CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification										DATE: February 2003	
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5**						R-1 ITEM NOMENCLATURE PE 0604721N SHIPBOARD INFORMATION WARFARE EXPLOIT SYSTEM					
COST ($ in Millions)	Prior Years Cost	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Total Program
Total PE Cost	**29.982**	**9.310**	**17.077**	**16.942**	**18.078**	**18.799**	**16.102**	**16.407**	**16.715**	**Continuing**	**Continuing**
X2134/SHIPBOARD IW EXPLOIT	**29.982**	**9.310**	**13.752**	**16.942**	**18.078**	**18.799**	**16.102**	**16.407**	**16.715**	**Continuing**	**Continuing**
X9242/COBLU DIGITAL UPGRADE	**0.000**	**0.000**	**3.325**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**3.325**
											0.000
											0.000
											0.000
											0.000
Quantity of RDT&E Articles											**0**

Note: Project X2135 has been incorporated into Project X2134 beginning in FY 02. Received Congressional Plus Up in FY02 of $2,478K for the CDL-N program. Received Congressional Plus Up in FY03 of $3,325K for the COBLU program.

U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The Shipboard Information Warfare line includes the following programs: Ships Signal Exploitation Equipment (SSEE), the Program of Record that executes the Maritime Cryptologic Systems for the 21st Century (MCS 21) and Common Data Link – Navy (CDL-N) the Program of Record that implements the DoD mandated use of the Common Data Link waveform to downlink un-processed SIGINT/COMINT and imagery. FY 03 Congressional Plus-up supports the Cooperative Outboard Logistics Update (COBLU) , the Program of Record provides Comprehensive Surface Tactical (CESM) capability. These systems provide the Battle Group with real time Indications and Warnings (I&W) by acquisition and localization of signals of interest (SOI). This program's funding is required to incorporate new commercial off-the-shelf (COTS) based technologies and software into the existing systems. The funding will focus on merging the current IW sensor systems into a scalable sensor package that can be tailored to different ship types and be compliant with the Maritime Cryptologic Architecture.

(U) JUSTIFICATION FOR BUDGET ACTIVITY:

This program is funded under BA-5, ENGINEERING & MANUFACTURING DEVELOPMENT because it encompasses engineering and manufacturing development of new end-items prior to production approval decision.

R-1 SHOPPING LIST - Item No. 129

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: **February 2003**			
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**	PROGRAM ELEMENT NUMBER AND NAME 0604721N/ SHIPBOARD IW EXPLOIT SYSTEM					PROJECT NUMBER AND NAME X2134 / SHIPBOARD IW EXPLOIT					
COST ($ in Millions)	Prior Years Cost	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Total Program
Project Cost	**29.982**	**9.310**	**13.752**	**16.942**	**18.078**	**18.799**	**16.102**	**16.407**	**16.715**	**Continuing**	**Continuing**
RDT&E Articles Qty											**0**

Note: Received Congressional Plus Up in FY02 of $2,478K for the CDL-N program. Project X2135 has been incorporated into Project X2134 beginning in FY 02.

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

The Shipboard Information Warfare line includes the following programs: Ships Signal Exploitation Equipment (SSEE), the Program of Record that executes the Maritime Cryptologic Systems for the 21st Century (MCS 21) and Common Data Link – Navy (CDL-N) the Program of Record that implements the DoD mandated use of the Common Data Link waveform to downlink un-processed SIGINT/COMINT and imagery. FY 03 Congressional Plus-up supports the Cooperative Outboard Logistics Update (COBLU) , the Program of Record provides Comprehensive Surface Tactical (CESM) capability. These systems provide the Battle Group with real time Indications and Warnings (I & W) by acquisition and localization of signals of interest (SOI). This program's funding is required to incorporate new commercial off-the-shelf (COTS) based technologies and software into the existing systems. The funding will focus on merging the current IW sensor systems into a scalable sensor package that can be tailored to different ship types and be compliant with the Maritime Cryptologic Architecture.

R-1 SHOPPING LIST - Item No. 129

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2003**
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA 5**	PROGRAM ELEMENT NUMBER AND NAME 0604721N / SHIPBOARD IW EXPLOIT SYSTEM	PROJECT NUMBER AND NAME X2134 / SHIPBOARD IW EXPLOIT

(U) B. Accomplishments/Planned Program

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	3.609	2.472	4.000	4.000
RDT&E Articles Quantity				

Common Data Link- Navy (CDL-N)

FY02 - Initiated design and development of CDL-N integrated operator station and Intelligence, Surveillance and Reconnaissance (ISR) processing systems. Continued CDL-N development efforts for interoperability and integration with emerging Navy sensor systems such as VTUAV, F/A-18 SHARP and EP-3E Multi-int systems. Initiated development of the advance technology CDL modem.

FY03 - Continue development and integration of advanced technology CDL modem, design and development of CDL-N Block 1 integrated operator station and development efforts for interoperability and integration with emerging Navy sensor systems such as VTUAV, F/A-18 SHARP and EP-3E Multi-int systems.

FY04 - Integrate advanced technology CDL modem. Continue design and development of CDL-N Block 1 integrated operator station, development efforts for interoperability and integration with emerging Navy sensor systems such as BAMS, F/A-18 SHARP and EP-3E Multi-int systems.

FY05 - Integrate and Test Cooperative Antenna Program EDM Panels. Design and development of CDL-N Block 2 Advanced Technology Insertion and development efforts for interoperability and integration with emerging Navy sensor systems such as BAMS, F/A-18 SHARP and EP-3E Multi-int systems.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2003**
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA 5**	PROGRAM ELEMENT NUMBER AND NAME 0604721N / SHIPBOARD IW EXPLOIT SYSTEM	PROJECT NUMBER AND NAME X2134 / SHIPBOARD IW EXPLOIT

(U) B. Accomplishments/Planned Program

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.569	0.500	1.500	2.500
RDT&E Articles Quantity				

Cryptologic On-Line Trainer (COLT)

FY02 - COLT supported Combat DF (CDF), Ships Signals Exploitation Equipment (SSEE), and Cooperative Outboard, Logistic Update (COBLU). Modified COLT server for Shipboard IW programs to include expansion of Signals of Interest (SOI), simulations and support for Wide Area Network (WAN) training. Integrated with latest release/update of CUB software.

FY03 - Continue to expand and modify the COLT server for Shipboard IW programs and integration with CUB 4.X software releases. Upgrade COLT client application functionality (SSEE Inc E, COBLU Phase 1, and CDF) to include additional SOI's and other emergent requirements.

FY04 - Modify COLT server in support of integration with CUB 5.X software releases. Upgrade COLT client application functionality (SSEE Inc E, COBLU Phase 1, and CDF) to include additional SOI's and other emergent requirements. Begin COLT integration with Battle Force Tactical Training (BFTT) system.

FY05 - Continue modifications and improvements to COLT server in support of CUB 5.X integration. Upgrade existing COLT client applications (SSEE Inc E, COBLU Phase 1, and CDF). Begin development of COLT SSEE Inc F and P3I requirements. Continue COLT BFTT integration development. Begin COLT automated performance monitoring/assessment functionality development.

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	3.925	1.750	1.000	1.000
RDT&E Articles Quantity				

Cryptologic Unified Build (CUB)

FY02 - Initiated development of CUB software to incorporate latest Defense Information Infrastructure Common Operating Environment, DII COE, release for interoperability of Shipboard IW programs. CUB software is utilized on all Shipboard IW programs. This development effort targets the DII COE 4.X baseline. Integrated Defense Messaging System, DMS, software/upgrades into CUB baseline and tested.

FY03 - Continue development of CUB software to incorporate latest DII COE releases/updates for interoperability of Shipboard IW programs. CUB software is utilized on all Shipboard IW programs and is the DII COE 4.X baseline effort. Continue development of CUB on-line tutorial software, CUBOLT, software. Initiate development of Blue Forces IW database.

