations, MK 50 and MK 46 Torpedo Program Testing and New SSN material program testing. At-sea experiments for the SSTD Program are planned. Continued support for near ocean bottom operations and other RDT&E programs, including the Lightweight Broad Band Variable Depth Sonar, sea floor mapping, testing Unmanned Underwater Vehicles (UUVs), testing sensors, Thermo Electric Air Conditioning (TEAC) Systems, and communication systems is planned. ASDS crew orientation continues and Pre-planned Product Improvement Testing begins. Restricted Availability (RAV 1) completes.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605863N

PROJECT NUMBER: S0354

PROGRAM ELEMENT TITLE: RDT&E,N Ship and Aircraft Support PROJECT TITLE: RDT&E Ships Support

2. (U) FY 1997 PLAN (Continued):

- (U) (\$630) FLIP continues to conduct research in underwater acoustic and non-acoustic phenomena to support ASW surveillance and weapons needs and ocean technology development. Dry-dock inspection may be scheduled depending on the number of at-sea hours accumulated. Due to non-affordability, no funding will be provided for FLIP from the Program Element in FY 1998 and out.

- (U) (\$2,000) Ex-DECATUR/SDTS conducts live fire operations at NAVAIRWARCENWPNDIV Point Mugu CA. Live fire testing planned includes the CIWS, the RAM, the Evolved Sea Sparrow Missile (ESSM), and the SSDS. This task will also support operation and maintenance of ship targets. NAVSURFWARCENDIV Port Hueneme, CA plans, schedules, and performs combat systems operations and maintenance on board SDTS.

- (U) (\$56) Portion of program reserved for Small Business Innovation Research Assessment in accordance with 15 U.S.C. 638.

- (U) Funding was initiated 10/96 and will obligate by 9/97.

3. (U) FY 1998 PLAN:

- (U) (\$11,245) USS DOLPHIN continues to provide New SSN material program testing, STD, and sea floor bottom mapping. In addition, Lightweight Broadband Variable Depth Sonar testing will continue as well as testing of ASDS. USS DOLPHIN will continue to support near ocean bottom operations and other RDT&E programs, modeling sonar propagation, UUVs, testing sensors and communication systems. USS DOLPHIN conducts periodic phased maintenance to maintain certification and procures material to support continued operations. The Naval Postgraduate Program and the ADS begin acoustic test programs. RAV 2 begins.

- (U) (\$2,482) Ex-DECATUR/SDTS conducts live fire operations at NAVAIRWARCENWPNDIV Point Mugu CA. Live fire testing planned includes the CIWS, the RAM, the ESSM, and the SSDS. NAVSURFWARCENDIV Port Hueneme, CA, plans, schedules, and performs combat systems operations and maintenance on board SDTS.

- (U) Funding will initiate 10/97 and obligate by 9/98.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605863N

PROJECT NUMBER: S0354

PROGRAM ELEMENT TITLE: RDT&E,N Ship and Aircraft Support PROJECT TITLE: RDT&E Ships Support

4. (U) FY 1999 PLAN:

- (U) (\$11,011) USS DOLPHIN continues to provide New SSN material program testing, SSTD, and sea floor bottom mapping. In addition, Lightweight Broadband Variable Depth Sonar testing will continue as well as testing of ASDS. USS DOLPHIN will continue to support near ocean bottom operations and other RDT&E programs, modeling sonar propagation, UUVs, testing sensors and communication systems. USS DOLPHIN conducts periodic phased maintenance to maintain certification and procures material to support continued operations. The Naval Postgraduate Program and the ADS continue acoustic test programs. RAV 2 completes.
- (U) (\$2,489) Ex-DECATUR/SDTS conducts live fire operations at NAVAIRWARCENPNDIV Point Mugu CA. Planned live fire testing includes the CIWS, the RAM, the ESSM and the SSDS. NAVSURFWARCENDIV Port Hueneme CA plans, schedules, and performs combat systems operations and maintenance on board Self Defense Test Ship (SDTS).
- (U) Funding will initiate 10/98 and obligate by 9/99.

B. (U) PROGRAM CHANGE SUMMARY:

	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
(U) FY 1997 President's Budget:	12,126	13,034	13,488	14,088
(U) Adjustments from Pres Budget:	-56	-532	239	-588
(U) FY 1998/99 President's Budget Submit:	12,070	12,502	13,727	13,500

(U) CHANGE SUMMARY EXPLANATION:

- (U) Funding: FY 1996 reduction consists of -\$106 thousand in general reductions and a \$50 thousand minor price adjustment. FY 1997 reduction consists of -\$532 thousand in undistributed Congressional reductions. FY 1998 increase consists of \$1,099 thousand for Navy Working Capital Fund (NWCF) adjustments which are partially offset by -\$484 thousand in NWCF adjustments and -\$376 thousand in general reductions. FY 1999 reduction consists of -\$389 thousand in NWCF adjustments and -\$379 thousand in general reductions which are partially offset by \$180 thousand in NWCF adjustments.

(U) Schedule: Not Applicable

(U) Technical: Not Applicable

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not Applicable

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605863N

PROJECT NUMBER: S0354

PROGRAM ELEMENT TITLE: RDT&E,N Ship and Aircraft Support PROJECT TITLE: RDT&E Ships Support

(U) RELATED RDT&E:

- (U) PE 0604755N: NATO Sea Sparrow and CIWS (Phalanx)
- (U) PE 0602314N: Undersea Surveillance and Weapons Technology (FLIP) (USS DOLPHIN)
- (U) PE 0602435N: Oceanographic and Atmospheric Technology (RL3B, OT3B)
- (U) PE 0602111N: Surface/Aerospace Surveillance and Weapons Technology (OR1A)
- (U) PE 0603226E: Unmanned Underwater Vehicles (USS DOLPHIN)
- (U) PE 0604610N: Lightweight Torpedo Development (USS DOLPHIN)

D. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998 RDT&E,N PROGRAM ELEMENT/PROJECT COST BREAKDOWN

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605863N

PROJECT NUMBER: S0354

PROGRAM ELEMENT TITLE: RDT&E,N Ship and Aircraft Support PROJECT TITLE: RDT&E Ships Support

A. (U) PROJECT COST BREAKDOWN: (\$ in thousands)

Project Cost Categories	FY 1996	FY 1997	FY 1998	FY 1999
a. USS DOLPHIN	9,005	9,786	11,215	10,981
b. FLIP	550	630	0	0
c. SDTS	2,500	2,000	2,482	2,489
d. Travel	15	30	30	30
e. SBIR	0	56	0	0
Total	12,070	12,502	13,727	13,500

B. (U) BUDGET ACQUISITION HISTORY AND PLANNING INFORMATION (\$ in thousands) - Not applicable

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605863N

PROGRAM ELEMENT TITLE: RDT&E,N Ship and Aircraft Support

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996		FY 1997		FY 1998		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		TOTAL	
	ACTUAL	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	COMPLETE	PROGRAM
W0568 RDT&E Aircraft Flight Hours	10,326		5,661		8,723		10,803		10,926		11,120		11,356		11,597		CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: RDT&E Aircraft Flight Hours. This non-acquisition project supports direct flight hour costs, including organizational and intermediate level maintenance, as well as associated consumables, including petroleum, oil, and lubricants (POL). These flight hours are used for aircrew training, the accomplishment of pilot proficiency requirements (approximately 3 hours per pilot per month), transition to new aircraft types, and support of Research and Development programs at four Naval Air Systems Command/Naval Surface Warfare Center/Office of Naval Research (NAVAIR/NSWC/ONR) activities. Annual flight simulator training for Naval Air Warfare Center (NAWC) activities, as well as pilot/Naval Flight Officer (NFO) Standardization and Instrument check flights for Navy personnel assigned to Defense Logistics Agency (DLA) activities are also supported.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$10,326) Met training/proficiency and project flight hour requirements. Provided organizational and intermediate-level maintenance, supply, and POL in support of RDT&E aircraft operations. Transition and reduction of aircraft and aircrew in response to downsizing of RDT&E aircraft inventory continued to occur. Supported the annual flight simulator training program. Initiated support of pilot/NFO check flights for DLA activities in accordance with a Tri-Service Letter of Agreement.

2. (U) FY 1997 PLAN:

- (U) (\$5,648) Meet 70 percent of training/proficiency flight hour requirements, maintaining a corresponding percentage of onboard pilots in a flight status, preserving adequate margins of safety. Plan to complete 45 percent of forecast project flight hour requirements. The highest priorities of annual flight simulator training as well as support to DLA activities will be achieved.
- (U) (\$13) Portion of program reserved for Small Business Innovation Research assessment in accordance with 15 U.S.C. 638.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605863N
PROGRAM ELEMENT TITLE: RDT&E,N Ship and Aircraft Support PROJECT TITLE: RDT&E Aircraft Flight Hours

PROJECT NUMBER: W0568

3. (U) FY 1998 PLAN:

- (U) (\$8,723) Meet 75 percent of training/proficiency and project flight hour requirements. Provide organizational and intermediate-level maintenance, supply, and POL in support of RDT&E aircraft operations. Support pilot/NFO check flights for DLA activities.

4. (U) FY 1999 PLAN:

- (U) (\$10,803) Meet 85 percent of training/proficiency and project flight hour requirements. Provide organizational and intermediate-level maintenance, supply, and POL in support of RDT&E aircraft operations. Support pilot/NFO check flights for DLA activities.

B. (U) PROGRAM CHANGE SUMMARY:

	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
(U) FY 1997 President's Budget:	10,353	5,903	9,138	10,789
(U) Adjustments from PRESBUDG:	-27	-242	-415	14
(U) FY 1998/99 President's Budget Submit:	10,326	5,661	8,723	10,803

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 1996 decrease consists of \$11 thousand for the F-16 Jordanian rescission and \$16 thousand for the Small Business Innovation Research (SBIR) assessment. FY 1997 decrease consists of \$242 thousand for Congressional undistributed reductions. FY 1998 decrease consists of \$395 thousand for Navy Working Capital Fund (NWCFF) carryover and rate adjustments, and \$20 thousand for minor pricing adjustments. FY 1999 increase consists of \$51 thousand for NWCFF rate adjustments. This increase is partially offset by a decrease of \$37 thousand for minor pricing adjustments.

(U) Schedule: Not Applicable

(U) Technical: Not Applicable

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not Applicable

(U) RELATED RDT&E: Not Applicable

D. (U) SCHEDULE PROFILE: Not Applicable

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FY 1998 RDT&E,N PROGRAM ELEMENT/PROJECT COST BREAKDOWN DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605863N PROJECT NUMBER: W0568
 PROGRAM ELEMENT TITLE: RDT&E,N Ship and Aircraft Support PROJECT TITLE: RDT&E Aircraft Flight Hours

A. (U) PROJECT COST BREAKDOWN: (\$ in thousands)

Project Cost Categories	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
a. NAWC/ONR/NSWC Flight Hours	10,190	5,519	8,607	10,680
b. DLA Flight Hours	72	104	116	123
c. Simulator Training	64	25	0	0
d. SBIR Assessment	0	13	0	0
Total	10,326	5,661	8,723	10,803

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FY 1998 RDT&E,N PROGRAM ELEMENT/PROJECT COST BREAKDOWN DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605863N PROJECT NUMBER: W0568
 PROGRAM ELEMENT TITLE: RDT&E,N Ship and Aircraft Support PROJECT TITLE: RDT&E Aircraft Flight Hours

B. (U) BUDGET ACQUISITION HISTORY AND PLANNING INFORMATION (\$ in thousands)

PERFORMING ORGANIZATIONS

Contractor/ Contract	Award/ Oblig Date	Perform Activity EAC	Project Office EAC	* Total FY 1995 & Prior	FY 1996 Budget	FY 1997 Budget	FY 1998 Budget	FY 1999 Budget	To Complete	Total Program
Government Method/										
Performing Fund Type										
Activity Vehicle										
Product Development										
NAWCAD PAX WX	10/98	CONT.	CONT.	21,688	3,510	1,770	3,420	4,244	CONT.	CONT.
NAWCWD MUGU WX	10/98	CONT.	CONT.	14,966	3,225	2,124	2,510	3,113	CONT.	CONT.
NRI. FSD PAX WX	10/98	CONT.	CONT.	8,259	2,035	740	1,410	1,791	CONT.	CONT.
All other efforts less than \$2.0M (Aggregate Total)										
MISC WX,RX,MP	10/98	CONT.	CONT.	11,518	1,556	1,014	1,383	1,655	CONT.	CONT.

