CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification						**DATE:**	**February 2006**	
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY/BA-7**				R-1 ITEM NOMENCLATURE **0205604N Tactical Data Links**				
COST ($ in Millions)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
Total PE Cost	18.380	86.864	41.967	25.611	17.507	27.837	23.086	
1743 Link-16 Improvements	5.185	2.347	0.498					
2126 ATDLS Integration	13.195	82.717	41.469	25.611	17.507	27.837	23.086	
9999 Congressional Increases		1.800						
Quantity of RDT&E Articles		**3**						

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

(U) This program element (PE) develops and improves the Navy's tactical data link (TDL) 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 United States (US) Navy TDL systems, including Link-16 and Link-22. Link-16 Joint Range Extension (JRE) transfers Link-16 data via satellite communications and other non-radio frequency (RF) paths. High Throughput Link-16 provides improved data transmission rates by altering the modulation characteristics of Link-16. Link-22 will pass Link-16 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 central processing unit (CPU) speeds, update rate and memory capacity required for advanced multi-TDL processing functions. NGC2P will update CDLMS with advanced processors required to support critical data link functions including Link-16 JRE and Link-22.

(U) ATDLS Integration Program develops new and improved capabilities for Navy Link-16 users. Development of new capabilities in ATDLS includes the Joint Interface Control Officer Support System (JSS), Common Link Integration Processing (CLIP) and Dynamic Network Management (DNM). The Joint Interface Control Officer (JICO) Support System (JSS) will be the standard joint service toolset to monitor and control Multi-TDL network architectures. The Common Link Integration Processing (CLIP) concept will introduce open system software required to reduce life cycle support costs and commercial off-the-shelf (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 U. S. Navy (USN) and U.S. Air Force (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 (DNM) will provide automatic reconfiguration of Link-16 networks that respond instantly to emergent warfighter requirements in the field. DNM consists of different capabilities including network control technologies (NCT), new terminal protocols (time slot reallocation receipt compliance (TSR RC) and Stochastic Unified Multiple Access (SHUMA)) and has been significantly expanded to include a more robust TSR and adaptive multinetting. The DNM capability will be integrated into the JSS host system and also Joint Tactical Information Distribution System (JTIDS), Multifunctional Information Distribution System (MIDS) and Joint Tactical Radio System (JTRS) terminals.

(U) FY06 includes Congressional Increase for the Airborne Tactical Server (ATS). ATS is a digital audio/video recorder with removable mass memory and a CPU. The ATS will function as an adjunct processor within the F/A-18 to demonstrate Level 2 Airborne Network Integration. The ATS will use an existing contract for demonstration only as risk reduction for future Battlespace Networking efforts.

(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-2, RDT&E Budget Item Justifica		**DATE:**	**February 2006**
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY/BA-7**	R-1 ITEM NOMENCLATURE **0205604N Tactical Data Links**		

(U) B. PROGRAM CHANGE SUMMARY:

(U) Funding:	FY 2005	FY 2006	FY 2007
FY06 President's Budget	18.744	86.364	54.032
FY07 President's Budget	18.380	86.864	41.967
Total Adjustments	-0.364	0.500	-12.065
Summary of Adjustments			
Shipboard Communications Adjustment			-12.200
Navy Working Capital Fund (NWCF) Civpers Efficiencies			-0.116
Small Business Innovation Research (SBIR)	-0.199		
Nuclear Physical Security (OSD-09)	0.004		
Inflation rate change			0.240
CIVPERS Pay Raise Rate Change			0.011
Sec. 8026(f): Federally Funded Research and Development Centers		-0.004	
Sec. 8125: Revised Economic Assumptions		-0.393	
Congressional Adds		1.800	
Congressional Action 1% Reduction		-0.903	
Department of Energy Transfer	-0.015		
Miscellaneous Navy Adjustments	-0.154		
Subtotal	-0.364	0.500	-12.065

(U) Schedule:

Link 16 (project 1743) - Changes to the NGC2P development schedule are due to: 1) the incorporation of additional interoperability software requirements and 2) the change in test strategy to conduct operational evaluation (OPEVAL) on units delivered from the NGC2P competitive production contract that will include both JRE and Link-22 capabilities.