FY04 - Initiate development of CUB software to incorporate latest DII COE. CUB ensures interoperability between Sensor Systems and C4I systems. This development effort targets the DII COE 5.X baseline.

FY05 - Continue development and integration of CUB software to incorporate DII COE 5.X baseline. This development effort completes the DII COE 5.X baseline. Continue development of CUB On-Line Tutorial, CUBOLT, software.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2003**
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA 5**	PROGRAM ELEMENT NUMBER AND NAME 0604721N / SHIPBOARD IW EXPLOIT SYSTEM	PROJECT NUMBER AND NAME X2134 / SHIPBOARD IW EXPLOIT

(U) B. Accomplishments/Planned Program

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.000	0.000	5.000	4.100
RDT&E Articles Quantity				

Multi-Mission Payload (MMP)

FY04 - Initiate System Development Phase of the remotely controlled platform independent MMP, intended for use as a pod on ship based aircraft. Award contracts for research and development of Engineering Development Models, EDMs. Conduct design review and perform end-to-end system engineering analysis. Perform aircraft data analysis and perform integration planning to develop the appropriate engineering design of the payload and its mechanical, electrical and environmental interface components. Determine design and interfaces of the data link equipment, which will be part of or co-located with the MMP to carry the command, control, and data exchange signals.

FY05 - Complete development of the EDMs pod and conduct laboratory acceptance tests. Develop Test Plan. Perform planning for, and make arrangements for, flight certification tests and evaluations. Plan for and obtain the Office of Naval Intelligence, ONI, certification and accreditation for Interim Authority To Operate, IATO. Perform the testing of EDM MMP pods on the aircraft, including flight certifications tests, after aircraft integration.

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.662	5.050	2.000	2.500
RDT&E Articles Quantity				

Ship Signal Exploitation Equipment, Increment E

FY02 - Initiated development of SSEE Increment E Engineering Development Model, EDM, which included development and operational testing. This effort is focused on developing state-of-the-art Electronic Support Measures/Signal Intelligence, ESM/SIGINT, attributes into surface Shipboard IW programs.

FY03 - Initiate P3I development and testing of SSEE Increment E upgrades. Upgrade includes incorporation of latest CUB release and expansion of Signal of Interest, SOI, database. Initiate special/modern signal collection and processing development.

FY04 - Initiate P3I development of Command and Control software portion of the Hostile force Integrated Targeting Sub-system, HITS, and Time/Frequency Difference of Arrival functions into SSEE Incr E.

FY05 - Continue with effort to improve Command and Control software portion of the HITS in SSEE Incre E. Continue to expand SOI processing capability to priority signal sets. Fully test improved software.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2003**
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA 5**	PROGRAM ELEMENT NUMBER AND NAME 0604721N / SHIPBOARD IW EXPLOIT SYSTEM	PROJECT NUMBER AND NAME X2134/SHIPBOARD IW EXPLOIT

(U) B. Accomplishments/Planned Program

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.000	1.980	1.792	1.618
RDT&E Articles Quantity				

Specific Emitter Identification (SEI)

FY03 - Initiate development of improved Specific Emitter Identification, SEI, software by independent test and evaluation, and begin retooling existing prototypes into a single platform. Conduct testing with SEI collection hardware and software. Initiate expansion of Navy's SEI data dissemination and management architecture. Facilitate the tactical employment of Navy SEI by addressing various operational issues. Continue development, testing, and documentation of SEI software enhancements in GCCS-M (CORRUS), GALE-LITE (SEI-GALE), and other fielded systems.

FY04 - Conduct independent test and evaluation and compatibility testing of SEI software and begin retooling existing prototypes into a single platform, Phase II. Formalize Navy SEI data standards for improved collection and dissemination. Begin integration of SEI capabilities into the Naval single platform distributed surface EW system. Continue to expand SEI database access, dissemination, and integration within the Theater Correlation Functions, TCFs, and tactical users. Continue to address SEI software operational issues to facilitate SEI tactical employment. Continue SEI software enhancements in GCCS-M (CORRUS), GALE-LITE, and other fielded systems.

FY05 - Continue to improve SEI software Phase III to support additional tactical installations, surface combatants, and airborne platforms. Enhance the exchange of Navy SEI data. Begin incorporation of future SEI algorithms corresponding to the next generation of multi-mission combatants and changing target sets. Continue incorporation of SEI into the overall Navy EW architecture for enhanced correlation and integration into Navy single platform distributed EW systems, to include surface, subsurface, and airborne.

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.545	2.000	1.650	2.360
RDT&E Articles Quantity				

Antenna & RF Distribution

FY02 - Initiated development of capturing Non-Line-of-Sight High Frequency, HF, signals.

FY03 - Complete development of the High Frequency Non-Line-of-Sight capability. Initiate development of low signature Direction Finding, DF, and Acquisition antenna sub-system. Initiate development of improved Radio Frequency, RF, distribution sub-system. Both antenna and distribution systems will support existing and future ship classes for Shipboard IW programs, handle modern Signals of Interest, SOI, and increase both shipboard and operational environment interference.

FY04 - Implement design goals and objectives for existing antenna and future antenna efforts via requirements analysis. Complete development of existing antenna upgrades for enhanced capability. Initiate prototype demonstration effort for future antenna design for low signature DF and acquisition/enhanced capability and initiation of shipboard EDM plans.

FY05 - Update requirements analysis to maintain growing Signals of Interest, SOI, threat capability support via system RFD unit and future antenna upgrades. Complete development of future antenna for low signature DF and acquisition/enhanced performance.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2003**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	0604721N / SHIPBOARD IW EXPLOIT SYSTEM	X2134 / SHIPBOARD IW EXPLOIT

(U) C. PROGRAM CHANGE SUMMARY:

(U) Funding:	FY 2002	FY 2003	FY 2004	FY 2005
President's Budget:	8.130	14.070		
Current BES/President's Budget	9.310	17.077	16.942	18.078
Total Adjustments	1.180	3.007	0.000	0.000
Summary of Adjustments				
Miscellaneous Navy Adjustments	-1.129	-0.185		
Section 8123: Management Reform Initiative	-0.085	0.000		
Congressional Increase	2.500	3.400		
SBIR/STTR Transfer	-0.058	0.000		
Sec. 313, PL 107-206: Revised Economic Assumption	-0.022	0.000		
Economic Assumptions (SEC 8135)	-0.026	-0.098		
Business Process Reform (SEC. 8100)	0.000	-0.070		
IT Cost Growth	0.000	-0.032		
FY03 FFRDC reduction Sec. 8029, P.L. 107-248	0.000	-0.008		
Subtotal	1.180	3.007	0.000	0.000

(U) Schedule:

Not Applicable

(U) Technical:

Not Applicable

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2003**
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**	PROGRAM ELEMENT NUMBER AND NAME 0604721N / SHIPBOARD IW EXPLOIT SYSTEM	PROJECT NUMBER AND NAME X2134 / SHIPBOARD IW EXPLOIT

(U) D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost
OPN Line 2360	54.325	85.235	123.267	69.106	72.538	76.743	78.164	79.608	Continuing	Continuing
DERF line 2360	3.480									

Related RDT&E, PE 0305885G

(U) E. ACQUISITION STRATEGY:

Acquisition, management and contracting strategies are to support engineering and manufacturing development by providing funds to SSC-Charleston, SSC-San Diego and miscellaneous contractors, with management oversight by SPAWAR.

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: **February 2003**				
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**			PROGRAM ELEMENT 0604721N / SHIPBOARD IW EXPLOIT SYSTEM			PROJECT NUMBER AND NAME X2134 / SHIPBOARD IW EXPLOIT						
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
Primary Hardware Development	Various	Various	35.739	1.912	12/02	2.356	12/03	2.514	12/04	Continuing	Continuing	Continuing
Ancillary Hardware Development											0.000	
Aircraft Integration											0.000	
Ship Integration											0.000	
Ship Suitability											0.000	
Systems Engineering	Various	Various		2.988		3.681		3.927		Continuing	Continuing	Continuing
Training Development	Various	Various		0.075		0.093		0.100		Continuing	Continuing	
Licenses											0.000	
Tooling											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal Product Development			35.739	4.975		6.130		6.541		Continuing	Continuing	Continuing

Remarks:
1. "Total PYs Cost" is shown as Primary Hardware Development was taken from the previous budget submit which combined Hardware, Software development and integration into one number.