Support and Management: Not Applicable
 Test and Evaluation: Not Applicable

GOVERNMENT FURNISHED PROPERTY: Not Applicable

	Total FY 1995 & Prior	FY 1996 Actual	FY 1997 Budget	FY 1998 Budget	FY 1999 Budget	To Complete	Total Program
Subtotal Production Development	56,431	10,326	5,648	8,723	10,803	CONT.	CONT.
Subtotal Support and Management	0	0	0	0	0	CONT.	CONT.
Subtotal Test and Evaluation	0	0	0	0	0	CONT.	CONT.
SBIR Assessment	0	0	13	0	0	CONT.	CONT.
Total Project	56,431	10,326	5,661	8,723	10,803	CONT.	CONT.

* This ongoing program has existed since prior to 1975. Detailed execution data is not available prior to 1991.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605863N

PROGRAM ELEMENT TITLE: RDT&E,N Ship and Aircraft Support

(U) COST: (Dollars in Thousands)

PROJECT

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
W0569 RDT&E Aircraft Support	37,310	30,090	26,146	31,310	30,696	30,591	31,661	32,764	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: RDT&E Aircraft Support. This continuing project funds costs associated with Navy Research, Development, Test and Evaluation (RDT&E) fixed and rotary wing aircraft which accommodate test and evaluation of aircraft/weapon systems. Testing aboard these platforms reduces the number of fleet units required to support RDT&E efforts. Included in these costs are Aviation Depot-Level Repairables (AVDLRs), which are spare and replacement aircraft parts and components. Starting in FY 1998, AVDLR costs have been reclassified as direct (customer-funded) costs, and a portion of the AVDLR funding to support customer programs has been redistributed to customers. The remainder of AVDLR funding has been retained in the account to support overhead (proficiency and training) flight hours, as well as residual project flying. This project also funds airframe Standard Depot Level Maintenance (SDLM), in-service repairs, modifications, emergency repairs, and engine repair, as well as aircraft material condition and field inspections. Additionally, it funds Individual Material Readiness List (IMRL) tools and support equipment, modification of in-service aircraft, and other systems for application to and compatibility with RDT&E requirements. Special Flight Test Instrumentation Pool (SFTIP) equipment, shared by programs to reduce or eliminate procurement lead times and save money, is also supported. The project also funds modifications and upgrades of RDT&E P3 engines, landing gear, and avionics. Operation and implementation of numerous maintenance and material management programs are also supported.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$37,310) The following programs were minimally supported: SDLM, AVDLR, IMRL, engine, and in-service repair support and modifications of aircraft in the RDT&E inventory. All efforts were made to maintain RDT&E aircraft readiness levels in order to support highest priority project workload. Operation and implementation of maintenance and material management programs at Naval Air Warfare Center activities continued.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605863N

PROJECT NUMBER: W0569

PROGRAM ELEMENT TITLE: RDT&E,N Ship and Aircraft Support PROJECT TITLE: RDT&E Aircraft Support

2. (U) FY 1997 PLAN:

- (U) (\$30,024) The following programs will be supported at a level which will meet a only a portion of forecast requirements: SDLM, AVDLR, engine, and in-service repair support and modifications of aircraft in the RDT&E inventory. Operation of maintenance and material management programs at Naval Air Warfare Center activities will continue at the minimum safe level. Deferral of required AVDLRs and SLDMS will result in slippage into FY98, increasing the requirement in that fiscal year. This funding level will support only the highest priority RDT&E programs in FY97, resulting in schedule slippage or cancellation of lower priority program testing.

- (U) (\$66)
15 U.S.C. 638. Portion of program reserved for Small Business Innovation Research assessment in accordance with

3. (U) FY 1998 PLAN:

- (U) (\$26,146) The following programs will be supported at a level which will meet a only a portion of forecast requirements: SDLM, AVDLR, IMRL, engine, and in-service repair support and modifications of aircraft in the RDT&E inventory. Required AVDLRs and SLDMS deferred to FY98 will be accomplished, with some deferrals of FY98 work to FY99. Consistent with an OSD policy change, customers will commence funding a portion of AVDLR costs incurred. Operation and implementation of maintenance and material management programs at Naval Air Warfare Center activities will continue.

4. (U) FY 1999 PLAN:

- (U) (\$31,310) The following programs will be supported at a level which will meet a only a portion of forecast requirements: SDLM, AVDLR, IMRL, engine, and in-service repair support and modifications of aircraft in the RDT&E inventory. Required AVDLRs and SLDMS deferred to FY99 will be accomplished. Operation and implementation of maintenance and material management programs at Naval Air Warfare Center activities will continue.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605863N

PROJECT NUMBER: W0569

PROGRAM ELEMENT TITLE: RDT&E,N Ship and Aircraft Support PROJECT TITLE: RDT&E Aircraft Support

B. (U) PROGRAM CHANGE SUMMARY:

	FY 1996	FY 1997	FY 1998	FY 1999
(U) FY 1997 President's Budget:	37,436	31,411	41,755	48,205
(U) Adjustments from PRESBUDG:	-126	-1,321	-15,609	-16,895
(U) FY 1998/99 President's Budget Submit:	37,310	30,090	26,146	31,310

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 1996 decrease consists of \$65 thousand for the SBIR assessment, \$43 thousand for the F-16 Jordanian rescission , and \$18 thousand for minor pricing adjustments. FY 1997 decrease consists of \$1,321 thousand for Congressional undistributed reductions. FY 1998 net decrease consists of \$13,095 for AVDLR redistribution to customer accounts, \$1,971 thousand for Navy Working Capital Fund (NWCf) carryover and rate adjustments, \$966 thousand for stand up of the Modeling and Simulation Program Office, and \$77 thousand for minor pricing adjustments. This decrease is partially offset by an increase of \$500 thousand for aircraft support. FY 1999 decrease consists of \$14,445 for AVDLR redistribution to customer accounts, \$1,049 thousand for stand up of the Modeling and Simulation Program Office, \$771 thousand for NWCf rate adjustments, \$500 thousand for aircraft support, and \$130 thousand for minor pricing adjustments.

(U) Schedule: Not Applicable

(U) Technical: Not Applicable

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not Applicable

(U) RELATED RDT&E: Not Applicable

D. (U) SCHEDULE PROFILE: Not Applicable

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FY 1998 RDT&E,N PROGRAM ELEMENT/PROJECT COST BREAKDOWN

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605863N

PROJECT NUMBER: W0569

PROGRAM ELEMENT TITLE: RDT&E,N Ship and Aircraft Support PROJECT TITLE: RDT&E Aircraft Support

A. (U) PROJECT COST BREAKDOWN: (\$ in thousands)

Project Cost Categories	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
a. AVDLR	21,857	19,690	10,666	12,941
b. SFTIP	1,000	700	1,100	1,133
c. SDLM	6,195	3,884	8,000	10,500
d. AIRCRAFT SUPPORT	8,258	5,750	6,380	6,736
e. SBIR ASSESSMENT	0	66	0	0
Total	38,310	30,090	26,146	31,310

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FY 1998 RDT&E,N PROGRAM ELEMENT/PROJECT COST BREAKDOWN DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605863N
PROJECT NUMBER: W0569
PROGRAM ELEMENT TITLE: RDT&E,N Ship and Aircraft Support PROJECT TITLE: RDT&E Aircraft Support

B. (U) BUDGET ACQUISITION HISTORY AND PLANNING INFORMATION (\$ in thousands)

PERFORMING ORGANIZATIONS

Contractor/ Contract Government Method/ Performing Fund Type Activity Vehicle	Award/ Oblig Date	Perform Activity EAC	Project Office EAC	* Total FY 1995 & Prior	FY 1996 Budget	FY 1997 Budget	FY 1998 Budget	FY 1999 Budget	To Complete	Total Program
Product Development										
NADOC PAX PD	10/98	CONT.	CONT.	83,638	10,482	8,584	13,000	15,650	CONT.	CONT.
NAWCAD PAX WX	10/98	CONT.	CONT.	81,922	12,483	10,798	7,175	8,372	CONT.	CONT.
NAWCWD MUGU WX	10/98	CONT.	CONT.	30,382	3,925	5,947	3,771	4,145	CONT.	CONT.
NAWCWD C/L WX	10/98	CONT.	CONT.	27,746	4,515	**				
All other efforts less than \$2.0M (Aggregate Total)										
MISC. WX,RC,PD	10/98	CONT.	CONT.	22,166	5,128	3,804	1,195	1,943	CONT.	CONT.
Support and Management										
MISC WX,RC,PD	10/98	CONT.	CONT.	2,469	777	891	1,005	1,200	CONT.	CONT.

Test and Evaluation: Not Applicable

GOVERNMENT FURNISHED PROPERTY: Not Applicable

* This ongoing program has existed since prior to 1975. Detailed execution data is not available prior to 1991.

** Effective FY 1997, funding for NAWCWD China Lake has been consolidated into one account at NAWCWD Point Mugu.

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FY 1998 RDT&E,N PROGRAM ELEMENT/PROJECT COST BREAKDOWN

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605863N

PROJECT NUMBER: W0569

PROGRAM ELEMENT TITLE: RDT&E,N Ship and Aircraft Support PROJECT TITLE: RDT&E Aircraft Support

	* Total FY 1995 & Prior	FY 1996 Budget	FY 1997 Budget	FY 1998 Budget	FY 1999 Budget	To Complete	Total Program
Subtotal Product Development	245,854	36,533	29,133	25,141	30,110	CONT.	CONT.
Subtotal Support and Management	2,469	777	891	1,005	1,200	CONT.	CONT.
Subtotal Test and Evaluation	0	0	0	0	0	CONT.	CONT.
SBIR Assessment	0	0	66	0	0	CONT.	CONT.
Total Project	248,323	37,310	30,090	26,146	31,310	CONT.	CONT.

* This ongoing program has existed since prior to 1975. Detailed execution data is not available prior to 1991.

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FY 1998 RDT&E,N PROGRAM ELEMENT/PROJECT COST BREAKDOWN DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605863N

PROJECT NUMBER: W0569

PROGRAM ELEMENT TITLE: RDT&E,N Ship and Aircraft Support PROJECT TITLE: RDT&E Aircraft Support

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Exhibit R-3

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605864N

PROGRAM ELEMENT TITLE: Test and Evaluation Support

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
W0541 Atlantic Undersea Test and Evaluation Center (AUTEC)	40,421	43,250	46,482	47,936	48,779	48,241	49,554	50,654	CONT.	CONT.
W0653 Naval Air Warfare Center Weapons Division	116,126	116,326	131,792	136,532	139,813	139,441	143,256	146,318	CONT.	CONT.
W0654 Naval Air Warfare Center Aircraft Division	79,391	74,332	85,660	88,156	89,859	89,357	91,722	93,569	CONT.	CONT.
TOTAL	235,938*	233,908	263,934	272,624	278,451	277,039	284,532	290,541	CONT.	CONT.

(U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program provides institutional maintenance and operational support for: the Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation Center (NAVUNSEAWARCEN DET AUTEC), Andros Island, Bahamas; the Naval Air Warfare Center Weapons Division (NAVAIRWARCENWPNDIV), Point Mugu and China Lake, CA; the Naval Air Warfare Center Aircraft Division (NAVAIRWARCENACDIV), Patuxent River, MD and Trenton, NJ. The Test and Evaluation (T&E) activities make up the Navy portion of the Department of Defense's Major Range and Test Facility Bases (MRTFB). These activities are chartered to perform T&E for the development and acquisition of technologically advanced weapons systems. Core T&E capabilities and capacity are operated to obtain weapons system performance documentation for acquisition program milestone decisions to provide operational forces with effective weapon systems. This project subsidizes acquisition programs, T&E costs, and fleet support to keep customers cost low and at the same time keep required T&E infrastructure in place.

