

UNCLASSIFIED

FY 1999 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1998

BUDGET ACTIVITY: 5

PROGRAM ELEMENT: 0604518N

PROGRAM ELEMENT TITLE: Combat Information Center (CIC) CONVERSION/NTDS IMPROV

(U) COST (Dollars in thousands)

PROJECT

NUMBER & TITLE	FY 1997 ACTUAL	FY 1998 ESTIMATE	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
NTDS SOFTWARE IMPROVEMENTS U1604	9,574	10,943	4,704	4,441	4,187	4,254	4,330	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The ACDS Block 1 program replaces the vintage Naval Tactical Data System (NTDS) operating systems and applications algorithms and implements advanced concepts for Tactical Data System upgrades for surface combatants in response to future threats, operational deficiencies and new and existing operational requirements. The increased emphasis on joint operations and littoral warfare has heightened the importance of ACDS Block 1's joint interoperability and improved littoral warfare capabilities. The program's objective is to develop integrated real time command and control systems that will increase ship's operational capabilities; promote standardization and introduce new shipboard tactical displays and support equipment; and provide integration between sensor/weapons systems which are organic to and outside the battle force. This program provides for significant Combat Direction System (CDS) improvements including implementation of the Joint Tactical Information Data System (JTIDS)/ Tactical Data Information Link Joint (TADILJ) (LINK 16) message standard to support interoperability/joint operations with U.S. Navy/Army/Air Force/Marine and NATO forces; implementation of the Aegis Tactical Executive System (ATES); and integration and interface with the Command and Control Processor (C²P), the Cooperative Engagement Capability (CEC), and Ship's Self Defense System (SSDS). This program will be an integral part of the LPD-17 and CVN-76 combat system, integrating battle management functions of all other sensor and weapon systems. In addition, the computer program is being modified to accommodate extensive use of COTS/NDI/OPEN Systems architecture hardware and firmware, and to operate in an Akcita Control Element Environment.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under ENGINEERING & MANUFACTURING DEVELOPMENT because it encompasses engineering and manufacturing development of new end-items prior to production approval decision.

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PROJECT NUMBER: U1604

PROJECT TITLE: NTDS
SOFTWARE IMPROV.

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(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1997 ACCOMPLISHMENTS:

- (U) (\$6,618) Completed PAT and CSIT on the ACDS Block I Level 2 computer program. Delivered certified program to CVN-69 for System Integration Test (SIT), fast cruise, sea trials, participated in CEC IOC events and continued to correct priority TRs reported from the fleet.
- (U) (\$350) Completed LHD-1 system installation, on board training, and participated in the CEC IOT&E events.
- (U) (\$575) Completed crew training on the LHD-1, follow on training on the CVN69 and LHD 1 in the spring and delivery of System Operator Manuals (SOMs) and Technical Manuals.
- (U) (\$946) Continued to conduct DT/OT testing on the lead ship (CVN-69) and perform safety certification and TECHEVAL (8/97) of the Level 2 computer program.
- (U) (\$515) Began preparation of required documentation for ASN(RDA) Formal Review to achieve Milestone III.
- (U) (\$570) Continued improvements to JMCIS interface to include TBMD data, unit/land tracks, and Air Tasking Orders (ATOs) and upgrade the Geo-Server Mapping Capability to include Digital Terrain and Elevation data, Cities, and Airfields.

2. (U) FY 1998 PLAN:

- (U) (\$6,035) Complete Level 2 delivery, conduct a successful OPEVAL (2/98) and achieve Milestone III (6/98).
- (U) (\$2,010) Complete CSIT on the ACDS Block 1 Level 2 CEC Version, participate in formal CEC DT/OT events and OPEVAL testing.
- (U) (\$559) Complete development and testing of ACDS Block 1 Level 2.2 and continue to implement corrections against operational deficiencies in order to deliver to the LHD-7 CSASF in 6/98.
- (U) (\$2,339) Conduct system engineering (critical item development specification, interface control drawings), conduct a Logistic Support Analysis (LSA) and commence system development efforts for Akcita Control Element which integrates the Ship Self Defense System (SSDS). (CV(N), LPD-17,LHD and LHA)

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3. (U) FY 1999 PLAN:

- (U) (\$4,704) Complete system engineering and minimal software coding of Akcita Control Element and begin software unit testing.

