CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification									DATE: **February 2004**		
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**						R-1 ITEM NOMENCLATURE **0205604N Tactical Data Links**					
COST ($ in Millions)	Prior Years Cost	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Total Program	
Total PE Cost	**324.123**	**40.024**	**43.971**	**18.977**	**31.084**	**24.866**	**25.370**	**25.884**	**CONT**	**CONT**	
1743 Link-16 Improvements	**30.556**	**14.376**	**11.509**	**3.647**	**2.381**	**0.000**	**0.000**	**0.000**	**0.000**	**62.469**	
2126 ATDLS Integration	**293.567**	**25.648**	**32.462**	**15.330**	**28.703**	**24.866**	**25.370**	**25.884**	**CONT**	**CONT**	
Quantity of RDT&E Articles	**13**	**9**	**8**	**1**						**31**	

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

(U) This program element (PE) develops and improves the Navy's tactical data link systems. It includes the Link-16 Improvements and Advanced Tactical Data Link Systems (ATDLS) Integration Programs.

(U) Link-16 Improvements extends Link-16 technological improvements to existing and new U.S. Navy tactical data link (TDL) systems, including Link-16 and Link-22. Link-16 Joint Range Extension (JRE) transfers Link-16 data via satellite communications and other non-RF paths. High Throughput Link-16 provides improved data transmission rates by altering the modulation characteristics of Link-16. Link-22 will pass TADIL-J data elements beyond the line-of-sight using a Time Division Multiple Access (TDMA) protocol and improved waveform with existing high-frequency (HF) and ultra-high-frequency (UHF) radios. This project allows more effective employment of fleet units by increasing timeliness, accuracy, and content of tactical data transfer and eliminate line-of-sight transmission limitations thereby improving operational flexibility. The Common Data Link Monitoring System (CDLMS) will be upgraded to Next Generation Command and Control Processor (NGC2P) to provide higher CPU speeds, update rate and memory capacity required for advanced multi-TADIL processing functions. NGC2P Increment 1 (now referred to as NGC2P) will update CDLMS with advanced processors required to support critical data link functions including Link-22 and Link-16 JRE.

(U) The ATDLS Integration program will integrate the Multifunctional Information Distribution System – Low Volume Terminal (MIDS-LVT) Link-16 terminal into U.S. Navy platforms. This multinational (U.S., France, Germany, Italy, and Spain) cooperative development program was established to design, develop, and deliver low-volume lightweight tactical information system terminals for U.S. and foreign fighter aircraft, helicopters, ships and ground sites. The terminals are designed as a Pre-Planned Product Improvement (P3I) of the Joint Tactical Information Distribution System (JTIDS) Time Division Multiple Access (TDMA) Class II terminal. The goal of the MIDS-LVT program is to produce a terminal that is smaller, lighter, fully compatible with, and as capable as the JTIDS TDMA Class II terminals, but suitable for use in platforms that cannot accommodate the bulkier, heavier JTIDS TDMA Class II equipment. This project includes the costs to integrate and test MIDS on the Navy's F/A-18 and selected ship platforms. ATDLS Integration of the MIDS-LVT will also provide selected U.S. Navy and U.S. Marine Corps tactical aircraft such as the F/A-18, P-3, EA-6B, AV-8B and SH-60; U.S. Navy ships, and U.S. Marine Corps ground units with crypto-secure, jam resistant, low-probability-of-exploitation communication of tactical data and voice at a high data rate. It will have additional capabilities of common grid navigation and automatic relay inherent in the equipment that will enable long-range communication and provide jam resistance. The system will be interoperable among all services and NATO/Allied users equipped with MIDS-LVT or JTIDS Class II/IIA.

R-1 SHOPPING LIST - Item No. 176

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification	DATE: **February 2004**
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**	R-1 ITEM NOMENCLATURE **0205604N Tactical Data Links**

(U) ATDLS Integration Program also develops new and improved capabilities for Navy TADIL-J users. The Command and Control Processor is a software development effort that provides an interface between the TADILs (Links 4A, 11, and 16) and major surface ship Command and Control Systems (Advanced Combat Direction System (ACDS) and AEGIS Command and Decision (C&D)). The Common Data Link Management System is a pre-planned product improvement of the Command and Control Processor. The CDLMS will provide translation between TADILs and isolate all tactical data link equipment, message standards and protocols from tactical information processors. This will provide a flexible capability for rapidly exchanging tactical information using a single database for translating various link formats while remaining completely independent of communications equipment and tactical data computing systems. Development of new capabilities in ATDLS includes Low Cost Integration (LCI referred to as Common Link Integration Processing (CLIP) in FY04 and out with funding realigned from Project X1743 Link-16 Improvements), Dynamic Network Management and the Joint Interface Control Officer Support System (JSS). The Common Link Integration Processing (CLIP) concept will introduce open system software required to reduce life cycle support costs and COTS technology refresh objectives and high throughput Link-16. The CLIP development concept addresses fundamental interoperability and affordability of tactical data link capabilities through cooperative development program under both USN and USAF sponsorship. The principal goal of CLIP is to develop a multi-TDL software capability that can be utilized by multiple platforms (aircraft, ships, and ground) for all services. Dynamic Network Management will provide automatic reconfiguration of Link-16 networks that respond instantly to emergent warfighter requirements in the field. Joint Interface Control Officer (JICO) Support System (JSS) will be the standard joint service toolset to monitor and control Multi-TADIL network architectures. The manual DNM capability developed under DNM will be integrated into the JSS host system.