Development Support											0.000	
Software Development	Various	Various		4.879		6.010		6.413		Continuing	Continuing	Continuing
Integrated Logistics Support	Various	Various	0.254	0.104		0.127		0.136		Continuing	Continuing	
Configuration Management	Various	Various		0.089		0.110		0.117		Continuing	Continuing	
Technical Data											0.000	
Studies & Analyses											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal Support			0.254	5.072		6.247		6.666		Continuing	Continuing	Continuing

Remarks:

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: **February 2003**				
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**		PROGRAM ELEMENT 0604721N / SHIPBOARD IW EXPLOIT SYSTEM			PROJECT NUMBER AND NAME X2134 / SHIPBOARD IW EXPLOIT							
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
Developmental Test & Evaluation	Various	Various	2.354	0.705	12/02	0.868	12/03	0.927	12/04	Continuing	Continuing	Cont.
Operational Test & Evaluation	Various	Various		0.321		0.395		0.421		Continuing	Continuing	
Live Fire Test & Evaluation											0.000	
Test Assets	Various	Various		0.334		0.412		0.439		Continuing	Continuing	
Tooling											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal T&E			2.354	1.360		1.675		1.787		Continuing	Continuing	
Remarks:												
Contractor Engineering Support											0.000	
Government Engineering Support											0.000	
Program Management Support	Various	Various	0.945	2.230		2.748		2.932		Continuing	Continuing	Continuing
Travel	Various	Various		0.115		0.142		0.152		Continuing	Continuing	Continuing
Transportation											0.000	
SBIR Assessment											0.000	
Subtotal Management			0.945	2.345		2.890		3.084		Continuing	Continuing	
Remarks:												
Total Cost			39.292	13.752		16.942		18.078		Continuing	Continuing	
Remarks:												

R-1 SHOPPING LIST - Item No. 129

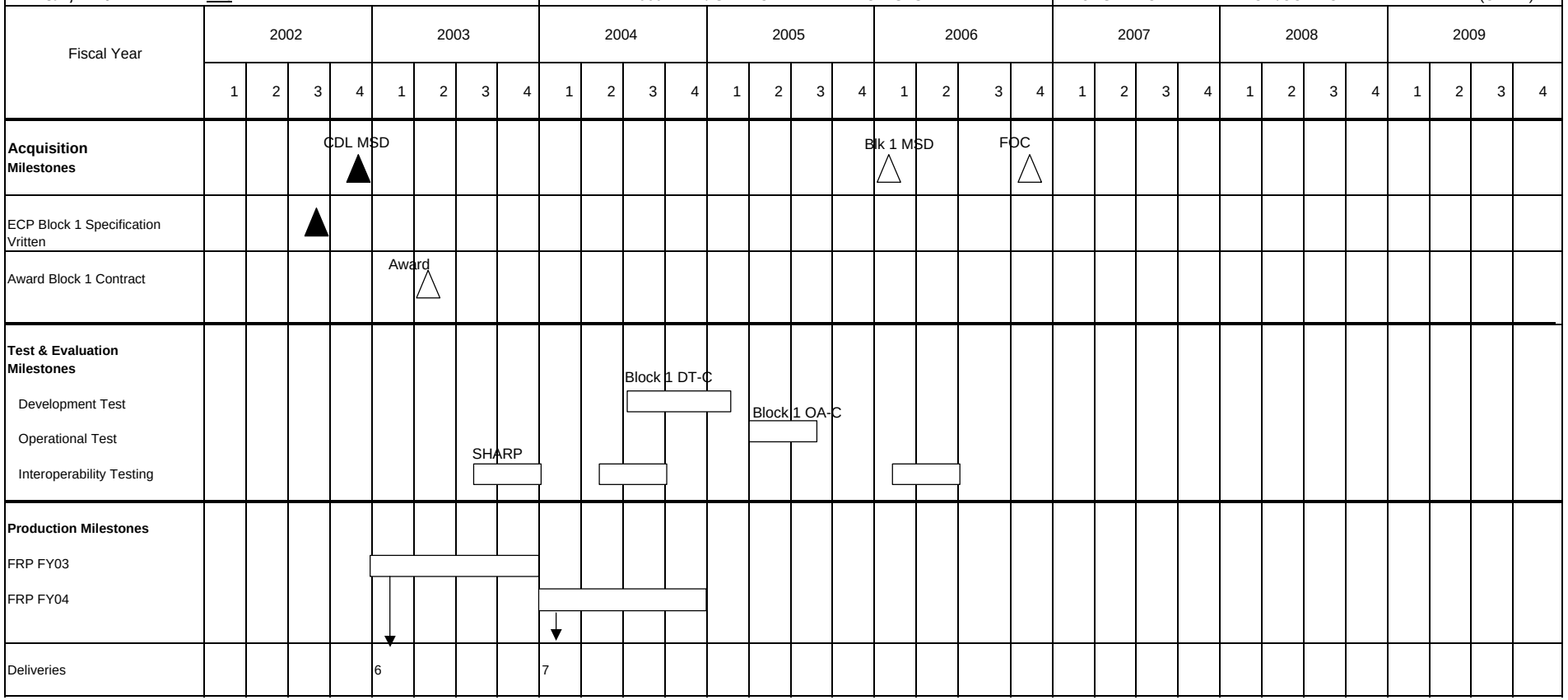
CLASSIFICATION:

EXHIBIT R4, Schedule Profile | DATE: **February 2003**

APPROPRIATION/BUDGET ACTIVITY: **RDT&E, N /** BA-5

PROGRAM ELEMENT NUMBER AND NAME: 0604721N/ SHIPBOARD IW EXPLOIT SYSTEM

PROJECT NUMBER AND NAME: X2134 SHIPBOARD IW EXPLOIT/COMMON DATA LINK-NAVY (CDL-N)



R-1 SHOPPING LIST - Item No. 129

* Not required for Budget Activities 1, 2, 3, and 6

CLASSIFICATION:

EXHIBIT R4, Schedule Profile

DATE: **February 2003**

APPROPRIATION/BUDGET ACTIVITY

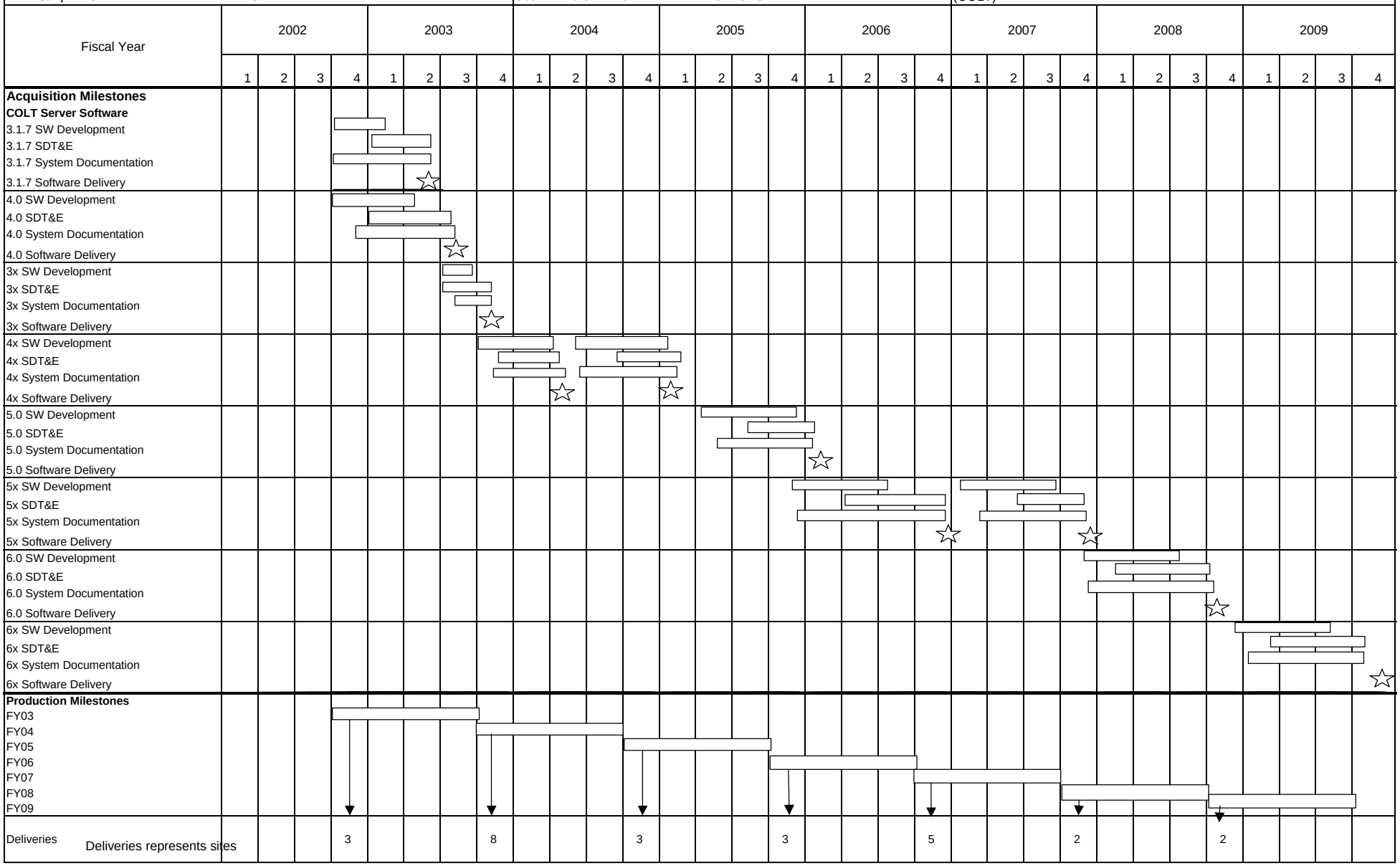
RDT&E, N / BA-5

PROGRAM ELEMENT NUMBER AND NAME

0604721N/ SHIPBOARD IW EXPLOIT SYSTEM

PROJECT NUMBER AND NAME

X2134 SHIPBOARD IW EXPLOIT/CRYPTOLOGIC ON-LINE TRAINER (COLT)



R-1 SHOPPING LIST - Item No. 129

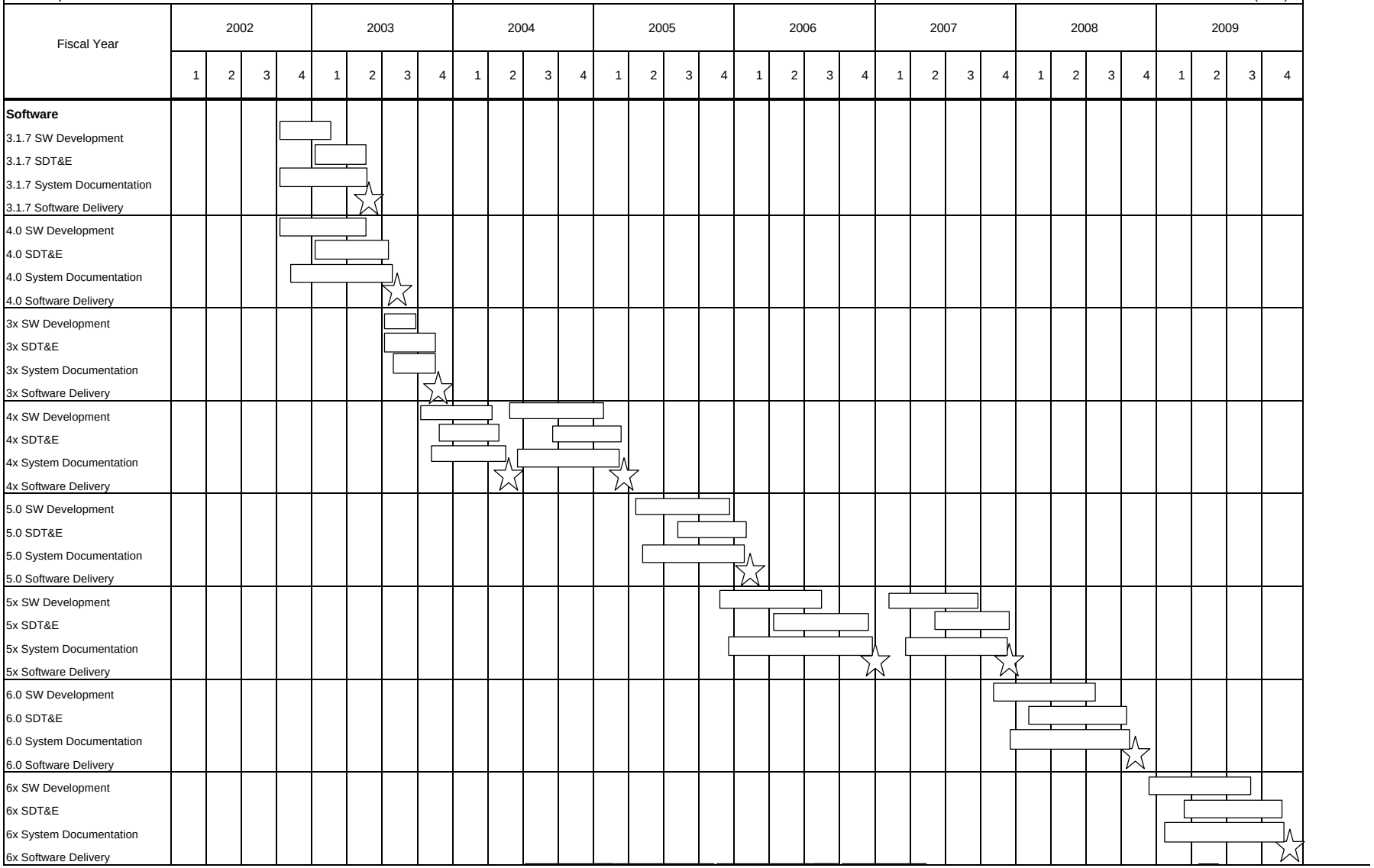
* Not required for Budget Activities 1, 2, 3, and 6

EXHIBIT R4, Schedule Profile | DATE: **February 2003**

APPROPRIATION/BUDGET ACTIVITY: **RDT&E, N / BA-5**

PROGRAM ELEMENT NUMBER AND NAME: 0604721N/ SHIPBOARD IW EXPLOIT SYSTEM

PROJECT NUMBER AND NAME: X2134 SHIPBOARD IW EXPLOIT/CRYPTOLOGIC UNIFIED BUILD (CUB)