(U) *FY 1996 total of \$235,938 excludes Below Threshold Reprogrammings of \$16,360 provided through related T&E Program Elements 0605862N, 0604759N, and 0604256N (FY 1995 and FY 1996). The Test and Evaluation Program for FY 1996 executed to a level of \$252,298 for MRTFB support.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under Research, Development, Test and Evaluation management support to fund the operations and installations required for general research and development use.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605864N

PROGRAM ELEMENT TITLE: Test and Evaluation Support

(U) COST (Dollars in Thousands)

PROJECT

NUMBER & FY	1996	1997	1998	1999	2000	2001	2002	2003	TO	TOTAL
TITLE	ACTUAL	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	COMPLETE	PROGRAM
W0541 Atlantic Undersea Test and Evaluation Support (AUTEC)										
	*40,421	43,250	46,482	47,936	48,779	48,241	49,554	50,654	CONT	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: AUTEC provides a deep water Test and Evaluation (T&E) facility for collecting selected underwater, surface and air tracking data on test participants. NAVUNSEAWARCEN DET AUTEC, Andros Island, Bahamas, includes the Weapons Range, Fleet Operational Readiness Accuracy Check Site, Weapons Acoustic Measurement Capability and an Ocean Haul Down Facility for large buoyant bodies. The Weapons Range provides three-dimensional (undersea, surface, and air) precision tracking capability in support of Anti-Submarine Warfare Development trials. The Fleet Operational Readiness Accuracy Check Site provides the capability to accurately calibrate and align electronic optical, acoustic, and navigational systems installed on submarines, surface ships and helicopters. The NAVUNSEAWARCEN DET AUTEC at West Palm Beach, Florida provides technical expertise in tracking systems, liaison and test planning with range users, test scheduling, and logistic support.

(U) *FY 1996 total of \$40,421 excludes Below Threshold Reprogramming of \$3,600 for AUTEC.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$18,723) Maintained core Major Range Test and Facility Base (MRTFB) capabilities to meet customers' test workload. Continued to operate and maintain the physical plant and essential technical test support instrumentation, marine craft, and critical spares inventory. Supported only priority maintenance and repair efforts. Performed contract administration support.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605864N

PROJECT NUMBER: W0541

PROGRAM ELEMENT TITLE: Test and Evaluation Support PROJECT TITLE: Atlantic Undersea

Test and Evaluation Center

- (U) (\$11,262) Continued rental payments to the Bahamian government for use of land and ocean in the Bahamas and lease payments to the General Services Administration (GSA) for facilities at West Palm Beach.

- (U) (\$10,436) Continued civilian pay, travel, utility, petroleum, oil and lubricants (POL), supply transportation, and general and administrative efforts required to maintain and operate AUTEK resources and capabilities.

2. (U) FY 1997 PLAN:

- (U) (\$21,764) Continue to maintain core Major Range Test and Facility Base (MRTFB) capabilities to meet customers' test workload. Continue to operate and maintain the physical plant, essential technical test support instrumentation, marine craft, and critical spares inventory. Support only priority maintenance and repair efforts. Perform contract administration support.

- (U) (\$10,874) Continue rental payments to the Bahamian government for use of land and ocean in the Bahamas and lease payments to GSA for facilities at West Palm Beach.

- (U) (\$10,370) Continue civilian pay, travel, utility, petroleum, oil and lubricants (POL), supply, transportation and general and administrative efforts required to maintain and operate AUTEK resources and capabilities.

- (U) (\$242) Portion of program reserved for Small Business Innovation Research assessment in accordance with 15 U.S.C. 638.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605864N

PROJECT NUMBER: W0541

PROGRAM ELEMENT TITLE: Test and Evaluation Support PROJECT TITLE: Atlantic Undersea
Test and Evaluation Center

3. (U) FY 1998 PLAN:

- (U) (\$24,847) Continue to maintain core test support resources, instrumentation systems, and marine craft required to perform AUTECH's mission. Maintain spares inventory. Perform maintenance and repair efforts. Perform contract administrative support.
- (U) (\$10,915) Continue rental payments to the Bahamian government for use of land and ocean in the Bahamas and lease payments to GSA for facilities at West Palm Beach.
- (U) (\$10,720) Continue civilian pay, travel, utility, POL, supply, transportation and general and administrative efforts required to maintain and operate AUTECH resources and capabilities.

4. (U) FY 1999 PLAN:

- (U) (\$25,896) Continue to operate and maintain core test support assets, instrumentation systems, and marine craft required to perform AUTECH mission. Maintain spares inventory. Perform facility repairs. Perform contract administrative support.
- (U) (\$10,960) Continue rental payments to the Bahamian government for use of land and ocean in the Bahamas and lease payments to GSA for facilities at West Palm Beach.
- (U) (\$11,080) Continue civilian pay, travel, utility, POL, supply, transportation, and general and administrative efforts required to maintain and operate AUTECH resources and capabilities.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605864N

PROJECT NUMBER: W0541

PROGRAM ELEMENT TITLE: Test and Evaluation Support PROJECT TITLE: Atlantic Undersea

Test and Evaluation Center

B. (U) PROGRAM CHANGE SUMMARY: (Dollars in Thousands)

(U) FY 1997 President's Budget:	FY 1996 41,009	FY 1997 45,094	FY 1998 47,488	FY 1999 47,121
(U) Adjustments from PRESBUDG:	-588	-1,844	-1,006	+815
(U) FY 1998/99 President's Budget Submit:	40,421	43,250	46,482	47,936

(U) CHANGE SUMMARY EXPLANATION: (Dollars in Thousands)

(U) Funding: FY 1996 decrease reflects \$47 thousand for the Jordanian F-16 financing rescission; \$181 thousand for the SBIR assessment, and \$360 thousand for the safety and survivability adjustment. FY 1997 decrease of \$1,844 thousand reflects Congressional undistributed reductions. FY 1998 net decrease reflects \$1,519 thousand for Navy Working Capital Fund (NWCf) carryover and rate adjustments; \$47 thousand to adjust the customer accounts of the Warfare Centers to reflect Base Realignment and Closure (BRAC) savings; and \$22 thousand for minor pricing adjustments. These decreases are partially offset by an increase of \$582 thousand to maintain an appropriate level of funding necessary to support the MRTFB program. FY 1999 net increase reflects reductions of \$536 thousand for NWCf rate adjustments; \$48 thousand for BRAC savings; and \$55 thousand for minor pricing adjustments. These decreases are offset by an increase of \$1,454 thousand to maintain an appropriate level of funding necessary to support the MRTFB program.

(U) Schedule: Not applicable.

(U) Technical: Not applicable.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605864N

PROJECT NUMBER: W0541

PROGRAM ELEMENT TITLE: Test and Evaluation Support PROJECT TITLE: Atlantic Undersea

Test and Evaluation Center

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not Applicable.

(U) RELATED RDT&E:

(U) PE 0604759N, Major T&E Investment

(U) PE 0605862N, RDT&E Instrumentation Modernization

D. (U) SCHEDULE PROFILE: Not applicable.

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DATE: February 1997

FY 1998 RDT&E,N PROGRAM ELEMENT/PROJECT COST BREAKDOWN

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605864N
PROGRAM ELEMENT TITLE: Test and Evaluation Support

PROJECT NUMBER: W0541
PROJECT TITLE: Atlantic Undersea Test
and Evaluation Center

A. (U) PROJECT COST BREAKDOWN: (\$ in thousands)

Project Cost Categories	FY 1996	FY 1997	FY 1998	FY 1999
a. Civilian Pay	2,527	2,600	2,700	2,800
b. General and Administrative	852	660	695	730
c. Supplies	1,417	1,700	1,785	1,875
d. Facilities Rental (Bahamian/West Palm Beach)	11,262	10,874	10,915	10,960
e. Petroleum, Oil and Lubricant (POL)	1,454	1,525	1,600	1,680
f. Transportation	2,800	2,800	2,800	2,800
g. Aircraft POL	483	510	535	560
h. Other Purchased Services	18,723	21,764	24,847	25,896
i. Other MRTFB Expenses	903	575	605	635
j. SBIR Assessment	0	242	0	0
Total	*40,421	43,250	46,482	47,936

*FY 1996 total of \$40,421 excludes Below Threshold Reprogramming of \$3,600 for AUTECH

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DATE: February 1997

FY 1998 RDT&E,N PROGRAM ELEMENT/PROJECT COST BREAKDOWN

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605864N PROJECT NUMBER: W0541
 PROGRAM ELEMENT TITLE: Test and Evaluation Support PROJECT TITLE: Atlantic Undersea Test and Evaluation Center

B. (U) BUDGET ACQUISITION HISTORY AND PLANNING INFORMATION (\$ in thousands)

PERFORMING ORGANIZATIONS

Contractor/ Contract Government Method/ Performing Fund Type Activity Vehicle	Award/ Oblig Date	Perform Activity EAC	Project Office EAC	Total FY 1995 & Prior	FY 1996 Actual	FY 1997 Budget	FY 1998 Budget	FY 1999 Budget	To Complete	Total Program
Product Development										
NAVFAC RX	10/98	TBD	TBD	110,550	10,050	10,050	10,050	10,050	CONT.	CONT.
AUTEC WX	10/98	TBD	TBD	650,834	30,371	32,958	36,432	37,886	CONT.	CONT.

Support and Management: Not Applicable

Test and Evaluation: Not Applicable

GOVERNMENT FURNISHED PROPERTY: Not Applicable

	Total FY 1995 & Prior	FY 1996 Actual	FY 1997 Budget	FY 1998 Budget	FY 1999 Budget	To Complete	Total Program
Subtotal Production Development	761,384	40,421	43,008	46,482	47,936	CONT.	CONT.
SBIR Assessment			242				
Total Project	761,384	40,421	43,250	46,482	47,936	CONT.	CONT.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605864N

PROGRAM ELEMENT TITLE: Test and Evaluation Support

(U) COST (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
	Naval Air Warfare Center Weapons Division (NAVAIRWARCENWPN DIV)									
W0653	116,126*	116,326	131,792	136,532	139,813	139,441	143,256	146,318	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides maintenance and operational support for the NAVAIRWARCENWPN DIV Pacific Ranges consisting of China Lake Land Ranges and Point Mugu Sea Range. The Pacific Ranges use China Lake's 1.1 million acres of land and 17,000 square miles of military restricted (R-2508) airspace together with Point Mugu's 125,000 square miles of instrumented sea range and 36,000 square miles of controlled overlying airspace; a neighboring deep draft port facility at Port Hueneme, and the offshore airfield and test instrumentation at Sea Range to perform its Test and Evaluation mission. The Point Mugu Sea Range has unique sea, mountain, and instrumented offshore islands, as well as the interconnectivity needed to support large complex operations. The China Lake air ranges contain unique terrain features, and are instrumented for both low level and high altitude missile and weapon system testing. The Electronic Combat Range (ECR) at China Lake provides outdoor free space development and operational testing of airborne electronic warfare (EW) systems and tactics against shipboard and land site air defense systems over a land range of 700 square miles. These ranges perform metric radar, multilateration and optical tracking of test objects; command, control, and destruct for range safety purposes; communications; frequency interference control and analysis; collection processing and display of telemetered data; real-time data processing and display; and the operation of full scale aerial target launch capability. Other test capabilities include a static Radar Cross Section (RCS) measurement facility; propulsion, warhead, environmental, rocket motor, and other missile component test facilities; parachute/weapon recovery system test facilities; gun ranges; and weapon system survivability. This project also supports the R-2508 Air Space Control System, annual lease for offshore islands, remote location instrumentation sites, and Host Tenant Agreement costs.