(U) This program element also funds: (1) the development required to accommodate expanded Link-16 operational capabilities for additional warfare areas, (2) development of automated network management aids, and (3) related systems engineering and contractor support efforts.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under OPERATIONAL SYSTEMS DEVELOPMENT because it encompasses engineering and manufacturing development for upgrade of existing, operational systems.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2004			
APPROPRIATION/BUDGET ACTIVITY **RDT&E,N/BA-7**	PROGRAM ELEMENT NUMBER AND NAME **0205604N Tactical Data Links**					PROJECT NUMBER AND NAME **1743 Link-16 Improvements**					
COST ($ in Millions)	Prior Years Cost	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Total Program	
Project Cost	**30.556**	**14.376**	**11.509**	**3.647**	**2.381**					**62.469**	
RDT&E Articles Qty		**9**	**6**							**15**	

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

(U) Link-16 Improvements extends Link-16 technological improvements to existing and new U.S. Navy tactical data link (TDL) systems, including Link-16 and Link-22. Link-16 Joint Range Extension (JRE) transfers Link-16 data via satellite communications and other non-RF paths. High Throughput Link-16 provides improved data transmission rates by altering the modulation characteristics of Link-16. Link-22 will pass TADIL-J data elements beyond the line-of-sight using a Time Division Multiple Access (TDMA) protocol and improved waveform with existing high-frequency (HF) and ultra-high-frequency (UHF) radios. This project allows more effective employment of fleet units by increasing timeliness, accuracy, and content of tactical data transfer and eliminate line-of-sight transmission limitations thereby improving operational flexibility. The Common Data Link Monitoring System (CDLMS) will be upgraded to Next Generation Command and Control Processor (NGC2P) to provide higher CPU speeds, update rate and memory capacity required for advanced multi-TADIL processing functions. NGC2P Increment 1 (now referred to as NGC2P) will update CDLMS with advanced processors required to support critical data link functions including Link-22 and Link-16 JRE.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2004**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E,N/BA-7	**0205604N Tactical Data Links**	**1743 Link-16 Improvements**

(U) B. Accomplishments/Planned Program

CDLMS / LINK-22 PROGRAM ENHANCEMENTS	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	6.994	0.980	
RDT&E Articles Quantity	9		

FY 03 Accomplishments: Completed MTP Prototype development. Multi-TADIL Processor (MTP) Prototype includes Extremely High Frequency (EHF) Moderate Data Rate (MDR) Beyond Line of Sight (BLOS) Link-16 capability, Link-16 throughput enhancements and Model 5 Dual Net Link-11 capability. Laboratory testing completed for the MTP Prototypes.
FY 04 Plan: Incorporate enhanced capabilities into NGC2P design. Complete design assessment of MTP Prototype and incorporate results into CDR.

CDLMS / LINK-22 Design and Test	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	3.989		
RDT&E Articles Quantity			

FY 03 Accomplishments: Continued CDLMS/Link-22 design. Conducted System Requirements Review (SRR) and Preliminary Design Review (PDR). Incorporated results from the MTP Prototype onto NGC2P system design requirements.

NGC2P CAPABILITY	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	3.393	10.529	3.647
RDT&E Articles Quantity		6	

FY 03 Accomplishments: Commenced development of NGC2P capability. Commenced development of NGC2P software. Commenced development of CDLMS field change and technical manuals and training curricula updates.
FY 04 Plan: Continue development of NGC2P capability. Continue development of EHF MDR BLOS capability, Link-16 throughput enhancements and Model 5 Dual Net Link-11 capability as well as continuing the rehosting of current C2P software from CMS-2 to Modern Higher Order Software language. Conduct development testing on the adjunct processor units to demonstrate JRE, Dual Net Multi-Frequency Link-11, GCCS-M Interface and Link-22 capabilities. Continue development of CDLMS field change and technical manual development. Continue development of training curricula update.
FY 05 Plan: Continue development of NGC2P capability and development of training curricula. Conduct combat systems integration testing, link certification testing, TECHEVAL/OPEVAL and battlegroup integration testing of NGC2P capability.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2004**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E,N/BA BA-7	**0205604N Tactical Data Links**	**1743 Link-16 Improvements**

(U) C. PROGRAM CHANGE SUMMARY:

(U) Funding:	FY 2003	FY 2004	FY 2005
FY 04 President's Budget	14.832	14.412	6.177
FY 05 President's Budget	14.376	11.509	3.647
Total Adjustments	-0.456	-2.903	-2.530
Summary of Adjustments			
Issue 66556 SBIR	-0.139		
Issue 68849 FY 2003 Update	-0.317		
Issue 67111 Realignment of CLIP funding to X2126		-2.753	-2.495
Issue 66961 SPAWAR Service Center Cost Center Adjustments		-0.020	-0.018
Issue 68041 Management Improvements (Section 8094)		-0.031	
Issue 68066 Efficiencies/Revised Economic Assumptions		-0.099	
Issue 67767 NWCF Rates - SPAWAR SSC Rates			-0.015
Issue 69025 WCF - R&D - SPAWAR - PBD 430			-0.007
Issue 69045 PBD 426 Rates - SSC			0.017
Issue 69492 PBD - 604 Inflation			-0.010
Issue 69512 PBD - 604 non-purchase inflation			-0.002
Total Adjustments	-0.456	-2.903	-2.530

Funding has been realigned within the Program Element from Project 1743 to 2126 in FYs 04 and beyond in order to manage and execute the Common Link Integration Processing (CLIP) Program under a single project.