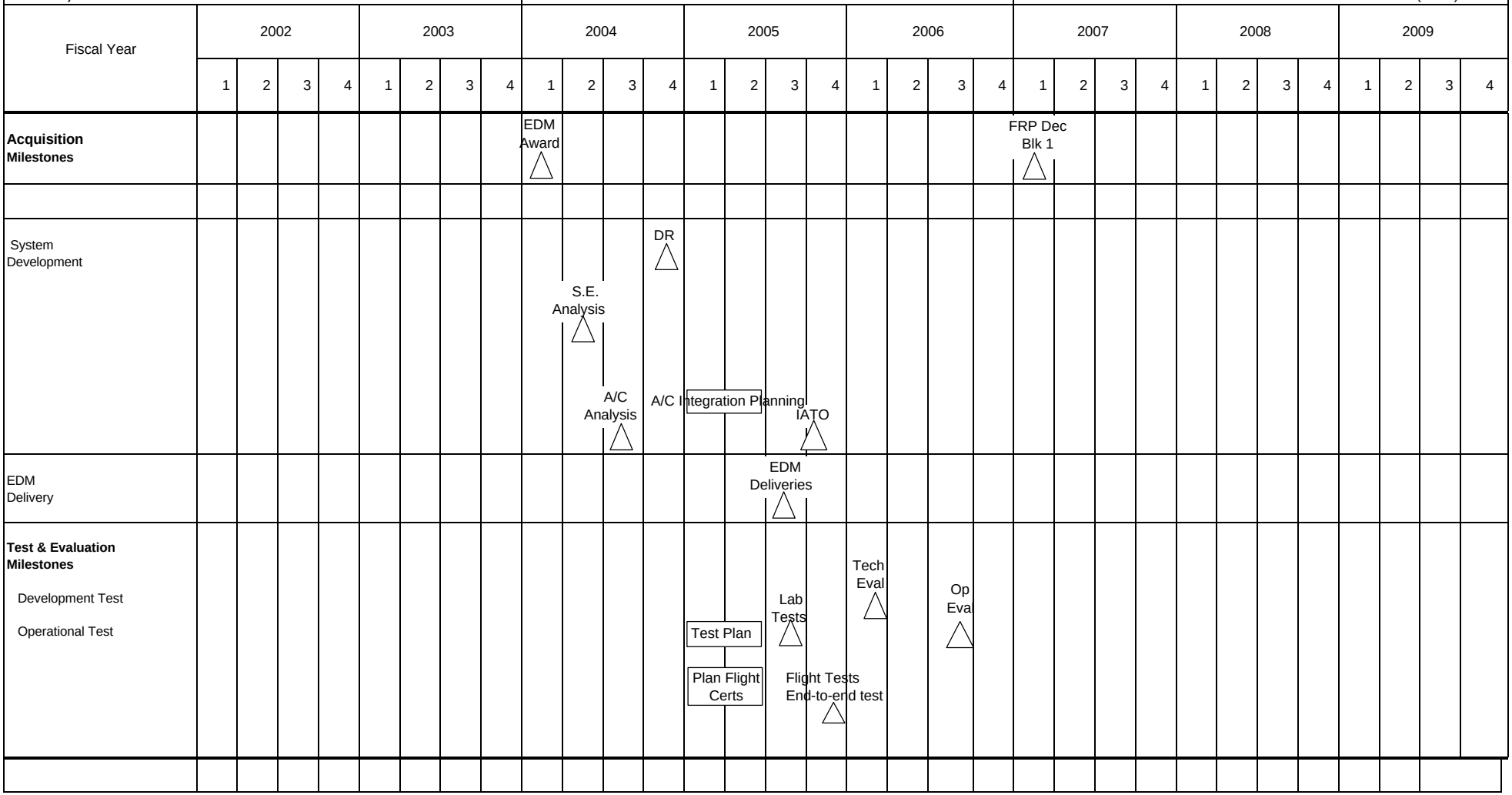
R-1 SHOPPING LIST - Item No. 129

* Not required for Budget Activities 1, 2, 3, and 6

CLASSIFICATION:

EXHIBIT R4, Schedule Profile — **Multi-Mission Payload (MMP)** — DATE: **February 2003**

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	0604721N / SHIPBOARD IW EXPLOIT SYSTEM	X2134 SHIPBOARD IW EXPLOIT/MULTI-MISSION PAYLOAD (MMP)



R-1 SHOPPING LIST - Item No. 129

* Not required for Budget Activities 1, 2, 3, and 6

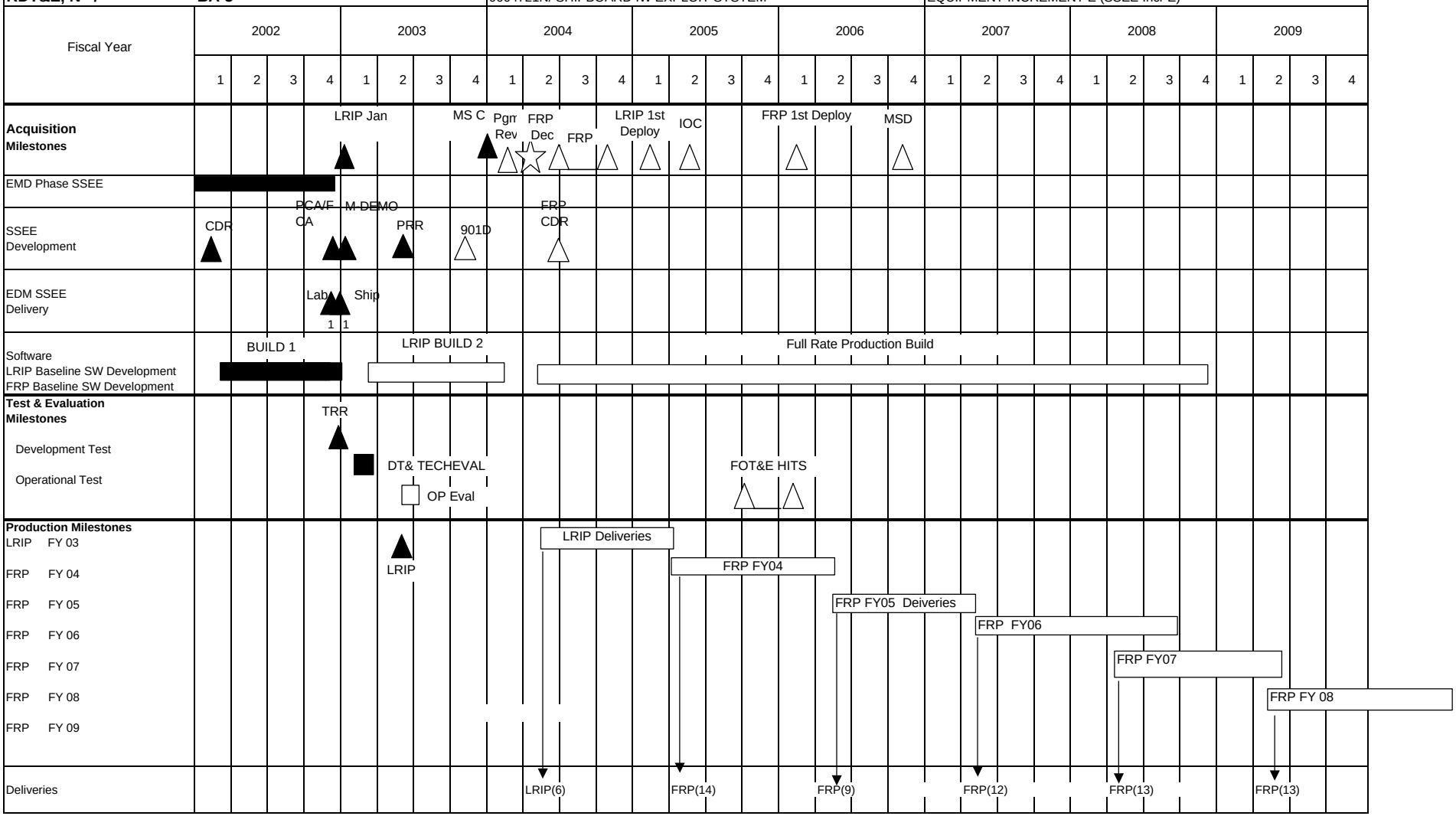
CLASSIFICATION:

EXHIBIT R4, Schedule Profile | DATE: **February 2003**

APPROPRIATION/BUDGET ACTIVITY: **RDT&E, N / BA-5**

PROGRAM ELEMENT NUMBER AND NAME: 0604721N/ SHIPBOARD IW EXPLOIT SYSTEM

PROJECT NUMBER AND NAME: X2134 SHIPBOARD IW EXPLOIT/SHIPS SIGNAL EXPLOITATION EQUIPMENT INCREMENT E (SSEE Incr E)