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B. (U) PROGRAM CHANGE SUMMARY:

	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
(U) FY 1998 President's Budget:	9,848	11,325	9,781
(U) Appropriated Value:	10,280	11,325	
(U) Adjustments to FY 1997/98 Appropriated Value/ FY 1998 President's Budget:	-706	-382	-5,077
(U) FY 1999 PRESBUDG Submit:	9,574	10,943	4,704

(U) CHANGE SUMMARY EXPLANATION:

- (U) Funding: Change in FY 1997 is due to Congressional Undistributed Reductions and minor pricing adjustments. Change in FY 1998 is due to Congressional Undistributed Reductions and minor pricing adjustments. FY 1999 change due to program restructure.
- (U) Schedule: Rephased to coincide with CEC installation.
- (U) Technical: Not applicable.

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PROJECT TITLE: NTDS SOFTWARE
IMPROV.

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

FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TO	TOTAL
ACTUAL	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	COMPLETE	PROGRAM

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(U) O&M,N 0708017N/486N/46N80 Ship System Tactical	5,368	8,507	12,020	12,917	14,798	15,538	16,315	CONT.	CONT.
(U) SCN PMS-312 CVN Ship Class	0	0	0	0	45,755	0	0	0	0
(U) SCN PMS 317 LPD-17 Ship Class	0	0	8,080	17,499	17,800	18,116	18,507	8,974	88,976
(U) OPN PEO(TAD)C CEC Program Office	0	73,255	47,332	107,894	94,333	173,171	175,768	429,475	1,164,228
(U) RELATED RDT&E:									
(U) PE 0603717N (Command and Control Processor) (C2P)									
(U) PE 0205604N (Navy JTIDS)									
(U) PE 0603658N (Cooperative Engagement Capability) (CEC)									
(U) PE 0205604N (Tactical Data Links)									
(U) PE 0604231N (Navy Tactical Combat System - Afloat) (NTCS-A)									
(U) PE 0604755N (Ship Self Defense System) (SSDS)									
(U) PE 0603872C (Theater Ballistic Missile Defense)(TBMD)									

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IMPROV.

D. (U) SCHEDULE PROFILE:

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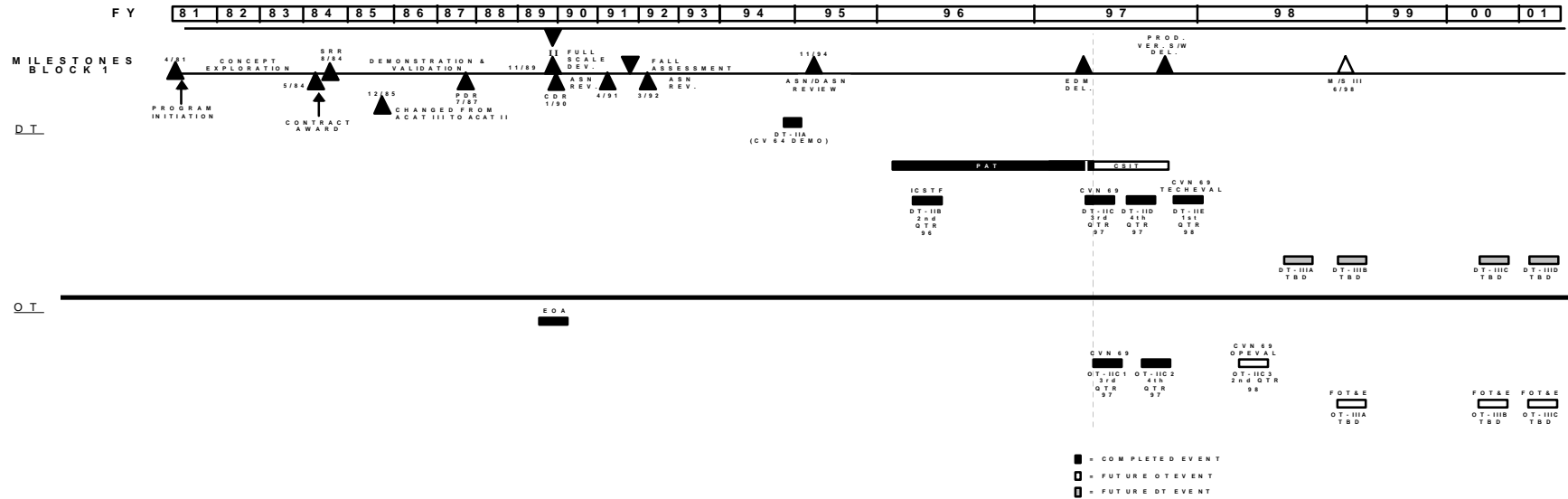
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ACDS BLOCK 1