(U) Schedule:

The CDR for NGC2P Increment 1 (now referred to as NGC2P) has accelerated from 2nd quarter FY05 to 2nd quarter FY04 and NGC2P IOC accelerated from 3rd quarter FY 07 to 1st quarter FY06. NGC2P Increment 2 (now referred to as CLIP) is shown in the PE 0205604N/2126 budget schedule.

(U) Technical:

NGC2P development has been re-baselined to reflect Navy priorities for tactical data link development. As a result, NGC2P development will focus on adding capability within the current software architecture through the addition of an adjunct processor into the CDLMS. As a result of this change in technical approach, NGC2P CDR has been advanced one year. NGC2P will upgrade existing CDLMS units to add JRE, Dual-Net Multi-Frequency Link-11, GCCS-M Interface, and Link 22. IOC for NGC2P has been advanced by 18 months to 1st quarter FY06.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: **February 2004**
APPROPRIATION/BUDGET ACTIVITY **RDT&E,N/BA-7**	PROGRAM ELEMENT NUMBER AND NAME **0205604N Tactical Data Links**	PROJECT NUMBER AND NAME **1743 Link-16 Improvements**	

(U) D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost
OPN Line 2614 ATDLS	9.004	16.063	2.386	13.237	11.562	11.795	12.033	Continuing	Continuing

(U) E. ACQUISITION STRATEGY:

Next Generation Command and Control Processor and Multi -TADIL Processor Prototype are utilizing existing cost plus contracts.

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: **February 2004**				
APPROPRIATION/BUDGET ACTIVITY **RDT&E,N/BA-7**			PROGRAM ELEMENT **0205604N Tactical Data Links**			PROJECT NUMBER AND NAME **1743 Link-16 Improvements**						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
NILE Subphase 2	CPIF	Logicon, San Diego, CA	3.171								3.171	3.171
NILE LLC Dev	CPIF	VIASAT, San Diego, CA	0.500								0.500	0.500
Link-22 Engineering/Integration	WX	SPAWARSYSCEN, San Diego, CA	3.547								3.547	3.547
Link-22 Integration	CPFF	Logicon, San Diego, CA	0.116								0.116	0.116
Link-22 Network Design	WX	NCTSI, San Diego, CA	0.690								0.690	0.690
Command and Control Processor (C2P)	Various	Various	2.377								2.377	2.377
Multi-TADIL Capability MTC	Various	Various	1.696								1.696	1.696
Next Generation C2P Engineering/Integration	WX	SPAWARSYSCEN, San Diego, CA	2.000	2.550	11/02	2.550	11/03	1.000	Various	Continuing	Continuing	Continuing
Next Generation C2P Engineering/Integration	Various	Various		0.686	Various	1.231	Various	0.329	Various	Continuing	Continuing	Continuing
Next Generation C2P GFE	Various	Various	0.560	0.236	Various						0.796	0.796
Next Generation C2P Design/Dev	CPFF	APC, Austin, TX	6.313	1.700	Various						8.013	8.013
Next Generation C2P Design/Dev TDA	CPFF	APL/JHU, Laurel, MD	7.585	3.453	Various						11.038	11.038
Next Generation C2P Design/Dev	CPFF	Northrop Grumman IT, Reston, VA		2.024	07/03	4.500	Various	0.250	Various	Continuing	Continuing	Continuing
Subtotal Product Development			28.555	10.649		8.281		1.579				

Remarks:

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: **February 2004**				
APPROPRIATION/BUDGET ACTIVITY **RDT&E,N/BA-7**			PROGRAM ELEMENT **0205604N Tactical Data Links**			PROJECT NUMBER AND NAME **1743 Link-16 Improvements**						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Development Support												
Software Development												
Integrated Logistics Support												
Configuration Management												
Technical Data												
Studies & Analyses												
GFE												
Award Fees												
Subtotal Support												

Remarks:

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 3)								DATE: **February 2004**			
APPROPRIATION/BUDGET ACTIVITY **RDT&E,N/BA-7**		PROGRAM ELEMENT **0205604N Tactical Data Links**				PROJECT NUMBER AND NAME **1743 Link-16 Improvements**					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
NGC2P Test & Evaluation	WX	SPAWARSYSCEN, San Diego, CA	0.731	2.100	Various	1.908	Various	1.395	Various	Continuing	Continuing	Continuing
NGC2P Test & Evaluation	WX	NCTSI, San Diego, CA				0.270	Various	0.298	Various	Continuing	Continuing	Continuing
Subtotal T&E			0.731	2.100		2.178		1.693				
Remarks:												
Engineering Support and Travel	Various	Various	1.270	1.627	Various	1.050	Various	0.375	Various	Continuing	Continuing	Continuing
Subtotal Management			1.270	1.627		1.050		0.375				
Remarks:												
Total Cost			30.556	14.376		11.509		3.647				
Remarks:												