ATDLS (project 2126) - JSS milestone (MS) C changed from 1st Qtr FY 07 to 4th Qtr FY 07, Full rate Production (FRP) changed from 4th Qtr FY 08 to 2nd Qtr FY 08, and engineering and test and evaluation milestones changed to align with current JSS Joint Program Schedule. Schedule changes are due to a slip in software delivery from the prime development contractor and to Navy funding reprioritization.
CLIP MS B for Increment 1 slipped from 2nd Qtr FY 05 to 3rd Qtr FY 05 due to extended milestone review period. CLIP Increment 1 MS C slipped from 4th Qtr FY 07 to 2nd Qtr FY 08 and CLIP Increment 2 Program, Engineering and Test and Evaluation Milestones slipped due to Navy funding reprioritization. Dynamic Network Management (DNM) SHUMA initial operating capabilities (IOC) slipped from 1st Qtr FY 07 to 3rd Qtr FY 08; time slot reallocation receipt compliance (TSR) IOC slipped from 1st Qtr FY 08 to 3rd Qtr FY 08; TSR RC operational testing (OT) slipped from 3rd Qtr FY 07 to 1st Qtr FY 08 and Multinetting technical evaluation (TECHEVAL)/OPEVAL slipped from 1st Qtr FY 08 to 4th Qtr FY 08 due to Navy funding reprioritization.

(U) Technical: Not applicable.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification						DATE: **February 2006**		
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)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
Project Cost	5.185	2.347	0.498					
RDT&E Articles Qty								

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

(U) Link-16 Improvements extends Link-16 technological improvements to existing and new United States Navy TDL systems, including Link-16 and Link-22. Link-16 Joint Range Extension (JRE) transfers Link-16 data via satellite communications and other non-radio frequency (RF) paths. High Throughput Link-16 provides improved data transmission rates by altering the modulation characteristics of Link-16. Link-22 will pass Link-16 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 central processing unit (CPU) speeds, update rate and memory capacity required for advanced multi-TDL processing functions. NGC2P will update CDLMS with advanced processors required to support critical data link functions including Link-16 JRE and Link-22.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
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

NGC2P CAPABILITY	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	5.185	2.347	0.498
RDT&E Articles Quantity			

FY 05 Accomplishments: Continued development of NGC2P capability and development of training curricula. Conducted development testing, combat systems integration testing and link certification testing for NGC2P JRE capability. Achieved AEGIS Ballistic Missile Defense (BMD) Milestone (MS) C.
FY 06 Plan: Conduct Operational Assessment (OA) for NGC2P JRE capability. Conduct development testing (DT), combat systems integration testing (CSIT) and link certification testing for NGC2P Link-22 capability. Achieve NGC2P MS C Low Rate Initial Production (LRIP).
FY 07 Plan: Conduct technical evaluation (TECHEVAL) and operational evaluation (OPEVAL) of NGC2P JRE and Link-22 capabilities. Achieve full rate production (FRP) decision for NGC2P.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2006
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) C. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Complete	Total Cost
OPN Line 2614 ATDLS	2.370	13.916	12.458	24.208	26.279	15.270	0.000	Continuing	Continuing

(U) D. ACQUISITION STRATEGY:

NGC2P software development is utilizing an existing Northrop Grumman Defense Mission Systems, Inc., cost plus contract.

(U) E. MAJOR PERFORMERS:

Northrop Grumman Defense Mission Systems, Inc., Reston, Virginia. Performs as prime hardware and software development contractor for NGC2P. Technical Direction Letter awarded 18 July 2003.

Space & Naval Warfare Systems Command Systems Center (SPAWARSYSCEN), San Diego, California. Performs as lead laboratory for NGC2P development, systems engineering, integration and test and evaluation.