(U) * FY 1996 total of \$116,126 excludes Below Threshold Reprogramming of \$10,101 for NAVAIRWARCENWPN DIV.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605864N

PROGRAM ELEMENT TITLE: Test and Evaluation Support

PROJECT NUMBER: W0653

PROJECT TITLE: Naval Air Warfare Center
Weapons Division

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$64,045) Operated core MRTFB capabilities required to meet critical test workload. Supported essential components of indirect civilian salary and contractor costs required to manage, operate, and maintain the Pacific Ranges' Sea, Air, Ground, Electronic Combat, Junction Ranch RCS ranges, Propulsion, Warhead, and Environmental test facilities, parachute system testing, operational target vehicle and launch functions, and aircraft maintenance. Supported critical elements of Naval Weapons Station MRTFB functions including weapons handling and storage, air operations and Public Works vehicle transportation costs. Supported the Safety and Survivability non-developmental items project to permit procurement of limited numbers of off-the-shelf non-developmental items for operational assessment.
- (U) (\$7,487) Supported continued priority equipment calibration, materials, supplies, technical equipment and spare parts for core range and target instrumentation and equipment systems.
- (U) (\$4,084) Supported transportation, printing, communications, annual leases for offshore island and remote location instrumentation sites, host tenant agreement costs, and critical training and travel necessary to manage and sustain MRTFB operations.
- (U) (\$6,131) Supported MRTFB Real Property Maintenance Activities (RPMA) funding for mission critical emergency call services, road maintenance, and system maintenance to meet customer requirements.
- (U) (\$3,969) Continued essential support for maintaining R-2508 Air Space Control System and DC-130 target air launch capabilities.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605864N

PROGRAM ELEMENT TITLE: Test and Evaluation Support

PROJECT NUMBER: W0653

PROJECT TITLE: Naval Air Warfare Center
Weapons Division

- (U) (\$24,992) Continued annual utility costs, facility service contracts, worker's compensation costs for MRTFB employees, and contributed to Command's General and Administrative (G&A) expenses for comptroller, contracting, personnel, and other services.
- (U) (\$5,418) Provided flight hour costs to maintain basic pilot proficiency in aircraft used to support the MRTFB mission.
- 2. (U) FY 1997 PLAN:
 - (U) (\$55,331) Operate core MRTFB capabilities required to meet acquisition program and fleet test workload. Support essential components of indirect civilian salary and contractor costs required to manage, operate, and maintain Pacific Ranges' Sea, Air, Ground, Electronic Combat, Propulsion, Warhead, and Environmental test facilities, operational target vehicle launch operations and aircraft maintenance. Support elements of Naval Weapons Station MRTFB functions including air operations and Public Works vehicle transportation costs. Customers will be required to pay for all MRTFB labor and contract costs within the parachute systems, weapons handling and storage, Junction Ranch RCS ranges, Supersonic Naval Ordnance Research Track functions; and a portion of the costs in the Air Ground ranges. In addition, civil service cost reductions through buyout programs and transfers within the command; along with reductions to contractor maintenance and support services has resulted in some capability cutbacks and operating deficiencies.
 - (U) (\$6,053) Support continued priority equipment calibration, materials, supplies, technical equipment and spare parts for core range, target instrumentation and equipment systems. Customers will be required to pay for all of the technical supplies and equipment within the parachute, weapons handling and storage, Junction Ranch RCS ranges and track functions.
 - (U) (\$3,084) Provide transportation, printing, communications, annual leases for offshore island and remote location instrumentation sites, Host Tenant Agreement costs, and critical training necessary to manage and sustain MRTFB operations. Reductions to travel and training supporting both Navy and Tri-service panels, management reviews and technical training will require customers to pay more of these costs.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605864N

PROJECT NUMBER: W0653

PROGRAM ELEMENT TITLE: Test and Evaluation Support

PROJECT TITLE: Naval Air Warfare Center
Weapons Division

- (U) (\$3,214) Continue MRTFB RPMA funding for mission critical emergency call services, road maintenance, and system maintenance to meet customer requirements. No funding will be available for repairs and minor construction costing more than \$25K. BMAR and facility readiness impacted.
- (U) (\$3,833) Continue essential support for maintaining R-2508 Air Space Control System and DC-130 target air launch capabilities. Reduced budget requires customers to pay additional flight hour rates for the DC-130.
- (U) (\$39,001) Continue annual utility costs, facility service contracts, worker's compensation costs for MRTFB employees, and contribution to Command's G&A expenses for comptroller, contracting, personnel and other support services.
- (U) (\$5,388) Provide flight hour costs to maintain basic pilot proficiency in aircraft used to support the MRTFB mission.
- (U) (\$422) Portion of program reserved for Small Business Innovation Research assessment in accordance with 15 U.S.C. 638.

3. (U) FY 1998 PLAN:

- (U) (\$61,942) Operate core MRTFB capabilities required to meet acquisition program and fleet test workload. Supports indirect civilian salary and contractor costs required to manage, operate, and maintain Pacific Ranges' Sea, Air, Ground, Electronic Combat, Propulsion, Warhead, and Environmental test facilities, operational target vehicle launch functions and aircraft maintenance. Support critical elements of Naval Weapons Station MRTFB functions, including air operations and Public Works vehicle transportation costs. Budget increase allows customer assessments to be consistent with the Department of Defense (DoD) policy for parachute systems testing, weapons handling and storage, Junction Ranch RCS ranges, track and the Air Ground ranges.

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Exhibit R-2

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605864N

PROGRAM ELEMENT TITLE: Test and Evaluation Support

PROJECT NUMBER: W0653

PROJECT TITLE: Naval Air Warfare Center
Weapons Division

- (U) (\$7,764) Support continued priority equipment calibration, materials, supplies, technical equipment and spare parts for core range and target instrumentation and equipment systems. Budget increase allows for standard customer charging for technical supplies and equipment used/expended in the tests utilizing parachutes, weapons handling and storage, Junction Ranch RCS ranges and track functions. In addition, increased investments for spare parts and technical consumables will be accomplished to maintain a reliable inventory of test instrumentation.
- (U) (\$3,341) Provide essential transportation, printing, communications, annual leases for offshore island and remote location instrumentation sites, Host Tenant Agreement costs, and critical training necessary to manage and sustain MRTFB operations. Travel funding will be increased to attend mission related meetings and to ensure greater efficiency for operation. Technical training will be increased to cross train engineers and technicians.
- (U) (\$7,168) Continue MRTFB RPMA funding for mission critical only emergency call services, road maintenance, system maintenance to meet customer requirements. Increased funding is required to compensate for no fund availability in FY 1997 for repairs and minor construction over \$25K.
- (U) (\$3,974) Continue essential support for maintaining R-2508 Air Space Control System and DC-130 target air launch capabilities. Budget increase will reduce DC-130 customer rates to appropriate levels.
- (U) (\$42,185) Continue annual utility costs, facility service contracts, worker's compensation costs for MRTFB employees, and contribution to Command's G&A expenses for comptroller, contracting, personnel, other support services.
- (U) (\$5,418) Provide flight hour costs to maintain basic pilot proficiency in aircraft used to support the MRTFB mission.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605864N

PROGRAM ELEMENT TITLE: Test and Evaluation Support

PROJECT NUMBER: W0653

PROJECT TITLE: Naval Air Warfare Center
Weapons Division

4. (U) FY 1999 PLAN:

- (U) (\$65,859) Operate core MRTFB capabilities required to meet acquisition program and fleet test workload. Support essential components of indirect civilian salary and contractor costs required to manage, operate, and maintain Pacific Ranges' Sea, Air, Ground, Electronic Combat, Propulsion, Warhead, and Environmental test facilities, operational target vehicle launch functions and aircraft maintenance. Support critical elements of Naval Weapons Station MRTFB functions including air operations and Public Works vehicle transportation costs. Budget increase allows customer assessments to be consistent with DoD policy for parachute systems testing, weapons handling and storage, Junction Ranch RCS ranges, track and the Air Ground ranges. Additional MRTFB contract cost increases will compensate for the loss of military operating boats on the Sea Range. Transition to outsourcing of range and target operations will result in one time employee separation costs.
- (U) (\$7,920) Support continued priority equipment calibration, materials, supplies, technical equipment and spare parts for core range and target instrumentation and equipment systems. Budget allows for standard customer charging for only the costs of technical supplies and equipment used/expended in the tests utilizing parachutes, weapons handling and storage, Junction Ranch RCS ranges and track functions.
- (U) (\$3,352) Provide transportation, printing, communications, annual leases for offshore island and remote location instrumentation sites, Host Tenant Agreement costs, and critical training necessary to manage and sustain MRTFB operations.
- (U) (\$8,304) Continue MRTFB RPMA funding for mission emergency call services, road maintenance, system maintenance, major repairs and minor construction to meet customer requirements and prolong the life of the physical plant at a minimal investment level.
- (U) (\$4,100) Continue essential support for maintaining R-2508 Air Space Control System and DC-130 target air launch capabilities.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605864N PROJECT NUMBER: W0653
 PROGRAM ELEMENT TITLE: Test and Evaluation Support PROJECT TITLE: Naval Air Warfare Center Weapons Division

- (U) (\$41,370) Continue annual utility costs, facility service contracts, worker's compensation costs for MRTFB employees, and contribution to Command's G&A expenses for comptroller, contracting, personnel, and other support services.
- (U) (\$5,627) Provide flight hour costs to maintain basic pilot proficiency in aircraft used to support the MRTFB mission.

B. (U) PROGRAM CHANGE SUMMARY: (Dollars in Thousands)

	FY 1996	FY 1997	FY 1998	FY 1999
(U) FY 1997 President's Budget:	115,238	121,290	136,336	135,458
(U) Adjustments from FY 1997 PRESBUDG:	+888	-4,964	-4,544	+1,074
(U) FY 1998/99 President's Budget Submit:	116,126	116,326	131,792	136,532

(U) CHANGE SUMMARY EXPLANATION: (Dollars in Thousands)

(U) Funding: FY 1996 increase reflects \$1,020 thousand for the safety and survivability adjustment, which is partially offset by a decrease of \$132 thousand for the Jordanian F-16 financing rescission. FY 1997 decrease reflects \$4,964 thousand for Congressional undistributed reductions. FY 1998 net decrease reflects reductions of \$136 thousand to adjust the customer accounts of the Warfare Centers to reflect Base Realignment and Closure (BRAC) savings; \$3,466 thousand for Navy Working Capital Fund (NWCf) rate adjustments; \$59 thousand for minor pricing adjustments; and \$2,975 thousand for stand up of the Modeling and Simulation Program Office. These decreases are offset by a \$2,092 thousand increase to maintain an appropriate level of funding necessary to support the MRTFB program. FY 1999 net increase reflects reductions of \$139 thousand for BRAC savings; \$300 thousand for NWCf surcharge and rate adjustments; \$154 thousand for minor pricing adjustments, and \$2,879 thousand for standup of the Modeling and Simulation Program Office. These decreases are offset by a \$4,546 thousand increase to maintain an appropriate level of funding necessary to support the MRTFB program.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605864N

PROGRAM ELEMENT TITLE: Test and Evaluation Support

PROJECT NUMBER: W0653

PROJECT TITLE: Naval Air Warfare Center
Weapons Division

(U) Schedule: Not applicable.

(U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not Applicable.

(U) RELATED RDT&E:

(U) PE 0604759N, Major T&E Investment

(U) PE 0605862N, RDT&E Instrumentation Modernization

(U) PE 0604256N, Threat Simulator Development

(U) PE 0604258N, Target Systems Development

D. (U) SCHEDULE PROFILE: Not applicable.

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DATE: February 1997

1998 RDT&E,N PROGRAM ELEMENT/PROJECT COST BREAKDOWN

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605864N

PROJECT NUMBER: W0653

PROGRAM ELEMENT TITLE: Test and Evaluation Support

PROJECT TITLE: Naval Air Warfare

Center, Weapons Div

A. (U) PROJECT COST BREAKDOWN: (\$ in thousands)

Project Cost Categories

	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
a. Civilian Pay	45,448	41,916	44,854	46,150
b. General and Administrative	21,481	35,377	38,481	37,585
c. Equipment and Supplies	6,606	5,620	7,015	7,194
d. Equipment Maintenance	6,606	6,247	7,713	9,585
e. MRTFB Flight Hours	5,418	5,388	5,418	5,627
f. DC-130	1,625	1,463	1,700	1,700
g. Facility Repairs	6,110	3,178	7,129	8,262
h. Range Operations and Support Services	10,838	10,394	12,357	13,098
i. Other MRTFB Expenses	2,341	1,578	2,200	2,300
j. Communications	1,341	1,119	1,221	1,246
k. Utilities	3,546	3,624	3,704	3,785
l. Other MRTFB Expenses/Safety & Survivability	4,766	0	0	0
m. SBIR Assessment		422		
Total	*116,126	116,326	131,792	136,532

*FY 1996 total of \$116,126 excludes Below Threshold Reprogramming of \$10,101 for NAVAIRWARCENWPNDIV

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DATE: February 1997

FY 1998 RDT&E,N PROGRAM ELEMENT/PROJECT COST BREAKDOWN

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605864N PROJECT NUMBER: W0653
 PROGRAM ELEMENT TITLE: Test and Evaluation Support PROJECT TITLE: Naval Air Warfare Center, Weapons Div

B. (U) BUDGET ACQUISITION HISTORY AND PLANNING INFORMATION (\$ in thousands)

PERFORMING ORGANIZATIONS

Contractor/ Contract Government Method/ Performing Fund Type Oblig Activity Vehicle Date	Award/ Oblig Date	Perform Activity EAC	Project Office EAC	Total FY 1995 & Prior	FY 1996 Actual	FY 1997 Budget	FY 1998 Budget	FY 1999 Budget	To Complete	Total Program
Product Development										
NAWCWD WX	10/97	TBD	TBD	2,294,317	114,126	115,904	131,792	136,532	CONT.	CONT.
Miscellaneous Government										
WX	10/96	2,000	2,000	0	2,000				0	2,000

Support and Management: Not Applicable

Test and Evaluation: Not Applicable

GOVERNMENT FURNISHED PROPERTY: Not Applicable

	Total FY 1995 & Prior	FY 1996 Actual	FY 1997 Budget	FY 1998 Budget	FY 1999 Budget	To Complete	Total Program
Subtotal Production Development	2,294,317	116,126	115,904	131,792	136,532	CONT.	CONT.
SHIR Assessment			422				
Total Project	2,294,317	116,126	116,326	131,792	136,532	CONT.	CONT.