R-1 SHOPPING LIST - Item No. 176

CLASSIFICATION:

EXHIBIT R4, Schedule Profile | DATE: **February 2004**

APPROPRIATION/BUDGET ACTIVITY: **RDT&E,N/BA-7**

PROGRAM ELEMENT NUMBER AND NAME: **0205604N Tactical Data Links**

PROJECT NUMBER AND NAME: **1743 Link-16 Improvements**

Fiscal Year	2003				2004				2005				2006				2007				2008				2009			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Program Milestones NGC2P													IOC △															
Engineering Milestones NGC2P		SRR △		PDR △		CDR △																						
Test & Evaluation Milestones MLTT																												
MTP Prototype	Lab Test △			Lab Test △																								
NGC2P							DT △			CSIT △	Link Cert △	TECHEVAL/OPEVAL △ BGIT △																
Contract Milestones LLC		LCC LRIP △																										
NGC2P								NGC2P △																				

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: **February 2004**	
APPROPRIATION/BUDGET ACTIVITY **RDT&E,N/BA-7**	PROGRAM ELEMENT **0205604N Tactical Data Links**				PROJECT NUMBER AND NAME **1743 Link-16 Improvements**		
Schedule Profile	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
MTP Prototype Lab Test Commenced	1Q						
NGC2P SRR	2Q						
LLC LRIP	2Q						
NGC2P PDR	4Q						
MTP Prototype Lab Test Completed	4Q						
NGC2P CDR		2Q					
NGC2P DT		3Q					
NGC2P Production Contract Award		4Q					
NGC2P CSIT			2Q				
NGC2P TECHEVAL/OPEVAL			3Q				
NGC2P Link Certification			3Q				
NGC2P BGIT			4Q				
NGC2P IOC				1Q			

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2004			
APPROPRIATION/BUDGET ACTIVITY **RDT&E,N/BA-7**	PROGRAM ELEMENT NUMBER AND NAME **0205604N Tactical Data Links**					PROJECT NUMBER AND NAME **2126 ATDLS Integration**					
COST ($ in Millions)	Prior Years Cost	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Total Program	
Project Cost	**293.567**	**25.648**	**32.462**	**15.330**	**28.703**	**24.866**	**25.370**	**25.884**	**CONT**	**CONT**	
RDT&E Articles Qty	**13**		**2**	**1**						**16**	

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

(U) The ATDLS Integration program will integrate the Multifunctional Information Distribution System – Low Volume Terminal (MIDS-LVT) Link-16 terminal into U.S. Navy platforms. This multinational (U.S., France, Germany, Italy, and Spain) cooperative development program was established to design, develop, and deliver low-volume lightweight tactical information system terminals for U.S. and foreign fighter aircraft, helicopters, ships and ground sites. The terminals are designed as a Pre-Planned Product Improvement (P3I) of the Joint Tactical Information Distribution System (JTIDS) Time Division Multiple Access (TDMA) Class II terminal. The goal of the MIDS-LVT program is to produce a terminal that is smaller, lighter, fully compatible with, and as capable as the JTIDS TDMA Class II terminals, but suitable for use in platforms that cannot accommodate the bulkier, heavier JTIDS TDMA Class II equipment. This project includes the costs to integrate and test MIDS on the Navy's F/A-18 and selected ship platforms. ATDLS Integration of the MIDS-LVT will also provide selected U.S. Navy and U.S. Marine Corps tactical aircraft such as the F/A-18, P-3, EA-6B, AV-8B and SH-60; U.S. Navy ships, and U.S. Marine Corps ground units with crypto-secure, jam resistant, low-probability-of-exploitation communication of tactical data and voice at a high data rate. It will have additional capabilities of common grid navigation and automatic relay inherent in the equipment that will enable long-range communication and provide jam resistance. The system will be interoperable among all services and NATO/Allied users equipped with MIDS-LVT or JTIDS Class II/IIA.

(U) ATDLS Integration Program also develops new and improved capabilities for Navy TADIL-J users. The Command and Control Processor is a software development effort that provides an interface between the TADILs (Links 4A, 11, and 16) and major surface ship Command and Control Systems (Advanced Combat Direction System (ACDS) and AEGIS Command and Decision (C&D)). The Common Data Link Management System is a pre-planned product improvement of the Command and Control Processor. The CDLMS will provide translation between TADILs and isolate all tactical data link equipment, message standards and protocols from tactical information processors. This will provide a flexible capability for rapidly exchanging tactical information using a single database for translating various link formats while remaining completely independent of communications equipment and tactical data computing systems. Development of new capabilities in ATDLS includes Low Cost Integration (LCI referred to as Common Link Integration Processing (CLIP) in FY04 and out with funding realigned from Project X1743 Link-16 Improvements), Dynamic Network Management and the Joint Interface Control Officer Support System (JSS). The Common Link Integration Processing (CLIP) concept will introduce open system software required to reduce life cycle support costs and COTS technology refresh objectives and high throughput Link-16. The CLIP development concept addresses fundamental interoperability and affordability of tactical data link capabilities through cooperative development program under both USN and USAF sponsorship. The principal goal of CLIP is to develop a multi-TDL software capability that can be utilized by multiple platforms (aircraft, ships, and ground) for all services. Dynamic Network Management will provide automatic reconfiguration of Link-16 networks that respond instantly to emergent warfighter requirements in the field. Joint Interface Control Officer (JICO) Support System (JSS) will be the standard joint service toolset to monitor and control Multi-TADIL network architectures. The manual DNM capability developed under DNM will be integrated into the JSS host system.