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: **February 2006**				
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 05 Cost	FY 05 Award Date	FY 06 Cost	FY06 Award Date	FY 07 Cost	FY 07 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	7.227	1.735	11/04	0.875	11/05				9.837	9.837
Next Generation C2P Engineering/Integration	Various	Various	1.770	0.240	Various						2.010	2.010
Next Generation C2P GFE	Various	Various	0.796								0.796	0.796
Next Generation C2P Design/Dev	CPFF	APC, Austin, TX	8.013								8.013	8.013
Next Generation C2P Design/Dev TDA	CPFF	APL/JHU, Laurel, MD	11.038								11.038	11.038
Next Generation C2P Design/Dev	CPFF	Northrop Grumman DMS, Reston, VA	7.759	1.556	Various						9.315	9.315
Subtotal Product Development			48.700	3.531		0.875						

Remarks:

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 3)								DATE: **February 2006**				
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 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
NGC2P Test & Evaluation	WX	SPAWARSYSCEN, San Diego, CA	4.626	0.702	11/04	0.630	11/05	0.189	11/06		6.147	6.147
NGC2P Test & Evaluation	WX	NCTSI, San Diego, CA	0.270	0.287	7/05	0.167	11/05				0.724	0.724
NGC2P Test & Evaluation	WX	OPTEVFOR, Norfolk, VA				0.050	11/05	0.146	11/06			
Subtotal T&E			4.896	0.989		0.847		0.335				
Remarks:												
Engineering Support and Travel	Various	Various	3.947	0.665	Various	0.625	Various	0.163	Various		5.400	5.400
Subtotal Management			3.947	0.665		0.625		0.163				
Remarks:												
Total Cost			57.543	5.185		2.347		0.498				
Remarks:												

CLASSIFICATION:

EXHIBIT R4, Schedule Profile																															DATE: **February 2006**
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	2005				2006				2007				2008				2009				2010				2011							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Program Milestones NGC2P		AEGIS BMD MS C LRIP △					MS C LRIP △				FRP △																					
Engineering Milestones NGC2P																																
Test & Evaluation Milestones NGC2P - JRE		DT △		DT/CSIT/ LINK CERT △		OA △		TECHEVAL △		OPEVAL △																						
NGC2P - LINK-22							DT/CSIT/LINK CERT △		TECHEVAL △		OPEVAL △																					
Contract Milestones NGC2P		AEGIS BMD LRIP △					LRIP △				FRP △																					

CLASSIFICATION:

Exhibit R-4a, Schedule Detail					DATE: **February 2006**			
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 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
NGC2P AEGIS BMD MS C LRIP	2Q							
NGC2P JRE DT	2Q							
NGC2P AEGIS BMD LRIP Contract Award	3Q							
NGC2P JRE DT/CSIT/Link Certification	4Q							
NGC2P OA		1Q						
NGC2P MS C LRIP		3Q						
NGC2P LRIP Contract Award		3Q						
NGC2P Link-22 DT/CSIT/Link Certification		4Q						
NGC2P JRE TECHEVAL			1Q					
NGC2P Link-22 TECHEVAL			1Q					
NGC2P JRE OPEVAL			2Q					
NGC2P Link-22 OPEVAL			2Q					
NGC2P FRP			3Q					
NGC2P FRP Contract Award			3Q					

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification					DATE: **February 2006**			
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)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
Project Cost	13.195	82.717	41.469	25.611	17.507	27.837	23.086	
RDT&E Articles Qty		3						

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

(U) ATDLS Integration Program develops new and improved capabilities for Navy Link-16 users. Development of new capabilities in ATDLS includes the Joint Interface Control Officer Support System (JSS), Common Link Integration Processing (CLIP) and Dynamic Network Management (DNM). The Joint Interface Control Officer (JICO) Support System (JSS) will be the standard joint service toolset to monitor and control Multi-TDL network architectures. The Common Link Integration Processing (CLIP) concept will introduce open system software required to reduce life cycle support costs and commercial off-the-shelf (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 U. S. Navy (USN) and U.S. Air Force (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 (DNM) will provide automatic reconfiguration of Link-16 networks that respond instantly to emergent warfighter requirements in the field. DNM consists of different capabilities including network control technologies (NCT), new terminal protocols (time slot reallocation receipt compliance (TSR RC) and Stochastic Unified Multiple Access (SHUMA)) and has been significantly expanded to include a more robust TSR and adaptive multinetting. The DNM capability will be integrated into the JSS host system and also Joint Tactical Information Distribution System (JTIDS), Multifunctional Information Distribution System (MIDS) and Joint Tactical Radio System (JTRS) terminals.