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FY 1998 RDT&E, N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605864N

PROGRAM ELEMENT TITLE: Test and Evaluation Support

(U) COST (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
W0654 Naval Air Warfare Center Aircraft Division (NAVAIRWARCENACDIV)										
	79,391*	74,332	85,660	88,156	89,859	89,357	91,722	93,569	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides funds for test and evaluation and fleet support for air platforms. Product areas include aircraft systems flight test and engineering. Test and Engineering Group Patuxent River, performs development, test, and evaluation of manned and unmanned air vehicle systems, including mission systems, equipment, subsystems, components, and support systems. NAVAIRWARCENACDIV has extensive airfield, flight test ranges, aircraft systems test facilities and simulation laboratories to support aircraft T&E. This project also provides technical and engineering support and associated research, development, test and evaluation facilities for air-breathing propulsion systems. This includes accessories and components, fuels and lubricants. This project has extensive facilities for conducting both installed and uninstalled aircraft engine Development, Test and Evaluation (DT&E). This project also funds costs not chargeable to the users.

(U) *FY 1996 total of \$79,391 excludes Below Threshold Reprogramming of \$2,659 for NAVAIRWARCENACDIV.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$27,431) Operated mission essential MRTFB capabilities to meet critical test workload. Supported essential elements of civilian labor required to manage, operate, and maintain the MRTFB.
- (U) (\$4,354) Provided essential travel, transportation, collateral equipment, and supplies required for support of the MRTFB. Continued payment of worker's compensation cost for MRTFB employees.

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Exhibit R-2

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605864N

PROGRAM ELEMENT TITLE: Test and Evaluation Support

PROJECT NUMBER: W0654

PROJECT TITLE: Naval Air Warfare Center
Aircraft Division

- (U) (\$8,818) Continued communications, purchased equipment maintenance, printing and reproduction, and purchased service contracts necessary to manage and sustain MRTFB operations.
 - (U) (\$6,109) Continued maintenance and repair of MRTFB facilities.
 - (U) (\$2,708) Provided minor construction and major repair to reduce Backlog, Maintenance and Repair (BMAR) items and sustain MRTFB operational capabilities.
 - (U) (\$7,700) Provided flight hour costs to maintain pilot proficiency in aircraft used to support MRTFB mission.
 - (U) (\$18,066) Contributed to the Command's General and Administrative expenses for essential support services (e.g., comptroller, contracting, personnel, and other services).
 - (U) (\$4,205) Continued mission essential annual utility costs, equipment rentals, and land, building, and facility leases.
2. (U) FY 1997 PLAN:
- (U) (\$27,385) Operate mission essential MRTFB capabilities to meet customer test workload. Support essential elements of civilian labor required to manage, operate, and maintain the MRTFB.
 - (U) (\$5,415) Provide essential travel, transportation, collateral equipment, and supplies required to support the MRTFB. Continue payment of worker's compensation costs for MRTFB employees. Support the Safety and Survivability non-developmental items project.
 - (U) (\$6,938) Continue communications, purchased equipment maintenance, printing and reproduction, and purchased service contracts necessary to manage and sustain MRTFB operations. Current budget requires customers to pay for Test Article Preparation including Aircraft Instrumentation, Mechanical Prototyping and Fabrication, Mechanical Design and Fabrication in support of uninstalled engine tests and additional costs in range and test facilities.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605864N

PROGRAM ELEMENT TITLE: Test and Evaluation Support

PROJECT NUMBER: W0654

PROJECT TITLE: Naval Air Warfare Center
Aircraft Division

- (U) (\$5,926) Continue minimum maintenance and repair of MRTFB facilities.
 - (U) (\$500) Provide major repair for essential MRTFB capabilities.
 - (U) (\$7,375) Provide flight hour costs to maintain pilot proficiency in aircraft used to support MRTFB mission.
 - (U) (\$16,500) Reimburse the Command for essential General and Administrative support services, (eg., comptroller, contracting, personnel and other services).
 - (U) (\$4,293) Continue mission essential annual utility costs, equipment rentals, and land, building, and facility leases.
3. (U) FY 1998 PLAN:
- (U) (\$27,089) Operate mission essential MRTFB capabilities to meet customers' test workload. Support essential elements of civilian labor required to manage, operate, and maintain the MRTFB.
 - (U) (\$4,566) Provide essential travel, transportation, collateral equipment, and supplies required to support continued operations. Continue payment of worker's compensation cost for MRTFB employees.
 - (U) (\$15,212) Continue communications, purchased equipment maintenance, printing and reproduction, and purchased service contracts necessary to manage and sustain MRTFB operations. Initiate Modeling and Simulation efforts. Budget increase allows customer assessments to be consistent with DoD policy for Test Article Preparation, including Aircraft Instrumentation, Mechanical Prototyping and Fabrication, Mechanical Design and Fabrication in support of uninstalled engine tests.
 - (U) (\$5,828) Continue maintenance and repair of MRTFB facilities.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605864N PROJECT NUMBER: W0654
PROGRAM ELEMENT TITLE: Test and Evaluation Support PROJECT TITLE: Naval Air Warfare Center
Aircraft Division

- (U) (\$2,700) Provide minor construction and major repair for essential MRTFB capabilities.
- (U) (\$7,877) Provide flight hour costs to maintain pilot proficiency in aircraft used to support MRTFB mission.
- (U) (\$18,000) Reimburse the Command for essential General and Administrative support services, (eg., comptroller, contracting, personnel, and other services).
- (U) (\$4,388) Continue mission essential annual utility costs, equipment rentals, and land, building, and facility leases.
- 4. (U) FY 1999 PLAN:
 - (U) (\$24,825) Operate mission essential MRTFB capabilities to meet customer test workload. Support essential elements of civilian labor required to manage, operate, and maintain the MRTFB.
 - (U) (\$4,663) Provide travel, transportation, collateral equipment, and supplies required to support continued operations of the MRTFB.
 - (U) (\$16,956) Continue communications, purchased equipment maintenance, printing and reproduction, and purchased service contracts necessary to manage and sustain MRTFB operations. Continue Modeling and Simulating efforts. Budget increase allows customer assessments to be consistent with DoD policy for Test Article Preparation, including Aircraft Instrumentation, Mechanical Prototyping and Fabrication, Mechanical Design and Fabrication in support of uninstalled engine tests.
 - (U) (\$6,385) Continue maintenance and repair of MRTFB facilities.
 - (U) (\$4,276) Provide minor construction and major repair to reduce BMAR items and sustain MRTFB operational capabilities.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605864N

PROJECT NUMBER: W0654
PROJECT TITLE: Test and Evaluation Support

PROJECT TITLE: Naval Air Warfare Center
Aircraft Division

- (U) (\$8,067) Provide flight hour costs to maintain pilot proficiency in aircraft used to support MRTFB mission.
- (U) (\$18,500) Reimburse the Command for essential General and Administrative support services, (eg., comptroller, contracting, personnel, and other services).
- (U) (\$4,484) Continue mission essential annual utility costs, equipment rentals, and land, building, and facility leases.

B. (U) PROGRAM CHANGE SUMMARY: (Dollars in Thousands)

(U) FY 1997 President's Budget:	FY 1996	FY 1997	FY 1998	FY 1999
	80,143	76,507	85,007	83,264
(U) Adjustments from FY 1997 PRESBUDG:	-752	-2,175	+653	+4,892
(U) FY 1998/99 President's Budget Submit:	79,391	74,332	85,660	88,156

(U) CHANGE SUMMARY EXPLANATION: (Dollars in Thousands)

(U) Funding: FY 1996 decrease reflects \$92 thousand for the Jordanian F-16 financing rescission and \$660 thousand for the safety and survivability adjustment. FY 1997 decrease reflects Congressional undistributed reductions of \$3,175 thousand, partially offset by a Congressional increase of \$1,000 thousand for the Safety and Survivability program. FY 1998 net increase reflects reductions of \$85 thousand to adjust the customer accounts of the Warfare Centers to reflect Base Realignment and Closure (BRAC) savings; \$ thousand for minor pricing adjustments, and \$2,141 thousand for Navy Working Capital Fund (NWCFF) carryover and rate adjustments. These decreases are offset by a \$1,637 thousand increase for stand up of the Modeling and Simulation Program Office; and a \$1,250 thousand increase to maintain an appropriate level of funding to support the MRTFB program. FY 1999 net increase reflects reductions of \$187 thousand for NWCFF surcharge and rate adjustments; \$58 thousand for minor pricing adjustments; and \$85 thousand for BRAC savings. These decreases are offset by an increase of \$1,234 thousand for Modeling and Simulation, and \$3,988 thousand increase to maintain an appropriate level of funding necessary to support the MRTFB program.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605864N PROJECT NUMBER: W0654
PROGRAM ELEMENT TITLE: Test and Evaluation Support PROJECT TITLE: Naval Air Warfare Center
Aircraft Division

(U) Schedule: Not applicable.

(U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not Applicable

(U) RELATED RDT&E:

(U) PE 0604759N, Major T&E Investment

(U) PE 0605862N, RDT&E Instrumentation Modernization

D. (U) SCHEDULE PROFILE: Not applicable.

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DATE: February 1997

FY 1998 RDT&E,N PROGRAM ELEMENT/PROJECT COST BREAKDOWN

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605864N

PROGRAM ELEMENT TITLE: Test and Evaluation Support

PROJECT NUMBER: W0654

PROJECT TITLE: Naval Air Warfare Center, Aircraft Div

A. (U) PROJECT COST BREAKDOWN: (\$ in thousands)

Project Cost Categories	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
a. Civilian Pay	27,431	27,385	27,089	24,825
b. General and Administrative	18,066	16,500	18,000	18,500
c. Equipment and Supplies	3,049	3,120	3,061	3,146
d. Equipment Maintenance	2,806	2,185	3,408	3,521
e. MRTFB Flight Hours	7,700	7,375	7,877	8,067
f. Facility Repairs	8,817	6,426	8,528	10,661
g. Other MRTFB Expenses	7,317	6,048	11,672	12,718
h. Utilities/Rental	4,205	4,293	4,388	4,484
i. Safety and Survivability		1,000		
j. Modeling and Simulation			1,637	2,234
Total	*79,391	74,332	85,660	88,156

*FY 1996 total of \$79,391 excludes Below Threshold Reprogramming of \$2,659 for NAVAIRWARCENACDIV.

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DATE: February 1997

FY 1998 RDT&E,N PROGRAM ELEMENT/PROJECT COST BREAKDOWN

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605864N PROJECT NUMBER: W0654
 PROGRAM ELEMENT TITLE: Test and Evaluation Support PROJECT TITLE: Naval Air Warfare Center, Aircraft Div

B. (U) BUDGET ACQUISITION HISTORY AND PLANNING INFORMATION (\$ in thousands)

PERFORMING ORGANIZATIONS

Contractor/ Contract Government Method/ Performing Fund Type Activity Vehicle	Award/ Oblig Date	Perform Activity EAC	Project Office EAC	Total FY 1995 & Prior	FY 1996 Actual	FY 1997 Budget	FY 1998 Budget	FY 1999 Budget	To Complete	Total Program
Product Development										
NAWCAD WX	10/98	TBD	TBD	1,492,151	79,391	74,332	85,660	88,156	CONT.	CONT.