R-1 SHOPPING LIST - Item No. 129

* Not required for Budget Activities 1, 2, 3, and 6

CLASSIFICATION:

EXHIBIT R4, Schedule Profile

DATE: **February 2003**

APPROPRIATION/BUDGET ACTIVITY

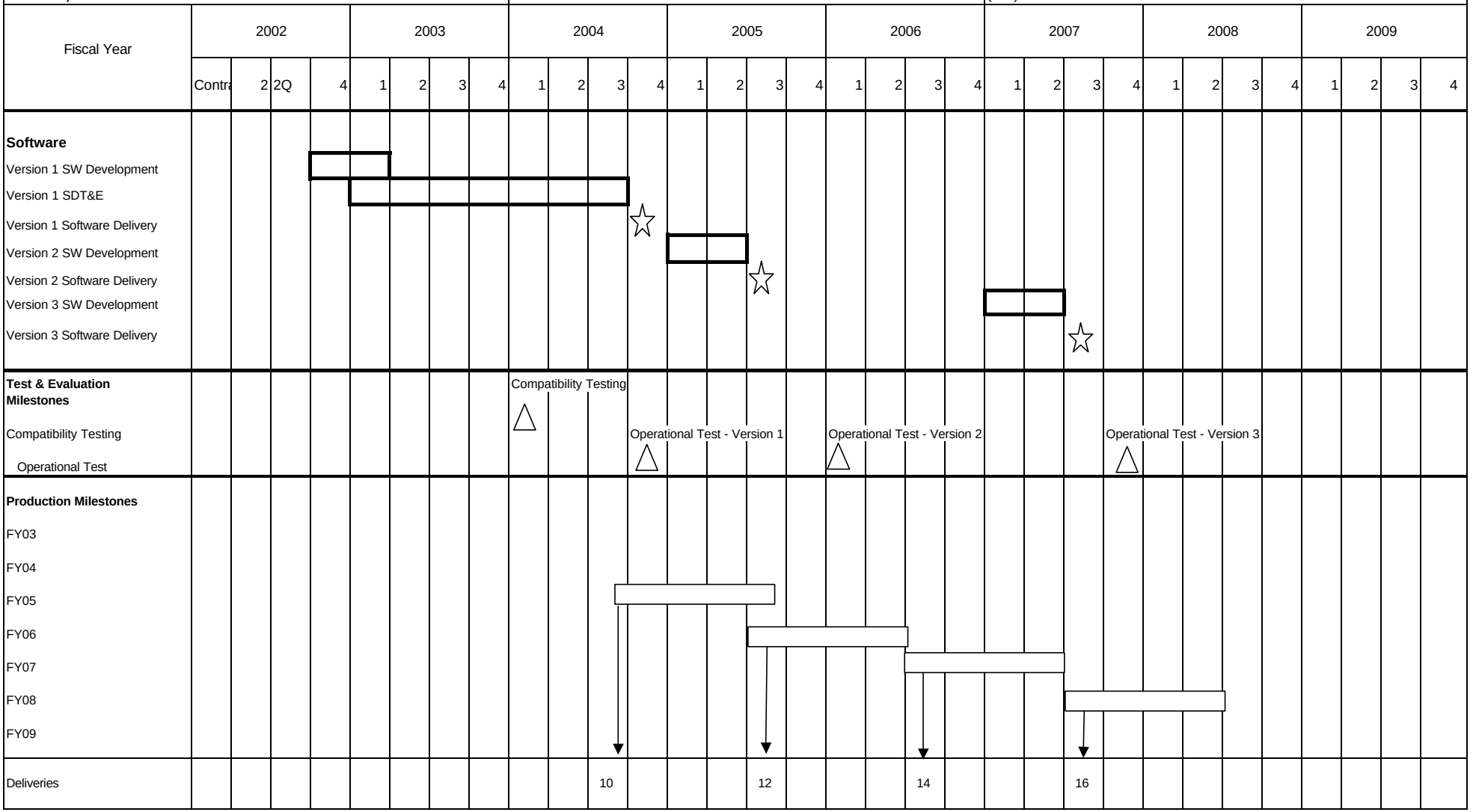
RDT&E, N / BA-5

PROGRAM ELEMENT NUMBER AND NAME

0604721N/ SHIPBOARD IW EXPLOIT SYSTEM

PROJECT NUMBER AND NAME

X2134 SHIPBOARD IW EXPLOIT/SPECIFIC EMITTER IDENTIFICATION (SEI)



* Not required for Budget Activities 1, 2, 3, and 6

R-1 SHOPPING LIST - Item No. 129

CLASSIFICATION:

EXHIBIT R4, Schedule Profile			DATE: **February 2003**
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N /**	PROGRAM ELEMENT NUMBER AND NAME 0604721N/ SHIPBOARD IW EXPLOIT SYSTEM	PROJECT NUMBER AND NAME X2134 SHIPBOARD IW EXPLOIT/ANTENNA RF DISTRIBUTION (ARFD)	

Fiscal Year	2002				2003				2004				2005				2006				2007				2008				2009			
	Contra	2	2Q	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
Acquisition Milestones				Award Contract △				Award Contract △				Award Contract △																				
Prototype Phase	■	■	■																													
System Development																																
EDM Delivery							EDM	△			EDM	△																				
Software 1XXSW Delivery 2XXSW Delivery																																
Test & Evaluation Milestones Development Test Operational Test																																
Production Milestones FRP FY07																		Production Rolled into SSEE △														
Deliveries																																

R-1 SHOPPING LIST - Item No. 129

* Not required for Budget Activities 1, 2, 3, and 6

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: **February 2003**		
APPROPRIATION/BUDGET ACTIVITY **RDT&BA-5**	PROGRAM ELEMENT 0604721N/ SHIPBOARD IW EXPLOIT SYSTEM				PROJECT NUMBER AND NAME X2134 SHIPBOARD IW EXPLOIT/COMMON DATA LINK-NAVY (CDL-N)			
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Prototype Phase								
System Design Review (SDR)								
Milestone II (MSII)								
Contract Award		Q2						
Software Specification Review (SSR)								
Preliminary Design Review (PDR)								
System Development								
Critical Design Review (CDR)								
Quality Design and Build								
Test Readiness Review (TRR)								
Developmental Testing (DT)			Q3-Q4					
Operational Analysis				Q2-Q3				
Interoperability Testing		Q3-Q4	Q2-Q3		Q1-Q2			
Eng Dev Model (EDM)								
Software Delivery 1XXSW								
Preproduction Readiness Review (PRR)								
EDM Radar Delivery - Flt Related								
Milestone C (MS C)								
Operational Testing (OT-IIA)								
Start Low-Rate Initial Production I (LRIP I)								
Software Delivery 2XXSW								
Developmental Testing (DT-IIB1)								
Developmental Testing (DT-IIB2)								
Start Low-Rate Initial Production II								
Operational Testing (OT-IIB)								
Developmental Testing (DT-IIC)								
Functional Configuration Audit (FCA)								
Low-Rate Initial Production I Delivery								
Technical Evaluation (TECHEVAL)								
Physical Configuration Audit								
Operational Evaluation (OT-IIC) (OPEVAL)								
Low-Rate Initail Production II Delivery								
IOC								
Full Rate Production (FRP) Decision								
Full Rate Production Start								
First Deployment								
FOC					Q4			