(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.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
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

Joint Interface Control Officer Spt Sys (JSS)	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	4.497	27.568	15.372
RDT&E Articles Quantity		3	

This funding includes the Navy's contribution to the JSS joint development initiative with the Air Force. The Air Force funded the majority of the software development contract in FY 05.
FY 05 Accomplishments: Completed Phase I. Awarded Phase II development contract for the continued development of the standard joint service toolset software to monitor and control multi-TDL network architectures. Conducted JSS Preliminary Design Review (PDR) of developed software. Performed laboratory integration test on engineering development model at contractor site.
FY 06 Plan: Conduct development test (DT) and operational (OT) test on JSS software capabilities and functionalities developed and to demonstrate readiness for Joint MS C decision. Conduct Critical Design Review (CDR). Test DNM Network Control Technology (NCT) capabilities in JSS during development test. Continue software development to fully implement the multi-TDL architecture (MTA) planning capability and generation of operational task (OPTASK) Link message on-line/off-line mode, the local JICO database repository (JDR); database management and joint symbology; Joint Range Extension (JRE); interfaces to the Theater Battle Management Core System (TBMCS); Network Design Facility (NDF) for assessing JTIDS Network Library; Spectrum toolkit for submit/receive frequency request; software for calculation of Time Slot Duty Factor (TSDF) and Link-16 dynamic network management. Procure three engineering development models (EDM) for TECHEVAL.
FY 07 Plan: Continue software development to include the implementation of remote JDR; dynamic network management and reconfiguration lists in Link-16 message standards; gateways to be interfaced to variable message format (VMF) and Intelligent Broadcast System (IBS); interface and network management for Link-22; on-line and off-line training mode via simulation and computer based training; and system security administration/profile management to ensure data security integrity. Conduct early operational assessment (EOA) on JSS software capabilities and functionalities developed and to demonstrate readiness for Joint MS C decision. Conduct development test and TECHEVAL on all software developed. Achieve Joint MS C Decision.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
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

Common Link Integration Processing (CLIP)	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	3.060	40.101	20.146
RDT&E Articles Quantity			

This funding line includes the Navy's contribution to the CLIP joint development initiative with the Air Force. The Air Force funded the software development contract in FY 05.
FY 05 Accomplishments: Achieved CLIP Increment 1 Milestone B Decision. Commenced 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. Commenced development of Increment 1 software and documentation to implement the CLIP architecture, Common Host Interface (CHI), Link-16/Joint Range Extension, data translation and forwarding capabilities. Conducted CLIP Increment 1 Systems Requirement Review (SRR).
FY 06 Plan: Conduct CLIP Increment 1 PDR and CDR. Conduct development testing of Increment 1 software capabilities and functionality.
FY 07 Plan: Conduct CLIP Acceptance Testing (CAT) of Increment 1 software capabilities and functionality. Develop plans for platform integration and testing of Increment 1 software on lead air platform. Achieve CLIP Increment 2 Milestone B Decision. Commence development of Increment 2 software and documentation to implement the remaining Link-16 functionality, incorporate JRE, Variable Message Format (VMF), Wide-band Networking Waveform (WNW) messages, internet protocol (IP) based applications, and N-series message standards.

Dynamic Network Management (DNM)	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	5.638	15.048	5.951
RDT&E Articles Quantity			

FY 05 Accomplishments: Continued 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. Completed Link-16 terminal and test bed modifications. Performed software formal qualification tests (SFQT), link certification and participate in Fleet exercise to evaluate DNM maturity. Conducted TSR RC CDR. Commenced design and development of platform integration of DNM into ship and aircraft. Integrated NCT capabilities into JSS. Conducted SHUMA link certification test in laboratory and in fleet. Developed DNM integrated logistics support products including system-operating procedures.
FY 06 Plan: Continue DNM development expanding capability to support full multinet capability allowing for data forwarding between Link-16, Internet Protocol (IP) networks and new Joint Tactical Radio System (JTRS) waveforms. Complete integration of NCT capabilities into JSS. Conduct Multinetting CDR. Conduct SHUMA development and operational tests. Commence shipboard and aircraft integration of the DNM capabilities including the expanded TSR RC. Conduct TSR RC development test. Conduct terminal recertification test. Conduct development test of multinetting capabilities. Continue support on DNM integrated logistic support products.
FY07 Plan: Continue development of multinetting capabilities and migration efforts to Wideband Networking Waveform (WNW) and JTRS waveforms. Continue platform integration of DNM capabilities.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
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. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Complete	Total Cost
RDT&E,DA	0.500								
OPN LI 2614 ATDLS	2.370	13.916	12.458	24.208	26.279	15.270	0.000	Continuing	Continuing
RDT&E,AF 0207434F/5050	125.813	157.677	184.100	151.289	155.710	159.298	162.024	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 0207434F/5050 - TDL System Integration