Support and Management: Not Applicable

Test and Evaluation: Not Applicable

GOVERNMENT FURNISHED PROPERTY: Not Applicable

	Total FY 1995 & Prior	FY 1996 Actual	FY 1997 Budget	FY 1998 Budget	FY 1999 Budget	To Complete	Total Program
Subtotal Production Development	1,492,151	79,391	74,332	85,660	88,156	CONT.	CONT.
Total Project	1,492,151	79,391	74,332	85,660	88,156	CONT.	CONT.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605865N

PROGRAM ELEMENT TITLE: Operational Test and Evaluation Capability

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
10831	Operational Test and Evaluation Force Support 5,974	7,358	9,107	9,154	9,469	9,356	9,519	9,673	CONT.	CONT.

1. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program element provides Commander, Operational Test and Evaluation Force (COMPTTEVFOR) general support funding for the planning, conducting, and reporting of operational test and evaluation of Navy weapon systems acquisition projects, and the validation of tactics as required by directives of the Secretary of Defense and by Publ Law.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RDT&E MANAGEMENT SUPPORT because it supports the operations installations required for general research and development use.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:
 - (U) (\$4,481) Operationally tested and evaluated CNO projects commensurate with authorized funding level.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605865N

PROJECT NUMBER: R0831

PROGRAM ELEMENT TITLE: Operational Test and Evaluation Capability

PROJECT TITLE: Operational Test and Evaluation Force Support

- (U) (\$1,493) Maintained level of effort associated with the DOD 5000 acquisition guidance which requires increased COMOPTEVFOR involvement in early operational assessments, developmental testing, and the Cost and Operational Effectiveness Analysis (COEA).

2. (U) FY 1997 PLAN:

- (U) (\$5,492) Operationally test and evaluate CNO projects commensurate with authorized funding level.
- (U) (\$1,831) Maintain level of effort associated with the DOD 5000 acquisition guidance which requires increased COMOPTEVFOR involvement in early operational assessments, developmental testing, and the COEA.
- (U) (\$35) Portion of extramural program reserved of Small Business Innovation Research Assessment in accordance with 15 USC 638.

3. (U) FY 1998 PLAN:

- (U) (\$6,830) Operationally test and evaluate CNO projects commensurate with authorized funding level.
- (U) (\$2,277) Maintain level of effort associated with the DOD 5000 acquisition guidance which requires increased COMOPTEVFOR involvement in early operational assessments, developmental testing, and the COEA.

4. (U) FY 1999 PLAN:

- (U) (\$6,866) Operationally test and evaluate CNO projects commensurate with authorized funding level.
- (U) (\$2,288) Maintain level of effort associated with the DOD 5000 acquisition guidance which requires increased COMOPTEVFOR involvement in early operational assessments, developmental testing, and the COEA.

3. (U) PROGRAM CHANGE SUMMARY:

(U) FY 1997 President's Budget:	FY 1996	FY 1997	FY 1998	FY 1999
	5,477	5,999	6,441	7,583
(U) Adjustments from FY 1997 PRESBUDG:	+497	+1,359	+2,666	+1,571
(U) FY 1998/1999 PRESBUDG Submission:	5,974	7,358	9,107	9,154

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Exhibit R-2

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605865N

PROGRAM ELEMENT TITLE: Operational Test and Evaluation
Capability

PROJECT NUMBER: R0831

PROJECT TITLE: Operational Test and
Evaluation Force Support

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 1996 adjustment is due to internal Navy adjustment (-563), Jordanian rescission (-1), SBIR assessment (-52) update to reflect actual execution (+1,113). FY 1997 adjustment is due to restoration of OPTEVFOR funding integrity (+1,700 and Congressional Undistributed Reductions (-341). FY 1998 adjustment is due to NWCF and minor adjustments (+188), inflation 22) and to fully fund testing requirement (+2,500). FY 1999 adjustment is due to NWCF and minor adjustments (-96), inflation 33) and to fully fund testing requirement (+1,700).

(U) Schedule: Not applicable.

(U) Technical: Not applicable.

2. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E: Not applicable.

3. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998/1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605865N PROJECT NUMBER: R0831
PROGRAM ELEMENT TITLE: Operational Test and Evaluation PROJECT TITLE: Operational Test and
Capability Evaluation Force Support

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: FEBRUARY 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605866N

PROGRAM ELEMENT TITLE: Navy Space and Electronic Warfare Support (SEW)

(U) COST: (Dollars in Thousands)

PROJECT NUMBER TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE PROGRAM	TOTAL PROGRAM
R0739 Navy C4I Top Level Requirements	1,059	1,034	1,164	1,897	1,929	1,958	2,038	2,047	CONT.	CONT.
X0706 EMI Reduction and Radio Frequency Management	1,911	1,719	1,619	2,273	2,325	2,381	2,433	2,488	CONT.	CONT.
Total	2,970	2,753	2,783	4,170	4,254	4,339	4,471	4,535	CONT.	CONT.

(U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: Project R0739 Navy C4I Top Level Requirements - Analyzes fleet requirements and research and development technology to develop top level plans for operating Navy Communications, Command and Control Computers, and Intelligence (C4I) and space systems in the Space and Electronic Warfare (SEW) mission area. Project X0706 Electromagnetic Interference (EMI) Reduction and Radio Frequency (RF) Management develops advanced technology to identify and reduce EMI sources from Navy systems and platforms.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RDT&E MANAGEMENT SUPPORT because it supports the operations and installations required for general research and development use.

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FY 1998 RDT&E, N BUDGET ITEM JUSTIFICATION SHEET DATE: FEBRUARY 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605866N

PROGRAM ELEMENT TITLE: Navy Space and Electronic Warfare Support (SEW)

(U) RESOURCES: (Dollars in Thousands)

PROJECT

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
R0739 Navy Command Control, Communications, Computers and Intelligence Top Level Requirements	1,059	1,034	1,164	1,897	1,929	1,958	2,038	2,047	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides analysis of fleet requirements and research and development technology to develop top level plans for operating Navy Communications and space systems in the Space and Electronic Warfare mission area.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$525) Identified programs and actions needed to provide networking office systems, e.g. enhanced
- (U) (\$534) Identified programs and actions needed to provide joint capabilities for architecture, e.g. enhanced near real time targeting, real time joint planning/coordination, early intelligence preparation of space, and hardkill/softkill weapons.

2. (U) FY 1997 PLAN:

- (U) (\$476) Identify programs and actions needed to provide networking of C systems, e.g. enhanced multilevel security, network management and mine warfare

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FY 1998 RDT&E, N BUDGET ITEM JUSTIFICATION SHEET DATE: FEBRUARY 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605866N PROJECT NUMBER: R0739
PROGRAM ELEMENT TITLE: Navy Space and Electronic Warfare Support (SEW) PROJECT TITLE: Navy Top Level Requirements

- (U) (\$536) Identify programs and actions needed to provide joint capabilities for architecture, e.g. enhance near real time targeting, real time joint planning/coordination, early intelligence preparation of battle space, and hardkill/softkill weapons.
- (U) (\$22) Portion of extramural program reserved for Small Business Innovation Research Assessment in accordance with 15 USC 638.
- 3. (U) FY 1998 PLAN:
 - (U) (\$587) Support studies of increased efficiencies and technological advantages conferred by more effective utilization of computing resources and bandwidth.
 - (U) (\$577) Identify programs and actions needed to provide joint capabilities for architecture, e.g. enhance near real time targeting, real time joint planning/coordination, early intelligence preparation of battle space, and hardkill/softkill weapons. Efforts have been reduced by 435K as a result of low expenditures for FY 1996.
- 4. (U) FY 1999 PLAN:
 - (U) (\$993) Support studies of increased efficiencies and technological advantages conferred by more effective utilization of computing resources and bandwidth.
 - (U) (\$904) Identify programs and actions needed to provide joint capabilities for architecture, e.g. enhance near real time targeting, real time joint planning/coordination, early intelligence preparation of battle space, and hardkill/softkill weapons.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEETDATE: FEBRUARY 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605866N

PROJECT NUMBER: R0739

PROGRAM ELEMENT TITLE: Navy Space and Electronic

PROJECT TITLE: Navy Top Level Requirements

Warfare Support (SEW)

B. (U) PROGRAM CHANGE SUMMARY:

(U) FY 1997 President's Budget:	FY 1996	FY 1997	FY 1998	FY 1999
	<u>1,082</u>	<u>1,077</u>	<u>1,605</u>	<u>1,873</u>
(U) Adjustments from 1997 PRESUDG:	-23	-43	-441	+24
(U) FY 1998/1999 PRESUDG SUBMIT	1,058	1,034	1,164	1,897

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 1996 adjustment is due to Jordanian rescission (-1), and administrative and personal services reductions (-5) and SBIR assessment (-17). FY 1997 adjustment is due to Congressional Undistributed reductions (-43). FY 1998 adjustment is due to low expenditures in FY 1996 (-435), NWCf and minor adjustments (-3), and inflation. FY 1999 adjustment is due NWCf and minor adjustments (+31), and inflation (-7).

(U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E: Not applicable.

D. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: FEBRUARY 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605866N

PROGRAM ELEMENT TITLE: Navy Space and Electronic Warfare Support (SEW)

(U) COST (Dollars in thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
X0706 EMI Reduction and Radio Frequency Management	1,911	1,719	1,619,	2,273	2,325	2,381	2,433	2,488	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: Electromagnetic Interference (EMI) Reduction and Radio Frequency (RF) Management. This project develops tools to identify and reduce EMI sources from Navy systems and platforms. There are several tools under development to identify and reduce EMI through proper use of the electromagnetic spectrum. The Battle Force (BF) EM Evaluation System (BEES) is a computer-aided force-level EMI evaluation tool that is used to develop BF Electromagnetic Environmental Effects (E3) policy for naval operations in the joint arena and fosters national and international inter-platform compatibility (EMC) during operations and exercises. The Automated Spectrum Planning, Engineering, Coordination and Tracking System (ASPECTS) is a computer-aided force-level communications planning and radar frequencies for fleet operations. The Waveform communication links, and analyze, allocate and assign communication and radar frequencies for fleet operations. The Waveform Recording and Playback System (WRAPS) is a unique E3 testing system to be used to measure degradation of a system performance due to EMI. The waveform of a potential interfering system is recorded; the recording can then be played back at a variety of test sites to evaluate the vulnerability of other systems to this waveform. Research includes advanced technology chamber (ATC), shielding effectiveness of composite materials, application of fiber optics to signal cables to eliminate EMI, and coherent measurements and development of E3 testing criteria/procedures.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEETDATE: FEBRUARY 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605866N

PROJECT NUMBER: X0706

PROGRAM ELEMENT TITLE: Navy Space and Electronic Warfare Support (SEW) (EMI) Reduction and Radio Frequency (RF) Management

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U)(\$672) ASPECTS: Completed ASPECTS software development for inclusion in CSS. Continued developing software for conversion of Frequency Management Module (FMM) of ASPECTS to TAC-4 in Joint Maritime Information Systems (JMCIS). Continued to develop Frequency Assignment Algorithms for Compatibility Analysis Program (EMCAP). Developed E³ Information Network software bridges to obtain access to multiple data bases for ASPECTS use.
- (U)(\$1,007) BEES: Developed detection-to-engagement (DTE) capability for platforms. Developed EMI displays for BEES Analyst Terminal to increase reporting capability. Continued development of capability to measure and record the EME in real-time and record specific radio frequency (RF) signatures for use in EMI investigations.
- (U)(\$232) Criteria and Test Procedures: Completed development of capability to assess system performance in topside High Frequency Electromagnetic Environment (HF EME) Began developing criteria and test procedures using industry standards.

2. (U) FY 1997 PLAN:

- (U)(\$373) ASPECTS: Complete development of software for conversion of FMM to TAC-4 in JMCIS. Continue to develop Frequency Assignment Algorithms for EMCAP. Develop capability to receive real-time recordings of
- (U)(\$983) BEES: Continue to develop models and EMI displays for BEES Analyst Terminal to increase model fidelity. Develop Decision Trees and begin to incorporate them into BEES to model operational decisions in response to EMI degradation. Develop force-level (DTE) model and complete initial capability command decision tree and terrain models.