R-1 SHOPPING LIST - Item No. 129

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: **February 2003**		
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA 5**	PROGRAM ELEMENT 0604721N/ SHIPBOARD IW EXPLOIT SYSTEM				PROJECT NUMBER AND NAME X2134 SHIPBOARD IW EXPLOIT/CRYPTOLOGIC ON-LINE TRAINER (COLT)			
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
COLT Server Software								
3.1.7 SW Development	Q4	Q1						
3.1.7 SDT&E		Q1-Q2						
3.1.7 System Documentation	Q4	Q1-Q2						
3.1.7 Software Delivery		Q2						
4.0 SW Development	Q4	Q1-Q2						
4.0 SDT&E		Q1-Q2						
4.0 System Documentation	Q4	Q1-Q2						
4.0 Software Delivery		Q3						
3x SW Development		Q2-Q3						
3x SDT&E		Q2-Q3						
3x System Documentation		Q3-Q4						
3x Software Delivery		Q4						
4x SW Development		Q4	Q1-Q4					
4x SDT&E		Q3-Q4	Q1-Q4	Q1				
4x System Documentation		Q3-Q4	Q1-Q4	Q1				
4x Software Delivery		Q2		Q1				
5.0 SW Development				Q2-Q4				
5.0 SDT&E				Q3-Q4	Q1			
5.0 System Documentation				Q2-Q4	Q1			
5.0 Software Delivery					Q1			
5x SW Development				Q4	Q1-Q2	Q1-Q3		
5x SDT&E					Q2-Q4	Q2-Q4		
5x System Documentation				Q4	Q1-Q4	Q1-Q4		
5x Software Delivery					Q4	Q4		
6.0 SW Development						Q4	Q1-Q3	
6.0 SDT&E							Q1-Q4	
6.0 System Documentation						Q4	Q1-Q4	
6.0 Software Delivery							Q4	
6x SW Development							Q4	Q1-Q3
6x SDT&E								Q1-Q4
6x System Documentation								Q1-Q4
6x Software Delivery								Q4

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CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: **February 2003**		
APPROPRIATION/BUDGET ACTIVITY **RDT&BA-5**	PROGRAM ELEMENT 0604721N/ SHIPBOARD IW EXPLOIT SYSTEM				PROJECT NUMBER AND NAME X2134 SHIPBOARD IW EXPLOIT/CRYTOLOGIC UNIFIED BUILD (CUB)			
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Software Development v 3.1.7	Q4	Q1						
System Developmental Test & Eval v 3.1.7		Q1-Q2						
System Documentation v 3.1.7	Q4	Q1-Q2						
Software Delivery v 3.1.7		Q2						
Software Development v 4.0	Q4	Q1-Q2						
System Developmental Test & Eval v 4.0		Q1-Q3						
System Documentation v 4.0	Q4	Q1-Q3						
Software Delivery v 4.0		Q3						
Software Development v 3x		Q3						
System Developmental Test & Eval v 3x		Q3-Q4						
System Documentation v 3x		Q3-Q4						
Software Delivery v 3x		Q4						
Software Development v 4x		Q4	Q1-Q4	Q1				
System Developmental Test & Eval v 4x		Q4	Q1-Q4	Q1				
System Documentation v 4x		Q4	Q1-Q4	Q1				
Software Delivery v 4x			Q2	Q1				
Software Development v 5.0				Q2-Q4				
System Developmental Test & Eval v 5.0				Q2-Q4	Q1			
System Documentation v 5.0				Q1-Q4	Q1			
Software Delivery v 5.0					Q1			
Software Development v 5x				Q4	Q1-Q3	Q1-Q3		
System Developmental Test & Eval v 5x					Q2-Q4	Q2-Q4		
System Documentation v 5x				Q4	Q1-Q4	Q2-Q4		
Software Delivery v 5x					Q4	Q4		
Software Development v 6.0						Q4	Q1-Q3	
System Developmental Test & Eval v 6.0							Q1-Q4	
System Documentation v 6.0						Q4	Q1-Q4	
Software Delivery v 6.0							Q4	
Software Development v 6x							Q4	Q1-Q3
System Developmental Test & Eval v 6x								Q1-Q4
System Documentation v 6x								Q1-Q4
Software Delivery v 6x								Q4

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: **February 2003**		
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA 5**	PROGRAM ELEMENT 0604721N/ SHIPBOARD IW EXPLOIT SYSTEM				PROJECT NUMBER AND NAME X2134 SHIPBOARD IW EXPLOIT/MULTI-MISSION PAYLOAD (MMP)			
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
EDM Award			Q1					
System Engineering Analysis			Q2					
Aircraft Data Analysis			Q3					
Design Review (DR)			Q4					
Aircraft Integration Planning				Q1-Q2				
Develop Test Plan				Q1-Q2				
Arrange/Plan for Flight Certifications				Q1-Q2				
Laboratory Acceptance Tests				Q3				
Eng Dev Model (EDM) Deliveries - Lab				Q3				
Plan & Obtain Interim Authority to Operate (IATO)				Q4				
Flight Certification Tests				Q4				
TECHEVAL					Q1			
OPEVAL					Q3			
Full Rate Production (FRP) Decision Block One						Q1		

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CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: February 2003		
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA 5**	PROGRAM ELEMENT 0604721N/ SHIPBOARD IW EXPLOIT SYSTEM				PROJECT NUMBER AND NAME X2134 SHIPBOARD IW EXPLOIT/SHIPS SIGNAL EXPLOITATION EQUIPMENT INCR E (SSEE Incr E)			
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Contract Award	Q2				Q1			
Software Specification Review (SSR)	Q1-Q4	Q1-Q4						
Preliminary Design Review (PDR)		Q4						
System Development	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4
Critical Design Review (CDR)	Q1		Q2					
Test Readiness Review (TRR)	Q4		Q2					
Developmental Testing		Q1	Q2					
Eng Dev Model (EDM) SSEE Delivery - Lab	Q4							
Software Delivery - System LRIP Config S/W		Q1						
Preproduction Readiness Review (PRR)		Q2						
EDM SSEE Delivery - Ship		Q1						
Operational Testing		Q2						
Milestone III (MS C)			Q1					
Start Low-Rate Initial Production (LRIP)		Q2						
Physical Configuration Audit	Q4							
Functional Configuration Audit (FCA)	Q4							
Low-Rate Initial Production Delivery			Q2					
Technical Evaluation (TECHEVAL)		Q1						
M-DEMO		Q1						
Operational Evaluation (OPEVAL)		Q2-Q3						
FOLLOW-ON Operational Evaluation (FOTE)				Q3-Q4				
IOC				Q1				
Full Rate Production (FRP) Decision			Q1					
Full Rate Production Start			Q2					
First Deployment FRP Config				Q1				
Pre-Planned Improvements (P3I)		Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4
Material Support Date					Q4			

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CLASSIFICATION:

Exhibit R-4a, Schedule Detail **Specific Emitter Identification (SEI)**					DATE: **February 2003**			
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA 5**	PROGRAM ELEMENT 0604721N/ SHIPBOARD IW EXPLOIT SYSTEM				PROJECT NUMBER AND NAME X2134 SHIPBOARD IW EXPLOIT/SPECIFIC EMITTER IDENTIFICATION (SEI)			
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
SPAWAR Pgm Development	Q3-Q4							
Additional Requirements						Q1		
Contract Award		Q2				Q1-Q4		
System Requirements		Q1						
Systems Requirements Review		Q2				Q1		
Technical Information Meeting		Q2				Q1		
Architecture Definition		Q2				Q1		
Foreign Comparison Test (FCT) Planning		Q1				Q2		
FCT Test		Q3				Q2		
FCT Test Analysis		Q4				Q3		
Preliminary Design Review		Q4				Q3		
Critical Design Review		Q4						
Development Lab Set-up		Q4						
Platform Independent Prototype Development		Q4						
Phase 1 - Software Development		Q4						
Phase 2 - Hardware requirements		Q4						
Phase 3 - software development/hardware requirements		Q4						
Technical Information Meeting		Q4						
Software Delivery			Q1					
Hardware/software compatibility testing			Q1-Q2					
Test Readiness Review (TRR)			Q1-Q2		Q1-Q2	Q4	Q1-Q2	
Developmental Testing (DT-IIA)			Q1-Q2		Q1-Q2	Q4	Q1-Q2	
Logistics			Q2-Q4	Q1-Q4		Q1-Q4	Q1-Q2	
Phase 1/2/3 delivery			Q2-Q4	Q1-Q2	2Q	Q4	Q1-Q2	
Software only configuration Installation			Q2-Q4		Q1-Q2	Q4	Q1-Q2	
Hardware only configuration Installation			Q2-Q3	Q1-Q2	Q1-Q2		Q3	
Hardware/software configuration Installation			Q2-Q4		Q3		Q3	
Operational Testing (OT-IIA)			Q4		Q3			
Start Low-Rate Initial Production I (LRIP I)			Q3		Q3			
IOC			Q4				Q4	Q1