(U) This project also funds: (1) the development required to accommodate expanded Link-16 operational capabilities for additional warfare areas, (2) development of automated network management aids, and (3) related systems engineering and contractor support efforts.

(U) Additional terminal development costs are funded in program element 0604771D.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2004**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E,N/BA-7	**0205604N Tactical Data Links**	**2126 ATDLS Integration**

(U) B. Accomplishments/Planned Program

F/A-18 MIDS	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	14.347	2.937	
RDT&E Articles Quantity			

FY 03 Accomplishments: Completed F/A-18 MIDS OPEVAL. Conducted F/A-18 system interoperability certification testing. Conducted F/A-18 MIDS OPEVAL Verification of Correction of Deficiencies (VCD).
FY 04 Plan: Conduct F/A-18 MIDS VCD of remaining deficiencies identified during OPEVAL.

MIDS on Ship (MOS)	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	2.491		
RDT&E Articles Quantity			

FY 03 Accomplishments: Completed MIDS on Ship developmental testing.

TADIL-J System Engineering	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	2.341		
RDT&E Articles Quantity			

FY 03 Accomplishments: Continued TADIL-J System Engineering which included investigating future capabilities and enhancements and ensured Naval upgrades are interoperable with Joint U.S. and allied forces such as joint range extension, dynamic network management, time critical strike, and support integration concepts for additional aircraft.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2004**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E,N/BA-7	**0205604N Tactical Data Links**	**2126 ATDLS Integration**

(U) B. Accomplishments/Planned Program

C2P Performance Upgrades	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	1.173		
RDT&E Articles Quantity			

FY 03 Accomplishments: Completed Performance Upgrades including C2P Model 5 improvements, Common Data Link Management System (CDLMS) development, and Satellite-TADIL-J development.

Common Link Integration Processing (CLIP) (LCI)	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	2.110	6.620	2.495
RDT&E Articles Quantity			

FY 03 Accomplishments: Developed program specifications, requirements and documentation including contract request for proposal, statement of work, CDRLs and systems requirements document.
FY 04 Plan: Commence development of CLIP to provide a common interpretation of data link message standards and to minimize interoperability issues while reducing platform integration costs through a common software solution. Conduct CLIP Link-16/JRE Preliminary Design Review.
FY 05 Plan: Continue development of CLIP Link-16/Joint Range Extension capability and commence development of CLIP Variable Message Forwarding (VMF) capability. Perform platform integration testing of CLIP Link-16/Joint Range Extension capability on air platforms. Conduct CLIP Link-16/JRE Critical Design Review. Conduct CLIP VMF Preliminary Design Review.

Dynamic Network Management	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	3.186	15.833	8.635
RDT&E Articles Quantity		1	

FY 03 Accomplishments: Commenced Dynamic Network Management (DNM) development to provide real-time reconfiguration of Link-16 networks and dynamic reallocation of network capacity to meet emergent warfighter requirements in the field as operations evolve. Supported the development of dynamic reconfiguration protocols and algorithms, preliminary DNM design, laboratory and simulation testing and Fleet Battle Experiment. Conduct Preliminary Design Review (PDR).
FY 04 Plan: Continue DNM development to provide automatic reconfiguration of Link-16 networks and dynamic reallocation of network capacity to meet emergent warfighter requirements in the field as operations evolve. Supports the development, test and evaluation of Link-16 terminal and test bed hardware and software modifications to implement DNM capability. Develop improved Link-16 capabilities including enhanced throughput and organic navigation. Conduct Critical Design Review. Conduct development test on an interim JSS unit to test manual DNM technology.
FY 05 Plan: Continue DNM development to provide automatic reconfiguration of Link-16 networks and dynamic reallocation of network capacity to meet emergent warfighter requirements in the field as operations evolve. Complete Link-16 terminal and test bed modifications. Perform software formal qualification tests (SFQT), link certification and participate in Fleet exercise to evaluate DNM maturity. Commence designing and development of platform integration of DNM into ship and aircraft. Develop DNM integrated logistics support products including system-operating procedures.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2004**
APPROPRIATION/BUDGET ACTIVITY **RDT&E,N/BA-7**	PROGRAM ELEMENT NUMBER AND NAME **0205604N Tactical Data Links**	PROJECT NUMBER AND NAME **2126 ATDLS Integration**

(U) B. Accomplishments/Planned Program

Joint Interface Cont. Off. Supt. Sys. (JSS)	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost		7.072	4.200
RDT&E Articles Quantity		1	1

FY 04 Plan: Develop software to monitor and control multi-TADIL network architectures and acquire test article to support development. Provides Navy funding share of the JSS multi-service development effort. Conduct Preliminary Design Review (PDR) and Critical Design Review (CDR).
FY 05 Plan: Continue software development and perform laboratory integration testing on engineering development model.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2004**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E,N/BA-7	**0205604N Tactical Data Links**	**2126 ATDLS Integration**