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FY 1998 RDT&E, N BUDGET ITEM JUSTIFICATION SHEET

DATE: FEBRUARY 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605866N

PROJECT NUMBER: X0706
PROJECT TITLE: Navy Space and Electronic Warfare Support (SEW)
PROJECT TITLE: Electromagnetic Interference (EMI) Reduction and Radio Frequency (RF) Management

- (U)(\$338) Criteria and Test Procedures: Develop Coherent Measurement Techniques for Testing.
- (U)(\$25) Portion of extramural program reserved for Small Business Innovation Research assessment in accordance with 15 U.S.C 638.

3. (U) FY 1998 PLAN:

- (U)(\$396) ASPECTS: Expand frequency assignment algorithms for EMCAP. Begin development of ASPECTS and EMCAP software updates. Complete EME monitoring transition study and real-time frequency management software development. Complete development of Information network software bridges to multiple databases. Complete development of Information Network Software bridges.
- (U)(\$891) BEES: Begin development of generic and specific electronic-communication system models. Continue incorporation of Decision Trees into BEES to model operational decisions in response to EMI degradation.
- (U)(\$332) Criteria and Test Procedures: Continue to investigate industrial standards for conversion to military standards, where appropriate. Incorporate Coherent Measurement Techniques for test criteria. An additional \$138K is forward financed with FY 1997 funding due to low expenditures in the accounting system FY 1996.

4. (U) 1999 PLAN:

- (U)(\$670) ASPECTS: Complete development of capability to receive real-time recordings of the EME to be used in frequency management. Continue ASPECTS and EMCAP software updates. Continue real-time frequency management software development.
- (U)(\$1,234) BEES: Continue development of generic and specific electronic-communication system models. Apply conditional logic to selected additional models to replicate operational decision making as it relates to E
- (U)(\$369) Criteria and Test Procedures: Continue to investigate industrial standards (foreign and domestic) for conversion to military standards. Continue to incorporate Coherent Measurement Techniques into test criteria.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: FEBRUARY 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605866N

PROGRAM ELEMENT TITLE: Navy Space and Electronic Warfare Support (SEW)

PROJECT NUMBER: X0706

PROJECT TITLE: Electromagnetic Interference (EMI) Reduction and Radio Frequency (RF) Management

B. (U) PROGRAM CHANGE SUMMARY:

(U) FY 1997 PRESIDENT'S BUDGET:

(U) ADJUSTMENTS FROM 1997 PRESUDG:

(U) FY 1998/1999 PRESUDG SUBMIT:

	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
	1,946	1,791	1,769	2,293
	-35	-72	-150	-20
	1,911	1,719	1,619	2,273

(U) CHANGE SUMMARY EXPLANATION

(U) Funding: FY 1996 adjustment reflects SBIR assessment (-29K) and other minor adjustments (-6K). FY 1998 adjustment is due to Congressional Undistributed General Adjustments (-72K). FY 1998 adjustment reflects an adjustment for low expenditures in FY 1996 (-138K); a NWCF rate adjustment (-6K), inflation (-4K) and other minor adjustments (-2K). FY 1999 adjustment is due to NWCF (-6K), inflation (-8K) and other minor adjustments (-6K).

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E: Not applicable.

D. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605873M

PROGRAM ELEMENT TITLE: Marine Corps Program Wide Support

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & FY TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
C0030 Marine Corps Studies and Analysis										
	2,169	4,080	3,709	3,898	4,037	4,342	4,512	4,658	CONT.	CONT.
C0033 Operational Test and Evaluation (OT&E) Support										
	1,975	2,103	2,114	2,267	2,528	2,571	2,657	2,671	CONT.	CONT.
C0073 Human Resources Management and Forecasting										
	1,234	1,276	1,384	1,419	1,466	1,508	1,553	1,600	CONT.	CONT.
C2330 Chem Bio Consequence Management										
	0	0	1,000	1,300	1,500	1,300	1,000	800	CONT.	CONT.
TOTAL	5,378	7,459	8,207	8,884	9,531	9,721	9,722	9,729	CONT.	CONT.

(U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program element (PE) provides the analytical foundation for the Marine Corps Studies System (MCSS), including mandated Mission Area Analyses and Cost and Operational Effectiveness Analyses. The MCSS is the front end of the Marine Corps' acquisition system, supporting the Concepts Based Requirements System and Combat Development Process. In addition, the PE supports Marine Corps Operational Test and Evaluation (OT&E) Activity representatives for Marine Corps OT&E and OT&E performed by Fleet Marine Force Commanders and Technical Support Activities. The PE also funds the advanced development of systems and equipment to improve the manpower readiness of the Fleet Marine Force.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RDT&E MANAGEMENT SUPPORT because it supports the operations and installations required for general research and development use.

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FY 1998/FY1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605873M

PROGRAM ELEMENT TITLE: Marine Corps Program Wide Support

(U) COST (Dollars in thousands)

PROJECT NUMBER & FY 1996 TITLE ACTUAL	FY 1996 ESTIMATE	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 COMPLETE	TO PROGRAM	TOTAL
C0030 Marine Corps Studies and Analysis	2,169	4,080	3,709	3,898	4,037	4,342	4,512	4,658	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program provides the analytical foundation for the Marine Corps Studies System (MCSS). The MCSS is the front end of the Marine Corps' acquisition system, supporting the Concepts Based Requirements System (CBRS) and Combat Development Process (CDP). This program funds a variety of studies to include: mandated Mission Area Analysis (MAA); technology assessments; force structure analysis; weapons systems analysis; concept development and analysis studies; cost benefit analysis; training assessments; feasibility analysis; scenario development; and system threat analysis. The MCSS also is required to fund for the execution of Milestone I Analysis of Alternatives (formerly Cost and Operational Effectiveness Analysis (COEA)) studies in support of Program Objective Memorandum initiatives. This program provides quantitative information to decision makers on which to base improvements to doctrine, training and education, force structure, and procurement. The MCSS also provides analytical support for decisions related to the resolution of current problems identified by the operating forces.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$1,869) Executed approved studies and analyses in the FY 1996 Marine Corps Studies Master Plan (MCSMP). The MCSMP included five mandated MAAs and one COEA.
- (U) (\$300) Fund the continuation of an estimated three continuing FY 1995 study initiatives including one MAA and one COEA.

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FY 1998/FY 1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605873M

PROJECT NUMBER: C0030

PROGRAM ELEMENT TITLE: Marine Corps Program Wide Support

PROJECT TITLE: Marine Corps Studies and Analysis

2. (U) FY 1997 PLAN:

- (U) (\$2,626) Execute approved studies and analyses in the FY 1997 MCSMP. The MCSMP will include six mandated MAAs and five Analysis of Alternatives.
- (U) (\$1,371) Fund the continuation of an estimated ten continuing FY 1996 study initiatives including four MAAs.
- (U) (\$83) Portion of program reserved for Small Business Innovation Research assessments in accordance with 15 U.S.C. 638(f) (1)

3. (U) FY 1998 PLAN:

- (U) (\$1,730) Execute approved studies and analyses in the FY 1998 MCSMP. The MCSMP will include six mandated MAAs and four Analysis of Alternatives study projects.
- (U) (\$1,979) Fund the continuation of an estimated fourteen continuing FY 1997 study initiatives including two MAAs and two Analysis of Alternatives study projects.

4. (U) FY 1999 PLAN:

- (U) (\$2,402) Execute approved studies and analyses in the FY 1999 MCSMP. The MCSMP will include six mandated MAAs and six Analysis of Alternatives.
- (U) (\$1,496) Fund the continuation of an estimated twelve continuing FY 1998 study initiatives including three MAAs and two Analysis of Alternatives.

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FY 1998/FY 1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605873M

PROJECT NUMBER: C0030

PROGRAM ELEMENT TITLE: Marine Corps Program Wide Support

PROJECT TITLE: Marine Corps Studies and Analysis

B. (U) PROGRAM CHANGE SUMMARY:

	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
(U) FY 1997 President's Budget:	2,217	3,863	3,843	3,819
(U) Adjustments from FY 1997 PRESBUD:	-48	+217	-134	+ 79
(U) FY 1998 President's Budget:	2,169	4,480	3,709	3,898

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: The FY 1997 and FY 1999 increases provide funding for additional, previously unfunded, study projects in the MCSMP. The FY 1996 and FY1998 decreases were due to minor affordability changes.

(U) Schedule: Not applicable.

(U) Technical: Studies and analyses are used as the front end for the Marine Corps' acquisition process by supporting the CBRS and CDP. Study and analysis projects are normally focused on Marine Corps mid- and long-range issues associated with organization, concepts, doctrine, equipment and training.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

D. (U) RELATED RDT&E: PE 0605154N (Center for Naval Analyses (CNA))

E. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605873M

PROGRAM ELEMENT TITLE: Marine Corps Program Wide Support

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
C0033 Marine Corps Operational Test and Evaluation Activity (MCOTEA)	1,975	2,103	2,114	2,267	2,528	2,571	2,657	2,671	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program supports the Marine Corps Operational Test and Evaluation (OT&E) Activity (MCOTEA) representatives for Marine Corps OT&Es and OT&Es performed by Fleet Marine Force Commanders and Technical Support Activities. This program also provides for OT&E of systems prior to procurement by the Marine Corps to include test planning, operational testing, and Independent Evaluation Report (IER) preparation.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$903) MCOTEA: Provide in-house support, salaries, and utilities.
- (U) (\$27) C-17 Aircraft: Participated in IOT&E and published IER.
- (U) (\$1) Medium Machine Gun Tripod-Lightweight (MMGT-LW): Conduct IOT&E and published IER.
- (U) (\$135) Improved Direct Air Support Central (IDASC): Conduct IOT&E and published IER.
- (U) (\$15) Joint Services Lightweight Integrated Suit Technology (JLIST): Conduct IOT&E and published IER.
- (U) (\$65) AN/TPS-59: Conduct IOT&E and publish IER.
- (U) (\$126) Tactical Remote Sensor System (TRSS): Conduct IOT&E and publish IER.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605873M

PROJECT NUMBER: C0033

PROGRAM ELEMENT TITLE: Marine Corps Program Wide Support

PROJECT TITLE: Marine Corps Test and Evaluation Activity

- (U) (\$6) Diver's Propulsion Device (DPD): Conduct IOT&E and published IER.
- (U) (\$26) Improved Recovery Vehicle: Conduct IOT&E and publish IER.
- (U) (\$77) Joint Anti-Armor Weapons System (JAVELIN): Conduct IOT&E and publish IER.
- (U) (\$92) Mobile Electronic Warfare Support System (MEWSS): Conduct IOT&E and publish IER.
- (U) (\$50) Secondary Imagery Dissemination System (SIDS) Conduct IOT&E EMD and publish IER.
- (U) (\$146) Light Armored Vehicle Mobility Block Improvement Plan (LAV MBIP): Conduct IOT&E and publish IER.
- (U) (\$9) Advanced Combat Vehicle Crewman's Helmet (ACVCH): Conduct IOT&E and publish IER.
- (U) (\$162) Marine Expeditionary Force Intelligence Analysis System (MEF IAS): Conduct IOT&E and publish IER.
- (U) (\$135) AVENGER: Conduct IOT&E and publish IER>

(U) FY 1997 PLAN:

- (U) (\$1,116) MCOTEA: Provide in-house support, salaries, and utilities.
- (U) (\$50) Designated Marksman Rifle (DMR): Conduct IOT&E and publish IER.
- (U) (\$138) Lightweight 155 Howitzer (LW 155): Conduct IOT&E and publish IER.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605873M

PROGRAM ELEMENT TITLE: Marine Corps Program Wide Support

PROJECT NUMBER: C0033

PROJECT TITLE: Marine Corps Test and Evaluation Activity

- (U) (\$19) Remote Landing Site Tower (RLST): Conduct IOT&E and publish IER.
 - (U) (\$90) Technical Control and Analysis Center (TCAC): Conduct IOT&E and publish IER.
 - (U) (\$40) Tactical Soft Shelters (TSS): Conduct IOT&E and publish IER.
 - (U) (\$55) Tactical Electronic Reconnaissance Processing and Evaluation System (TERPES): Conduct IOT&E and publish IER.
 - (U) (\$65) Medium Heavy Equipment Transporter (MHET): Conduct IOT&E and publish IER.
 - (U) (\$60) Commercial GTF Terminal (TRI BAND): Conduct IOT&E and publish IER.
 - (U) (\$90) Tactical Combat Operations II (TCO II): Conduct IOT&E and publish IER.
 - (U) (\$200) Mobile Electronic Warfare Support System (MEWSS): Conduct IOT&E and publish IER.
 - (U) (\$55) Advanced Field Artillery Tactical Data System (AFATDS): Conduct IOT&E and publish IER.
 - (U) (\$125) Driver's Thermal Viewer (DTV): Conduct IOT&E and publish IER.
3. (U) FY 1998 PLAN:
- (U) (\$1,116) Provide in-house support, salaries, and utilities.
 - (U) (\$110) Tactical Air Command Central (TACC) Phase II: Conduct IOT&E and publish IER.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605873M

PROJECT NUMBER: C0033

PROGRAM ELEMENT TITLE: Marine Corps Program Wide
Support Evaluation Activity

PROJECT TITLE: Marine Corps Test and

- (U) (\$90) Tactical Air Operations Center (TAOC): Conduct IOT&E and publish IER.
- (U) (\$423) Advanced Field Artillery Tactical Data System (AFATDS): Conduct IOT&E and publish IER.
- (U) (\$55) Meteorological Hydrogen Generator (MHG): Conduct IOT&E and publish IER.
- (U) (\$85) Underwater Topo/Hydro Survey Equipment (UURC-THSE): Conduct IOT&E and publish IER.
- (U) (\$100) Thermal Weapon Imaging System (TWIS): Conduct IOT&E and publish IER.
- (U) (\$60) Mobile Electronic Warfare Support System (MEWSS): Conduct IOT&E and publish IER.
- (U) (\$75) Data Automation Communications Terminal (DACT): Conduct IOT&E and publish IER.