CLASSIFICATION:

Exhibit R-4a, Schedule Detail **Antenna RF Distribution (ARFD)**					DATE: **February 2003**			
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA 5**	PROGRAM ELEMENT 0604721N/ SHIPBOARD IW EXPLOIT SYSTEM				PROJECT NUMBER AND NAME X2134 SHIPBOARD IW EXPLOIT/ANTENNA RF DISTRIBUTION (ARFD)			
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Award (HF Non-Line-of-Sight) Contract	1Q							
Computer Based Modeling	2Q							
Ship Demonstration	4Q							
Contract Award		2Q						
CDR Antenna Design		3Q						
HF Non-Line-of-Sight Developmental Testing		4Q						
Eng Dev Model (EDM) Delivery - Lab		4Q						
Award Contract			1Q					
System Design Review (SDR)			2Q					
Software Specification Review (SSR)			2Q					
Eng Dev Model (EDM) Delivery - Lab			4Q					
Contract Award			2Q					
System Design Review (SDR)			2Q					
Software Specification Review (SSR)			3Q					
Devlipment Testing			3Q-4Q					
Operational Testing				1Q-4Q				
Deliver capability to SSEE					1Q			

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: **February 2003**			
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**	PROGRAM ELEMENT NUMBER AND NAME 0604721N/SHIPBOARD IW EXPLOIT SYSTEM					PROJECT NUMBER AND NAME X9242 / COOPERATIVE OUTBOARD LOGISTICS UPDATE (COBLU)					
COST ($ in Millions)	Prior Years Cost	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Total Program
Project Cost	**0.000**	**0.000**	**3.325**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**3.325**
RDT&E Articles Qty											**0**

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

Cooperative Outboard Logistics Update, COBLU, is a cooperative program between the United States and the United Kingdom. The existing OUTBOARD system (AN/SSQ-108) has been updated to provide comprehensive surface tactical capability. The program maximizes use of already developed military and commercial signal exploitation equipment. The system architecture requires minimal effort to implement future technologies necessary to handle the evolving threat. This effort will develop, integrate and test an engineering prototype of Low Probability of Intercept (LPI) subsystem to detect recognize and process the most current threat signals. Once development effort is completed it will be included as a pre-planned product improvement for COBLU introduced through field change kits.

(U) JUSTIFICATION FOR BUDGET ACTIVITY:

This program is funded under BA-5, ENGINEERING & MANUFACTURING DEVELOPMENT because it encompasses engineering and manufacturing development of new end-items prior to production approval decision.

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2003**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	0604721N/SHIPBOARD IW EXPLOIT SYSTEM	X9242 / COOPERATIVE OUTBOARD LOGISTICS UPDATE

(U) B. Accomplishments/Planned Program

	FY 02	FY 03	FY 04	
Accomplishments/Effort/Subtotal Cost	0.000	3.325	0.000	
RDT&E Articles Quantity				

Cooperative Outboard Logistics Update (COBLU)

FY03 - Develop, integrate and test an engineering prototype of a Low Probability of Intercept (LPI) subsystem.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2003**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	0604721N/SHIPBOARD IW EXPLOIT SYSTEM	X9242 / COOPERATIVE OUTBOARD LOGISTICS UPDATE

(U) C. PROGRAM CHANGE SUMMARY:

(U) Funding:	FY 2002	FY 2003	FY 2004
Previous President's Budget:	0.000	0.000	0.000
Current BES/President's Budget	0.000	3.325	0.000
Total Adjustments	0.000	3.325	0.000
Summary of Adjustments			
Cong. Add for COBLU update		3.400	
Business Process Reform (SEC. 8100)		-0.014	
Economic Assumtions (SEC. 8135)		-0.019	
IT Cost Growth (SEC. 8109)		-0.006	
Inflation Savings		-0.036	
Subtotal	0.000	3.325	0.000

(U) Schedule:

Not Applicable

(U) Technical:

Not Applicable

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2003**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	0604721N/SHIPBOARD IW EXPLOIT SYSTEM	X9242 / COOPERATIVE OUTBOARD LOGISTICS UPDATE

(U) D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost

If effort is successful 9 field change kits will be procured with SCN.

(U) E. ACQUISITION STRATEGY:

Not Applicable

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: **February 2003**				
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**			PROGRAM ELEMENT 0604721N/SHIPBOARD IW EXPLOIT SYSTEM			PROJECT NUMBER AND NAME X9242/COOPERATIVE OUTBOARD LOGISTICS UPDATE						
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
Primary Hardware Development				0.250	02/03						0.250	
Ancillary Hardware Development											0.000	
Aircraft Integration											0.000	
Ship Integration											0.000	
Ship Suitability											0.000	
Systems Engineering											0.000	
Training Development											0.000	
Licenses											0.000	
Tooling											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal Product Development			0.000	0.250		0.000		0.000		0.000	0.250	
Remarks:												
Development Support											0.000	
Software Development				3.075	02/03						3.075	
Integrated Logistics Support											0.000	
Configuration Management											0.000	
Technical Data											0.000	
Studies & Analyses											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal Support			0.000	3.075		0.000		0.000		0.000	3.075	
Remarks:												

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: **February 2003**		
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**		PROGRAM ELEMENT 0604721N/SHIPBOARD IW EXPLOIT SYSTEM			PROJECT NUMBER AND NAME X9242/COOPERATIVE OUTBOARD LOGISTICS UPDATE							
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
Developmental Test & Evaluation											0.000	
Operational Test & Evaluation											0.000	
Live Fire Test & Evaluation											0.000	
Test Assets											0.000	
Tooling											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal T&E			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
Contractor Engineering Support											0.000	
Government Engineering Support											0.000	
Program Management Support											0.000	
Travel											0.000	
Transportation											0.000	
SBIR Assessment											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
Total Cost			0.000	3.325		0.000		0.000		0.000	3.325	
Remarks:												

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CLASSIFICATION:

EXHIBIT R4, Schedule Profile

DATE: **February 2003**

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	0604721N/ SHIPBOARD IW EXPLOIT SYSTEM	X9242 SHIPBOARD IW EXPLOIT/SHIPS SIGNAL COOPERATIVE OUTBOARD LOGISTICS UPDATE, COBLU

Fiscal Year	2002				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	1	2	3	4
Acquisition Milestones																																
LPI Subsystem Development						Award	PDR	CDR																								
HW development/selection																																
Software Development																																
System Integration																																
Test & Evaluation Milestones																																
Capability Demonstration																																
Regression Test																																
Development Test																																
Production Milestones																																
Deliveries																																

Note: Outyear Fielding of this subsystem will be handled through pre-planned product improvement and fielded using field change kits. Currently nine (9) kits will be procured with SCN Funding.

* Not required for Budget Activities 1, 2, 3, and 6

CLASSIFICATION:

Exhibit R-4a, Schedule Detail					DATE: **February 2003**			
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA 5**	PROGRAM ELEMENT 0604721N/ SHIPBOARD IW EXPLOIT SYSTEM				PROJECT NUMBER AND NAME COOPERATIVE OUTBOARD LOGISTICS UPDATE, COBLU			
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Contract Award		Q2						
Preliminary Design Review (PDR)		Q3						
System Design Review (SDR)		Q2						
System Development		Q2 -Q4	Q1-Q3					
Critical Design Review (CDR)		Q4						
System Integration			Q1-Q4					
Eng Dev Model (EDM) Delivery - Lab			Q3					
Software Delivery -			Q3					
Test Readiness Review (TRR)			Q4					
Developmental Testing			Q4					
Capability Demo			Q4					
EDM Delivery -			Q4					

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