INTEGRATED PROGRAM SCHEDULE



CFS 2448-1

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FY 1999 RDT&E,N PROGRAM ELEMENT/PROJECT COST BREAKDOWN

DATE: February 1998

BUDGET ACTIVITY: 5

PROGRAM ELEMENT: 0604518N

PROJECT NUMBER: U1604

PROGRAM ELEMENT TITLE: CIC Conversion/NTDS Improvement

PROJECT TITLE: NTDS

Software Improvements

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

Project Cost Categories	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>
a. S/W Development and Integration	5,299	7,350	2,800
b. TDA/PAT Conduct/Training/System Engineering	1,963	1,346	873
c. Operating System License/Technical Support	209	50	0
d. Integrated Logistics Support	169	0	46
e. Configuration Management	50	0	0
f. IV&V Agent / Test Support	547	128	0
g. DT/OT Efforts	705	847	450
h. Test Facilities / HDW and Development	200	0	0
i. Engineering / MSS Support	175	150	150
j. Installation Costs / ED Hardware	50	0	0
k. Travel	64	95	50
l. Miscellaneous /SBIR	143	977	335
Total	9,574	10,943	4,704

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RDT&E PE/Project Cost Breakdown
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PROGRAM ELEMENT: 0604518N

PROJECT NUMBER: U1604

PROGRAM ELEMENT TITLE: CIC Conversion/NTDS Improvements

PROJECT TITLE: NTDS Software Improvements

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 FY1996 &Prior	FY1997 Actual	FY1998 Budget	FY1999 Budget	To Complete	Total Program
Product Development :										
Hughes Aircraft Co. San Diego, CA	C/CPAF	05/84	106,521	106,521	106,521	0	0	0	0	106,521
Hughes Aircraft Co. San Diego, CA	SS/CPFF	05/94	18,900	18,900	10,948	3,258	4,694	0	0	18,900
Hughes Aircraft Co. San Diego, CA	SS/CPAF	08/97	19,210	19,210	0	0	3,236	2,835	13,139	19,210
NCCOSC / RDTE DIV San Diego, CA	WR	Various	43,608	43,608	39,904	1,963	1,141	300	300	43,608
Miscellaneous Contractor	Various	Various	9,113	9,113	5,308	1,703	397	346	1,359	9,113
Misc Govt. Activities	Various	Various	4,161	4,161	2,125	524	300	623	589	4,161
Support and Management :										
Miscellaneous	Various	Various	1,168	1,168	293	175	150	150	400	1,168
Test and Evaluation :										
Miscellaneous	Various	Various	22,617	22,617	18,515	1,252	975	450	1,425	22,617

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RDT&E PE/Project Cost Breakdown
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PROGRAM ELEMENT TITLE: CIC Conversion/NTDS Improvements

PROJECT TITLE: NTDS
Software Improvements

GOVERNMENT FURNISHED PROPERTY

<u>Item Description</u>	<u>Contract Method/ FundType Vehicle</u>	<u>Award/ Oblig Date</u>	<u>Delivery Date</u>	<u>Total FY1996 &Prior</u>	<u>FY1997 Actual</u>	<u>FY1998 Budget</u>	<u>FY1999 Budget</u>	<u>To Complete</u>	<u>Total Program</u>
Product Development									
Miscellaneous	Various	Various	Various	11,756	699	50	0	0	12,505

Support and Management : Not applicable.

Test and Evaluation : Not applicable.

	<u>FY1996 &Prior</u>	<u>FY1997 Actual</u>	<u>FY1998 Budget</u>	<u>FY1999 Budget</u>	<u>To Complete</u>	<u>Total Program</u>
Subtotal Product Development	176,562	8,147	9,818	4,104	15,387	214,018
Subtotal Support and Management	293	175	150	150	400	1,168
Subtotal Test and Evaluation	18,515	1,252	975	450	1,425	22,617
Total Project	195,370	9,574	10,943	4,704	17,212	237,803

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RDT&E PE/Project Cost Breakdown
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