4. (U) FY 1999 PLAN:

- (U) (\$1,152) Provide in-house support, salaries, and utilities.
- (U) (\$150) Light NBC Reconnaissance System (LNBCRS): Conduct IOT&E and publish IER.
- (U) (\$460) Advanced Field Artillery Tactical Data System: Conduct IOT&E and publish IER.
 - (U) (\$50) Target Location Designation and Handoff System (TLDHS): Conduct IOT&E and publish IER.
- (U) (\$400) Light Tactical Vehicle Replacement (LTVR): Conduct IOT&E and publish IER.
- (U) (\$55) Gun Laying Position System (GLPS): Conduct IOT&E and publish IER.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605873M

PROJECT NUMBER: C0033

PROGRAM ELEMENT TITLE: Marine Corps Program Wide Support

PROJECT TITLE: Marine Corps Test and Evaluation Activity

B. (U) PROGRAM CHANGE SUMMARY:

	FY 1996	FY 1997	FY 1998	FY 1999
(U) FY 1997 President's Budget:	2,048	2,214	1,714	2,365
(U) Adjustments from FY 1997 PRESBUD:	- 73	- 111	+400	-98
(U) FY 1998 President's Budget:	1,975	2,103	2,114	2,267

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: The FY 1996, FY1997, and FY1999 funding adjustments are due to minor affordability changes. The increase of \$400 in FY 1998 supports the operational testing of programs that were added to the operational testing schedule or additional funding requirements required for operational testing for programs scheduled during that fiscal year: MHG, AFATDS, and MACS.

(U) Schedule: Not applicable.

(U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E: Not applicable.

D. (U) SCHEDULE PROFILE: Not applicable.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605873M

PROGRAM ELEMENT TITLE: Marine Corps Program Wide Support

(U) COST (Dollars in thousands)

PROJECT NUMBER & TITLE	FY 1996 ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
C0073 Human Resources Management and Forecasting	1,234	1,276	1,384	1,419	1,446	1,508	1,553	1,600	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program funds the advanced development of systems and equipment to improve the manpower readiness of the Fleet Marine Force and develops techniques and methods that advance enlisted and officer occupational assignment, promotions, and career track planning in the Marine Corps while end strength is reduced and force structure is changed. This program considers three major efforts: Total Force Decision Support System (TFDSS), Total Force Manpower Process Modernization (TFMPM), and Optical Digital Imaging (ODI).

(U) TFDSS will provide a data warehouse for current and historical manpower data. The data will be accessed in a client/server environment using the Marine Corps Local Area Network. The interface provides a "drag and drop" (Windows/icon) environment to allow action officers and decision makers the ability to perform adhoc queries using their desktop personal computers, without the need for programming. The data warehouse will provide manpower data to other Headquarters, Marine Corps systems.

(U) The manpower process involves planning, accessing, training, and managing personnel resources. Much of this process is supported by a set of 13 mathematical models that process on an obsolete Control Data Corporation (CDC) mainframe computer. The TFMPM program will migrate the manpower models from the mainframe environment to a client/server architecture ensuring availability in the future. In addition, analysis of the manpower process is being conducted in order to integrate the process across all functional areas.

(U) ODI is a state-of-the-art automation system which utilizes Optical Digital Imagery technology to store and maintain official military personnel files on optical platters. It will provide the capability to capture, store, and retrieve images obtained from paper, microfiche, or digital media and provide rapid access and display of those images. An electronic output to workstations, image printers, and Computer Output to Microfiche units will be available for the entire record or specific documents within a record in a timely and efficient manner.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 199

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605873M

PROGRAM ELEMENT TITLE: Marine Corps Program Wide

Support

PROJECT NUMBER: C0073

PROJECT TITLE: Human Resources Management and Forecasting

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS:

- (U) (\$387) TFDSS: Continued to load active, reserve, separated, and retired Marines. Provide data to three other Headquarters Marine Corps, Manpower and Reserve Affairs systems. Developed custom applications for manpower analysis, planning, and assignment, and to support flag level TFDSS use. Continued to manage and update Life Cycle Management documentation. Began to load structure data. Researched available commercial off-the-shelf product to enhance the application and database.
- (U) (\$813) TFMPM: Completed conversion of the Manning Level Process (MLP) model, TFPM and OSGM to a client/server architecture. Began conversion of the Promotion Planning Process (P3) model to a client/server architecture. Studied current application and configuration of the Officer Planning Utility System (OPUS) and began conversion of relevant portions to a client/server architecture. Completed implementation of the Oracle database as the standard database for all manpower models.
- (U) (\$34) ODI: Identified an efficient format to layout data that must be extracted from the new Performance Evaluation System form. This form will allow entry using existing equipment in the field and take advantage of new technology available to accurately read that form.
- 2. (U) FY 1997 PLAN:
- (U) (\$606) TFDSS: Design applications to track quality of life issues, analyze equal opportunity data, and monitor personal awards. Expand user-base and enhance interface. Continue to manage and update Life Cycle Management documentation. Conduct feasibility study to implement in the Fleet Marine Force (FMF) and supporting establishment. Identify additional data sources.

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605873M

PROJECT NUMBER: C0073

PROGRAM ELEMENT TITLE: Marine Corps Program Wide

PROJECT TITLE: Human Resources Management

Support

and Forecasting

- (U) (\$49) Portion of program reserved for Small Business Innovation Research assessment in accordance with 15 U.S.C. 638(f) (1)
- (U) (\$621)TFMPM: Complete conversion of the Officer Planning Utility System (OPUS) to a client server architecture. Integrate the P3 model under OPUS. Conduct a Business Process Analysis (BPA) of manpower process to validate applicability of Precise Personnel Assignment System (PREPAS) models and the Tour Concept Evaluation Process (TCEP). Research how the manpower process may be better integrated. Identify deficiencies in Manpower which degrade the manpower process.
- 3. (U) FY 1998 PLAN:
 - (U) (\$687)TFDSS: Incorporate additional data sources. Develop custom summarization and applications to support decision makers. Update Life Cycle Management Documentation. Move data outside of HQMC in a distributed environment to support the Fleet Marine Force. Continue to load active, reserve, separated, retiree and structure data.
 - (U) (\$697)TFMPM: Research ways to improve the Total Force Manpower Process from both a functional and organizational viewpoint. This will be done by examining the entire manpower process and will include all aspects of the process not just those supported by the existing manpower models. New modeling techniques and methodologies will be examined. The replacement of current proprietary model algorithms will also be researched.
- 4. (U) FY 1999 PLAN:
 - (U) (\$758)TFDSS: Continue to load active, reserve, separated, retiree, and structure data. Provide data to FMF and HQMC Systems. Update Life Cycle Management Documentation. Identify additional data sources outside of HQMC. Develop custom applications.
 - (U) (\$661)TFMPM: Continue with analysis of the Total Manpower Process. Research hardware and software technology to determine replacement for the existing hardware/software currently utilized.

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Exhibit R-

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605873M PROJECT NUMBER: C0073
 PROGRAM ELEMENT TITLE: Marine Corps Program Wide Support PROJECT TITLE: Human Resources Management and Forecasting

B. (U) PROGRAM CHANGE SUMMARY:

	FY 1996	FY 1997	FY 1998	FY 1999
(U) FY 1997 President's Budget:	1,667	1,347	1,681	1,715
(U) Adjustments from FY 1997 PRESBUDG:	-433	-71	297	-296
(U) FY 1998 President's Budget:	1,234	1,276	1,384	1,419

(U) CHANGE SUMMARY EXPLANATION:

- (U) Funding: Funding decrease is based on decreased requirements.
- (U) Schedule: Not Applicable
- (U) Technical: Not Applicable

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FY 1998 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1997

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605873M PROJECT NUMBER: C0073
 PROGRAM ELEMENT TITLE: Marine Corps Program Wide Support PROJECT TITLE: Human Resources Management and Forecasting

C. (U) OTHER PROGRAM FUNDING SUMMARY: (Dollars in thousands)

	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TO	TOTAL
ACTUAL ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	COMPLETE	PROGRAM
(U) O&MM,C Line 90A0										
22	27	120	120	120	120	120	120	120	CONT.	CONT.
(U) PMC Line 51 (BLI# 494200) ADP Equipment (Portion of Manpower and Reserves) (TFDSS, MPM and ODI portions only)										
3,406	0	0	0	0	0	0			0	3,983
(U) PMC (BLI# 463500) Communications and Electronics Infrastructure										
0	0	188	257	248	241	249	250	250	CONT.	CONT.

(U) RELATED RDT&E:

- (U) PE 0603007A (Manpower, Personnel and Training Advanced Technology)
- (U) PE 0603227F (Personnel, Training, and Simulation Technology)
- (U) PE 0603707N (Manpower, Personnel and Training Advanced Technology Development)
- (U) This program adheres to Tri-Service Reliance Agreements on Manpower and Personnel, with oversight and coordination provided by the Joint Directors of Laboratories.

D. (U) SCHEDULE PROFILE: Not Applicable

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FY 1998 RDT&E N, BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605873M

PROGRAM ELEMENT TITLE: Chem Bio Consequence Management

(U) COST (Dollars in thousands)

PROJECT

NUMBER & FY 1996 TITLE ACTUAL	FY 1997 ESTIMATE	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
C2330 Chem Bio Consequence Management	0	0	1,000	1,300	1,500	1,300	1,000	800	CONT.
								CONT.	CONT.

A. MISSION DESCRIPTION & BUDGET SUPPORT: This project includes improvements in all areas of the Chemical Biological Incident Response Force inclusive to its commodity areas of reconnaissance, decontamination, emergency medical support, communications & general support and force protection.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1996 ACCOMPLISHMENTS: Not Applicable.
2. (U) FY 1997 PLAN: Not Applicable.
3. (U) FY 1998 PLAN: (1,000) Industry development and government testing for prototype protective equipment, detectors, etc. Reliability, Adaptability and Maintainability and Durability (RAM-D) testing.
4. (U) FY 1999 Plan: (\$1,300) Downselect to one contractor via formal source selection procedures. Procure quantities for any required follow-on operational testing.

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FY 1998 RDT&E, N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605873M

PROJECT NUMBER: C2330

PROGRAM ELEMENT TITLE: Marine Corps Program Wide
Support

PROJECT TITLE: Chem Bio Consequence
Management

B. (U) PROGRAM CHANGE SUMMARY:

	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
(U) FY 1997 President's Budget:	0	0	0	0
(U) Adjustments from FY 1997 PRESBUDG:	0	0	+1,000	+1,300
(U) FY 1998 President's Budget:	0	0	1,000	1,300

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: Funding increase was due to PBD 098.

(U) Schedule: Not Applicable

(U) Technical: Not Applicable

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E: PE 0605154N (Center for Naval Analyses (CNA))

D. (U) SCHEDULE PROFILE: Not applicable.

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