(U) D. ACQUISITION STRATEGY:

The Air Force was designated as the acquisition executive for JSS. For JSS Phase I, the government competed and awarded three firm fixed price contracts to Northrop Grumman Defense Mission Systems, Inc.; Lockheed Martin Corporation and Advanced Information Engineering Services, Inc. for EDM system development and demonstration. For JSS Phase II, there was a down select to Northrop Grumman Defense Mission Systems, Inc. to complete Phase II development, integration and test utilizing cost plus award fee, firm fixed price, time and material and cost reimbursable contract options. For CLIP, a competitive cost plus award fee/incentive fee contract was awarded by the Navy to Northrop Grumman Defense Mission Systems, Inc. to develop a single common data link integration solution that can be configured to satisfy a broad-range of platforms. The DNM Network Controller Technology will be incorporated into JSS Block 1 and will utilize the contract for JSS. Remaining DNM development efforts will utilize an existing development contract with BAE Systems.

(U) E: MAJOR PERFORMERS:

Northrop Grumman Defense Mission Systems, Inc., Reston, Virginia (VA). Performs as prime hardware and software development contractor for JSS. Contract awarded 27 May 2005.
Northrop Grumman Defense Mission Systems, Inc., Reston, VA. Performs as prime software development contractor for CLIP. Contract awarded 9 June 2005.
Space & Naval Warfare Systems Command Systems Center (SPAWARSYSCEN), San Diego, California. Performs as lead laboratory for CLIP, JSS and DNM development, systems engineering,

(U) F: METRICS:

Earned Value Management is used for metrics reporting and risk management.

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1) | DATE: **February 2006**

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 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
MIDS F/A-18 Integration	WX	Various	153.119								153.119	153.119
TADIL-J System Engineering	WX	SPAWARSYSCEN, San Diego, CA	28.233								28.233	28.233
TADIL-J System Engineering	Various	Various	4.654								4.654	4.654
MIDS on Ship	CPIF	BAE Systems, Wayne, NJ (DLS)	15.944								15.944	15.944
MIDS on Ship	Various	Various	44.331								44.331	44.331
Performance Upgrades	WX	SPAWARSYSCEN, San Diego, CA	14.213								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
JSS Software Dev and Integration	FFP	Note 1	8.778									8.778
JSS Software Dev and Integration	CPAF/FFP	Northrop Grumman DMS, Reston, VA		3.165	Various	19.157	11/05	12.271	11/06	Continuing	Continuing	Continuing
JSS Systems Engineering	CPFF	Galaxy Scientific, Arlington, VA	0.249	0.289	Various	0.231	11/05					0.769
JSS Systems Engineering	WX	SPAWARSYSCEN, San Diego, CA	0.193	0.360	1/05	2.066	11/05	0.888	11/06	Continuing	Continuing	Continuing
JSS Systems Engineering	Various	Various		0.145	Various	0.188	Various	0.426	Various	Continuing	Continuing	Continuing
CLIP Dev	WX	SPAWARSYSCEN, San Diego, CA	0.568	1.411	Various	0.939	11/05	1.738	11/06	Continuing	Continuing	Continuing
CLIP Dev	Various	Various	3.383	1.237	Various	3.470	Various	3.251	Various	Continuing	Continuing	Continuing
CLIP SW Dev	CPAF/IF	Northrop Grumman DMS, Reston, VA				29.239	11/05	11.392	11/06	Continuing	Continuing	Continuing
TDL Training SW Dev	WX	NAVAIR Training Sys Div, Orlando, FL				1.605	11/05			Continuing	Continuing	Continuing
DNM System Engineering & Integration	WX	SPAWARSYSCEN, San Diego, CA	4.438	2.597	11/04	7.439	11/05	2.400	11/06	Continuing	Continuing	Continuing
DNM Development	CPFF	Northrop Grumman DMS, Reston, VA	3.747								3.747	3.747
DNM Development	MIPR	Warner Robbins AFB, GA	0.761	0.064	11/04	0.660	11/05	0.134	11/06	Continuing	Continuing	Continuing
DNM Development	CPIF	BAE Systems, Wayne, NJ (DLS)	0.117			2.210	1/06	0.563	11/06	Continuing	Continuing	Continuing
DNM Host Platform Integration Sys Eng	CPFF	SeaPort-E/TBD				0.550	1/06	0.631	11/06	Continuing	Continuing	Continuing
DNM Systems Engineering	Various	Various	1.194	0.870	Various	0.907	Various	0.633	Various	Continuing	Continuing	Continuing
Subtotal Product Development			296.110	10.138		68.661		34.327				