(U) C. PROGRAM CHANGE SUMMARY:

(U) Funding:	FY 2003	FY 2004	FY 2005
FY 04 President's Budget	26.782	30.114	12.912
FY 05 President's Budget	25.648	32.462	15.330
Total Adjustments	-1.134	2.348	2.418
Summary of Adjustments			
Issue 65590 Federal Technology Transfer	-0.011		
Issue 66556 SBIR	-0.374		
Issue 68849 FY 2003 Update	-0.749		
Issue 67111 Realignment of CLIP funding to X2126		2.753	2.495
Issue 66961 SPAWAR Service Cost Center Adjustments		-0.033	-0.016
Issue 68041 Management Improvements (Section 8094)		-0.087	
Issue 68060 FFRDC Reduction (Section 8029)		-0.006	
Issue 68066 Efficiencies/Revised Econ Assumption (Section 8126)		-0.279	
Issue 67767 NWCF Rates - SPAWAR SSC Rates			-0.014
Issue 69025 WCF - R&D - SPAWAR - PBD 430			-0.007
Issue 69045 PBD 426 Rates - SSC			0.016
Issue 69492 PBD-604 Inflation			-0.041
Issue 69512 PBD 604 non-purchase inflation			-0.009
Issue 69650 P07 Technical Adjustments			-0.006
Total Adjustments	-1.134	2.348	2.418

Commencing in FY 04, Project X2126 no longer separately identifies TADIL-J systems engineering in the program plans. TADIL-J systems engineering is included in the applicable product line.

Funding was realigned within the Program Element from Project 1743 to 2126 in FYs 04 and beyond in order to manage and execute the Common Link Integration Processing (CLIP) Program under a single project.

(U) Schedule: MIDS MS III corrected to read 4th quarter vice 1st quarter FY 2003. MS III was achieved for Air Force MIDS LVT (1) in September 2003. MS III for Navy MIDS LVT (1) was delayed from September 2003 to April 2004 for the resolution of four critical operational issues. The LCI schedule has been rebaselined to reflect the CLIP program schedule. Two OPEVAL Verification of Correction of Deficiencies (VCD) were scheduled for MIDS F/A-18. MIDS on Ship TECHEVAL and OPEVAL no longer required due to the program being included under the MIDS Program for MS III decision with F/A-18 as lead platform. MIDS on Ship DT-III-B scheduled in 1st quarter FY 2004 to test Block Cycle 1 production software. DNM CDR slipped from 2nd quarter FY 2004 to 3rd quarter FY 2004 due to the incorporation of additional program requirements. DT event scheduled for DNM in 4th quarter of FY 2004 to test manual DNM capability on interim JSS unit.
(U) Technical: The Low Cost Integration Program was combined with a portion of the Next General Command and Control Processing (NGC2P) Program to develop a single common data link integration solution for both ship and air platforms and is referred to as the Common Link Integration Processing (CLIP) Program.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2004**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E,N/BA-7	**0205604N Tactical Data Links**	**2126 ATDLS Integration**

(U) D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost
APN LINE LI 052500 F/A-18	37.937	46.580	48.949	41.254	46.327	47.997	48.915	Continuing	Continuing
RDT&E,DA	10.122	10.633	18.536	18.797	19.064	19.581	20.058	Continuing	Continuing
OPN LI 2614 ATDLS	9.004	16.063	2.386	13.237	11.562	11.795	12.033	Continuing	Continuing

SCN - Funding for ATDLS hardware is not separately identified in the SCN budget exhibits.
RELATED RDT&E:
PE 0604771D/P771 - Link-16: System development and demonstration for a Joint Tactical Data Link (TDL).
PE 0604771D/P773 - MIDS: MIDS-LVT terminal development.

(U) E. ACQUISITION STRATEGY:

F/A-18 MIDS aircraft integration is utilizing cost plus fixed fee contracts on an R&D Basic Ordering Agreement with Boeing. MIDS integration and testing; TADIL-J systems engineering; and performance upgrades development are utilizing existing cost plus contracts. For Common Link Integration Processing (CLIP), a competitive contract will be awarded to develop a single common data link integration solution that can be configured to satisfy a broad-range of platforms. The Air Force was designated as the acquisition executive for JICO Support System (JSS), and will award a competitive contract for software development and integration. The Dynamic Network Management Network Controller Technology will be incorporated into JSS Block 1 and willl utilize the competitive contract for JSS. Remaining Dynamic Network Management development efforts will utilize existing development contracts with NGIT, DLS and BAE.
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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1) | DATE: **February 2004**

APPROPRIATION/BUDGET ACTIVITY: **RDT&E,N/BA-7** | PROGRAM ELEMENT: **0205604N Tactical Data Links** | PROJECT NUMBER AND NAME: **2126 ATDLS Integration**

Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
MIDS F/A-18 Integration	WX	Various	142.970	7.260	Various	1.217	Various				151.447	151.447
TADIL-J System Engineering	WX	SPAWARSYSCEN, San Diego, CA	27.009	1.224	Various						28.233	28.233
TADIL-J System Engineering	Various	Various	3.726	0.928	Various						4.654	4.654
MIDS on Ship	CPIF	BAE Systems, Wayne, NJ (DLS)	13.944	2.000	12/02						15.944	15.944
MIDS on Ship	Various	Various	44.240	0.091	Various						44.331	44.331
Performance Upgrades	WX	SPAWARSYSCEN, San Diego, CA	13.143	1.070	Various						14.213	14.213
Performance Upgrades	Various	Various	5.236								5.236	5.236
Air Defense System Integrator	CPFF	APC, Austin, TX	2.059								2.059	2.059
Dual Net Link-11	WX	Various	1.866								1.866	1.866
Korean Air Defense Sys Impr	CPFF	JHU/APL, Laurel, MD	0.900								0.900	0.900
DNMFL Prototypes	Various	Various	2.127								2.127	2.127
Common Link Processing Program (CLIP) Dev	WX	SPAWARSYSCEN, San Diego, CA				0.568	11/03	0.924	11/04	Continuing	Continuing	Continuing
Common Link Processing Program (CLIP) Dev	Various	Various		1.946	Various	1.137	Various	0.250	Various	Continuing	Continuing	Continuing
Common Link Processing Program (CLIP) SW Dev	CPFF	TBD				4.220	6/04	1.000	11/04	Continuing	Continuing	Continuing
DNM System Engineering	WX	SPAWARSYSCEN, San Diego, CA		0.500	11/02	3.173	11/03	1.921	11/04	Continuing	Continuing	Continuing
DNM Development	CPFF	Northrop Grumman IT, Reston, VA		1.840	2/03	0.696	11/03				2.536	2.536
DNM NCT Development	CPFF	ESC Hanscom AFB, MA/TBD				5.759	6/04	0.150	11/04			
DNM Development	MIPR	Warner Robbins AFB, GA		0.600	Various	0.161	03/04	0.100	11/04	Continuing	Continuing	Continuing
DNM Development	CPIF	BAE Systems, Wayne, NJ (DLS)				0.117	1/04	0.400	11/04	Continuing	Continuing	Continuing
DNM Systems Engineering	Various	Various				1.194	Various	1.600	11/04	Continuing	Continuing	Continuing
JSS Software Dev and Integration	CPFF	ESC Hanscom AFB, MA/TBD				5.564	6/04	3.400	11/04	Continuing	Continuing	Continuing
JSS Test Articles	CPFF	ESC Hanscom AFB, MA/TBD				0.771	6/04	0.596	11/04		1.367	1.367
JSS Systems Engineering	CPFF	Galaxy Scientific, Arlington, VA				0.214	11/03	0.204	11/04	Continuing	Continuing	Continuing
JSS Systems Engineering	WX	SPAWARSYSCEN, San Diego, CA				0.193	11.03					
Subtotal Product Development			257.220	17.459		24.984		10.545				

Remarks: The Low Cost Integration (LCI) Program has been renamed to the Common Link Integration Processing (CLIP) Program.

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: **February 2004**				
APPROPRIATION/BUDGET ACTIVITY **RDT&E,N/BA-7**			PROGRAM ELEMENT **0205604N Tactical Data Links**			PROJECT NUMBER AND NAME **2126 ATDLS Integration**						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Development Support												
Software Development												
Integrated Logistics Support												
Configuration Management												
Technical Data												
Studies & Analyses												
GFE												
Award Fees												
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	

Remarks:

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 3)								DATE: **February 2004**				
APPROPRIATION/BUDGET ACTIVITY **RDT&E,N/BA-7**			PROGRAM ELEMENT **0205604N Tactical Data Links**			PROJECT NUMBER AND NAME **2126 ATDLS Integration**						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Test and Evaluation	Various	Various	4.025								4.025	4.025
MIDS F/A-18 T&E	WX	SPAWARSYSCEN, San Diego, CA	9.088	3.190	Various	0.496	Various				12.774	12.774
MIDS F/A-18 T&E	Various	Various	7.863	2.477	Various	1.197	Various				11.537	11.537
MIDS on ShipT&E	PD	OPTEVFOR, Norfolk, VA	0.092								0.092	0.092
MIDS on Ship T&E	WX	SPAWARSYSCEN, San Diego, CA	0.940	0.400	11/02						1.340	1.340
MIDS Test Assets	SS/CPAF/IF	MIDSCO, Fairfield, NJ	6.594								6.594	6.594
Common Link Integration Processing (CLIP) T&E	WX	SPAWARSYSCEN, San Diego, CA						0.321	11/04	Continuing	Continuing	Continuing
Dynamic Network Management T&E	WX	SPAWARSYSCEN, San Diego, CA				3.685	12/03	1.534	Various	Continuing	Continuing	Continuing
Dynamic Network Management T&E	WX	OPTEVFOR, Norfolk, VA				0.214	06/04	1.500	Various	Continuing	Continuing	Continuing
Dynamic Network Management T&E	WX	Various				0.428	Various					
Subtotal T&E			28.602	6.067		5.592		3.355				
Remarks:												
Engineering Support and Travel	Various	Various	7.745	2.122	Various	1.886	Various	1.430	Various	Continuing	Continuing	Continuing
Subtotal Management			7.745	2.122		1.886		1.430				
Remarks:												
Total Cost			293.567	25.648		32.462		15.330				

Remarks: The Low Cost Integration Processing (LCI) Program has been renamed to the Common Link Integration Processing (CLIP) Program.