Note 1. JSS Phase I Software Development contracts awarded to three vendors: Northrop Grumman Defense Missions, Reston, VA; Lockheed Martin Corporation, Moorestown, New Jersey; and to Advanced Information Engineering Services, Inc., Buffalo, New York.

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 3) | DATE: **February 2006**

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 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Test and Evaluation	Various	Various	4.025								4.025	4.025
MIDS F/A-18 T&E	WX	SPAWARSYSCEN, San Diego, CA	12.774								12.774	12.774
MIDS F/A-18 T&E	Various	Various	11.706								11.706	11.706
MIDS on Ship T&E	PD	OPTEVFOR, Norfolk, VA	0.092								0.092	0.092
MIDS on Ship T&E	WX	SPAWARSYSCEN, San Diego, CA	1.340								1.340	1.340
MIDS Test Assets	SS/CPAF/IF	MIDSCO, Fairfield, NJ	6.594								6.594	6.594
JSS T&E	WX	SPAWARSYSCEN, San Diego, CA				0.553	11/05	0.445	11/06	0.261	1.259	1.259
JSS T&E	WX	OPTEVFOR, Norfolk, VA				0.442	11/05	0.222	11/06	0.204	0.868	0.868
JSS T&E	WX	NCTSI, San Diego, CA		0.020	1/05	0.111	11/05	0.056	11/06	0.057	0.244	0.244
JSS Test Articles	CPAF/FFP	Northrop Grumman DMS, Reston, VA				3.536	11/05	0.118	11/06		3.654	3.654
JSS Test Articles	WX	SPAWARSYSCEN, San Diego, CA				0.553	11/05	0.222	11/06		0.775	0.775
CLIP T&E	WX	OPTEVFOR, Norfolk, VA		0.060	1/05	0.066	12/05	0.069	11/06	Continuing	Continuing	Continuing
CLIP T&E	WX	SPAWARSYSCEN, San Diego, CA				3.179	11/05	2.609	11/06	Continuing	Continuing	Continuing
Dynamic Network Management T&E	WX	SPAWARSYSCEN, San Diego, CA	3.167	0.900	11/04	2.486	11/05	0.799	11/06	Continuing	Continuing	Continuing
Dynamic Network Management T&E	WX	OPTEVFOR, Norfolk, VA	0.214			0.663	11/05	0.167	11/06	Continuing	Continuing	Continuing
Dynamic Network Management T&E	WX	Various	0.428	0.550	Various	0.332	Various	0.313	Various	Continuing	Continuing	Continuing
ATDLS T&E Support	CPFF	AMSEC LLC, Virginia Beach, VA		0.267	11/04	0.272	11/05	0.280	11/06	Continuing	Continuing	Continuing
Subtotal T&E			40.340	1.797		12.193		5.300				
Remarks:												
Engineering Support and Travel	Various	Various	11.753	1.260	Various	1.863	Various	1.842	Various	Continuing	Continuing	Continuing
Subtotal Management			11.753	1.260		1.863		1.842				
Remarks:												
Total Cost			348.203	13.195		82.717		41.469				

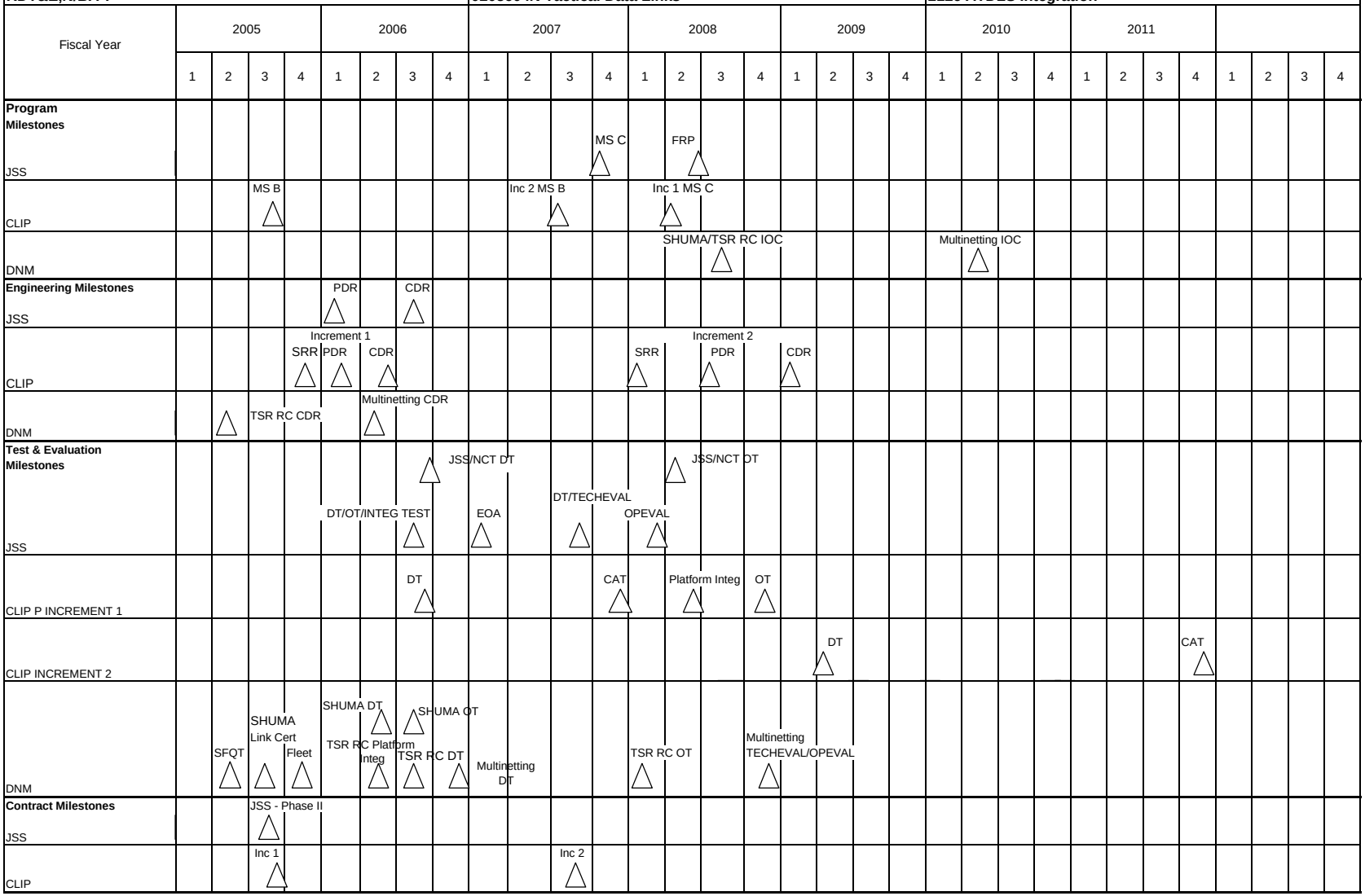
CLASSIFICATION:

EXHIBIT R4, Schedule Profile | DATE: **February 2006**

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

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

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



The Joint Interface Control Officer (JICO) Support System (JSS) is a multi-service development effort and is currently funded by the Navy's Tactical Data Links International Program Office (PE 0205604N/2126) and the Air Force's Electronic Systems Center Tactical Data Links System Program Office (TDL SPO) (PE 0207434F/5050). The JSS Program schedule is shown above.