EXHIBIT R4, Schedule Profile | DATE: **February 2004**

APPROPRIATION/BUDGET ACTIVITY: **RDT&E,N/BA-7**

PROGRAM ELEMENT NUMBER AND NAME: **0205604N Tactical Data Links**

PROJECT NUMBER AND NAME: **2126 ATDLS Integration**

Fiscal Year	2003				2004				2005				2006				2007				2008				2009			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Program Milestones MIDS			IOC △	MS III △	US AF		MS △	US Navy																				
CLIP (LCI)																				Link-16/JRE IOC △				VMF/Data Forwarding IOC △				
DNM																	IOC △											
Engineering Milestones DNM							CDR △																					
CLIP (LCI)								Link-16/JRE PDR △ CDR △			VMF/Data Forwarding PDR △ CDR △					Link-4/11/22 PDR △ CDR △												
JSS								PDR △	CDR △																			
Test & Evaluation Milestones MIDS F/A-18	△ OPEVAL △	Interoperability Cert	OPEVAL △	VCD		VCD △																						
MIDS on Ship					DT-III-B △																							
CLI P (LCI) LINK-16/JRE										Platform Integ Test △			CT △			DT △			OT △								
CLIP (LCI) VMF/DATA FORWARDING														Platform Integ Test △			CT △			DT △			OT △				
CLIP (LCI) LINK-4/11/22																		Platform Integ Test △			CT △			DT △			OT △	
DNM								DT △		SFQT △	Link Cert △	Fleet Exercise △			TECH/OPEVAL △													
JSS												Lab Test △	Integ Test △															
Contract Milestones CLIP (LCI)						Link-16/JRE	△			VMF/Data Forwarding	△				Link-4/11/22	△												
JSS							JSS △																					

R-1 SHOPPING LIST - Item No. 176

The Low Cost Integration (LCI) Program has been renamed as the Common Link Integration Processing (CLIP) Program.
The CLIP Program is a multi-Service effort and is funded by various programs. The development of the CLIP software and integration is funded by LCI (PE 0205604N/2126), NGC2P (PE 0205604N/1743), Naval aircraft platform programs, the Air Force Tactical Data Link Common Software Program and the Air Force Objective Gateway Program. The CLIP Program schedule is shown above.
The Joint Interface Control Officer (JICO) Support System (JSS) is a multi-service effort and is currently funded by the Navy and the Air Force.

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: **February 2004**	
APPROPRIATION/BUDGET ACTIVITY **RDT&E,N/BA-7**	PROGRAM ELEMENT **0205604N Tactical Data Links**				PROJECT NUMBER AND NAME **2126 ATDLS Integration**		
Schedule Profile	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
MIDS F/A-18 Interoperability Cert	1Q						
MIDS F/A-18 OPEVAL	1Q						
MIDS IOC	3Q						
MIDS F/A-18 OPEVAL VCD	3Q						
MIDS DAB MS III USAF	4Q						
MIDS on Ship DT-III-B		1Q					
MIDS F/A-18 VCD		2Q					
MIDS DAB MS III US Navy		3Q					
DNM CDR		3Q					
CLIP (LCI) Link-16/JRE Contract Award		3Q					
JSS Contract Award		3Q					
CLIP (LCI) Link-16/JRE PDR		4Q					
JSS PDR		4Q					
DNM DT		4Q					
CLIP (LCI) Link-16/JRE CDR			1Q				
JSS CDR			1Q				
DNM SFQT			2Q				
CLIP (LCI) Link-16/JRE Platform Integration Test			3Q				
DNM Link Certification			3Q				
CLIP (LCI) VMF/Data Forwarding Contract Award			3Q				
CLIP (LCI) VMF/Data PDR			4Q				
DNM Fleet Exercise			4Q				
JSS Laboratory Test			4Q				
CLIP (LCI) VMF/Data Forwarding CDR				1Q			
CLIP (LCI) Link-16/JRE Contractor Test (CT)				1Q			
JSS Integration Test				2Q			
CLIP (LCI) VMF/Data Forwarding Platform Integration Test				3Q			
DNM TECHEVAL/OPEVAL				3Q			
CLIP (LCI) Link-4/11/22 Contract Award				3Q			
CLIP (LCI) Link-4/11/22 PDR				4Q			
CLIP (LCI) Link-16/JRE DT				4Q			
DNM IOC					1Q		
CLIP (LCI) Link-4/11/22 CDR					1Q		
CLIP (LCI) VMF/Data Forwarding CT					1Q		
CLIP (LCI) Link-16/JRE OT					3Q		
CLIP (LCI) Link-4/11/22 Platform Integration Test					3Q		
CLIP (LCI) VMF/Data Forwarding DT					4Q		
CLIP (LCI) Link-16/JRE IOC						1Q	
CLIP (LCI) Link-4/11/22 CT						1Q	
CLIP (LCI) VMF/Data Forwarding OT						3Q	
CLIP (LCI) Link-4/11/22 DT						4Q	
CLIP (LCI) VMF/Data Forwarding IOC							1Q
CLIP (LCI) Link-4/11/22 OT							3Q

R-1 SHOPPING LIST - Item No. 176

The Low Cost Integration (LCI) Program has been renamed to the Common Link Integration Processing (CLIP) Program.