The CLIP Program is a joint initiative and is funded by various programs. The development of the CLIP software is funded by the Navy's Tactical Data Links International Program Office (PE 0205604N/2126) and the Air Force Tactical Data Links (TDL) Gateways and Network Management (TGN) System Program Office (PE 0207434F/5050). The integration of CLIP software is funded by platforms. The CLIP Program schedule is shown above.

CLASSIFICATION:

Exhibit R-4a, Schedule Detail					DATE: **February 2006**			
APPROPRIATION/BUDGET ACTIVITY **RDT&E,N/BA-7**	PROGRAM ELEMENT **0205604N Tactical Data Links**				PROJECT NUMBER AND NAME **2126 ATDLS Integration**			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
DNM TSR CDR	2Q							
DNM SHUMA SFQT	2Q							
CLIP Increment 1 MS B	3Q							
DNM SHUMA Link Certification Test	3Q							
JSS Phase II Contract Award	3Q							
CLIP Increment I Contract Award	3Q							
CLIP Increment 1 SRR	4Q							
DNM SHUMA Fleet Exercise	4Q							
JSS PDR		1Q						
CLIP Increment 1 PDR		1Q						
CLIP Increment 1 CDR		2Q						
DNM Multinetting CDR		2Q						
SHUMA DT		2Q						
DNM TSR RC Platform Integration		2Q						
JSS CDR		3Q						
JSS/NCT DT		3Q						
JSS DT/OT/Integration Testing		3Q						
CLIP Increment 1 DT		3Q						
DNM SHUMA OT		3Q						
DNM TSR RC DT		3Q						
DNM Multinetting DT		4Q						
JSS EOA			1Q					
CLIP Increment 2 MS B			3Q					
JSS DT/TECHEVAL			3Q					
CLIP Increment 2 Contract Award			3Q					
JSS MS C			4Q					
CLIP Increment 1 CAT			4Q					

CLASSIFICATION:

Exhibit R-4a, Schedule Detail					DATE: **February 2006**			
APPROPRIATION/BUDGET ACTIVITY **RDT&E,N/BA-7**	PROGRAM ELEMENT **0205604N Tactical Data Links**				PROJECT NUMBER AND NAME **2126 ATDLS Integration**			
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
CLIP Increment 2 SRR				1Q				
JSS OPEVAL				1Q				
DNM TSR RC OT				1Q				
JSS FRP				2Q				
CLIP Increment 1 MS C				2Q				
JSS/NCT OT				2Q				
CLIP Increment 1 Platform Integ				2Q				
DNM SHUMA/TSR RC IOC				3Q				
CLIP Increment 2 PDR				3Q				
CLIP Increment 1 OT				4Q				
DNM Multinetting TECHEVAL/OPEVAL				4Q				
CLIP Increment 2 CDR					1Q			
CLIP Increment 2 DT					2Q			
DNM Multinetting IOC						2Q		
CLIP Increment 2 CAT							4Q	

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification						DATE: **February 2006**			
APPROPRIATION/BUDGET ACTIVITY **RDT&E,N/BA-7**	PROGRAM ELEMENT NUMBER AND NAME **0205604N Tactical Data Links**		PROJECT NUMBER AND NAME **9999 Congressional Increases**						
COST ($ in Millions)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
Project Cost			1.800						
RDT&E Articles Qty									

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

(U) Congressional Increase for the Airborne Tactical Server (ATS). ATS is a digital audio/video recorder with removable mass memory and a central processing unit (CPU). The ATS will function as an adjunct processor within the F/A-18 to demonstrate Level 2 Airborne Network Integration. The ATS will use an existing contract for demonstration only as risk reduction for future Battlespace Networking efforts.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E,N/BA-7	**0205604N Tactical Data Links**	**9999 Congressional Increases**

(U) B. Accomplishments/Planned Program

Airborne Tactical Server (9888)	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		1.800	
RDT&E Articles Quantity			

(U) Congressional Increase for the Airborne Tactical Server (ATS). ATS is a digital audio/video recorder with removable mass memory and a CPU. The ATS will function as an adjunct processor within the F/A-18 to demonstrate Level 2 Airborne Network Integration. The ATS will use an existing contract for demonstration only as risk reduction for future Battlespace Networking efforts.