

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification								DATE:			
								February 2004			
APPROPRIATION/BUDGET ACTIVITY						R-1 ITEM NOMENCLATURE					
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY /						0204311N-Integrated Surveillance Systems					
BA-7											
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		304.048	25.186	14.117	16.965	18.007	19.924	13.528	13.760	Continuing	Continuing
Q0766-Integrated Surveillance Systems		224.154	16.833	9.903	13.138	14.060	16.309	9.842	10.002	Continuing	Continuing
Z0766 Fixed Surveillance Systems- Note 1		73.208	2.897	4.214	3.827	3.947	3.615	3.686	3.758	Continuing	Continuing
9102 IUSS Mission Planning		6.686	2.927	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.613
9270 Fiberoptic Wavelength Division Multiplier		0.000	2.529	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.529
Quantity of RDT&E Articles											0.000
(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This Program Element (P.E.) comprises four projects - Q0766, Z0766, 9102 and 9270. Project Q0766 provides for Integrated Undersea Surveillance Systems (IUSS) Research and Development Projects. IUSS provides the Navy with its primary means of submarine detection both nuclear and diesel. The program has undergone a major transition from emphasis on maintaining a large dispersed surveillance force keyed to detection and tracking of submarines to a much smaller force that is effective against modern diesel and nuclear submarines in regional/littoral or broad ocean areas of interest. This transition preserves the ability to continue open ocean surveillance. Project Z0766 (FSS) is a classified project, with details available as a separate enclosure. Project 9102 is a Congressional Plus-Up that supports development efforts for IUSS. Project 9270 is a Congressional Plus-Up that supports the development wideband optical networks for multiple platforms. (U) JUSTIFICATION FOR BUDGET ACTIVITY: The IUSS Research and Development project (Q0766) funds SURTASS Passive and SURTASS Low Frequency Active (LFA) developments. SURTASS provides the mobile, tactical arm of the Integrated Undersea Surveillance System, providing long range detection and cueing for tactical weapons platforms against both diesel and nuclear powered submarines. SURTASS LFA provides an active adjunct capability for IUSS passive and tactical sensors to assist in countering the quieter diesel and nuclear threats of the 1990s and beyond. The LFA tasks are directed at detection of slow quiet threats in harsh littoral waters.  (U) In order to continue with reductions in life cycle costs and continue with system-wide consolidation, a long-term goal is to develop a common IUSS processor based on NAVSEA'S Acoustic Rapid COTS Insertion (ARCI) program. The IUSS ARCI variant will have the capability to process and display data from future underwater systems. The IUSS ARCI variant will also have the capability to replace the legacy systems as they reach end of life and require upgrading. Additionally, a goal of SURTASS is to consolidate on the TB-29A/TL array, a variant of the Submarine TB-29A Long line array. This will reduce the number of array variants employed by SURTASS from 4 to 1, and will enable development and logistics cost savings by leveraging off the submarine TB-29A program. Future efforts will upgrade the LFA capability to ARCI processing and smaller, lighter weight acoustic sources for augmentation of small SWATH platforms, and for replacement of aging LFA sources.											
Note 1- Details available at a higher classification.											

R-1 SHOPPING LIST - Item No. 170

UNCLASSIFIED

Exhibit R-2, RDTEN Budget Item Justification  
(Exhibit R-2, page 1 of 23)

# UNCLASSIFIED

## 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	0204311N-Integrated Surveillance Systems					Q0766: IUSS Detection and Classification System					
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	224.154		16.833	9.903	13.138	14.060	16.309	9.842	10.002	Continuing	Continuing
RDT&E Articles Qty											0

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

A. (U) The SURTASS project comprises the mobile, tactical arm of the Integrated Undersea Surveillance System, providing long range detection and cueing for tactical weapons platforms against both diesel and nuclear powered submarines. SURTASS also provides the undersea surveillance necessary to support regional conflicts and sea-lane protection. SURTASS has experienced recent passive and active success against diesel submarines operating in shallow water. SURTASS is greatly reducing costs by consolidating logistics support, using Non-Developmental Items and commercial hardware, while increasing operator efficiency through computer aided detection and classification processing. SURTASS development efforts include: twin-line array processing, improved detection and classification/passive automation to counter quieter threats; additional signal processing and bi-static active capability; integrated active and passive operations; improved Battle Group support; and improved information processing. Functional improvements are delivered to the Fleet in software "Builds". Future builds are based upon the Advanced Processor Build (APB) process begun by the NAVSEA Submarine USW program. APB-99 was used to support an ARCI Engineering Development Model (EDM) demonstration system, providing A-180R long-line processing only. APB-01 was used for the production ARCI systems for all long-line arrays. APB-02 provides Twin-line processing capabilities, and APB-03 will provide active processing capabilities. Additionally, each APB will introduce new capabilities into SURTASS systems including improved automation, normalizer techniques, adaptive beam forming, and display enhancements. SURTASS participates in the process by contributing algorithms for consideration, supplying peer group members for review of candidate algorithms, participating in test evolutions, and incorporating improved algorithms into operational systems. LFA provides an active adjunct capability for IUSS passive and tactical sensors to counter the quieter diesel and nuclear threats of the 1990s and beyond. The LFA tasks are directed at detection of slow quiet threats in harsh littoral waters. Improvements include Twin-Line/LFA integration enhancements; advanced waveforms for littoral/shallow water operations including Doppler sensitive waveforms; and processing algorithms to reduce clutter and reverberation false alarms in shallow water. Also includes adaptive beam forming; integration of tactical decision aids for LFA monostatic and bistatic operation; integration of SURTASS active and passive information processing systems to provide contact association and geographic tracking; and common anti-submarine warfare (ASW) OMI and environmental processing. The LFA task includes development and testing of a compact LFA transmit source array for SWATH-P ships, and upgrade of LFA processing capability into the ARCI architecture.

B. (U) PEO LMW is involved with the development and maintenance of various IUSS systems. These systems include FDS, FDS-C, SDS, SURTASS, and ADS. The near term objective is to obtain a common Operator Machine Interface (OMI) among currently fielded systems. The long-term goal is to develop a single IUSS processor baseline, with minor maintenance efforts continuing on fielded systems. The existing system architecture, signal processing, contact management, and reporting requirements will be evaluated as well as the requirements for future systems. The development of the IUSS processor will take advantage of automation advancement, array technology improvements, and IUSS, submarine, and surface USW system commonality.

R-1 SHOPPING LIST - Item No. 170

Exhibit R-2a, RDTE Project Justification  
(Exhibit R-2a, page 2 of 23)

UNCLASSIFIED

# UNCLASSIFIED

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EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2004</b>												
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA 7</b>	PROGRAM ELEMENT NUMBER AND NAME 0204311N-Integrated Surveillance Systems	PROJECT NUMBER AND NAME <b>Q0766: IUSS Detection and Classification System</b>												
<b>(U) B. Accomplishments/Planned Program</b>														
<table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 30%;"></td><td style="width: 15%; text-align: center;">FY 03</td><td style="width: 15%; text-align: center;">FY 04</td><td style="width: 15%; text-align: center;">FY 05</td></tr><tr><td><b>FSS</b></td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td></tr></table> <div style="border: 1px solid black; height: 100px; margin-top: 10px;"></div>				FY 03	FY 04	FY 05	<b>FSS</b>	0.000	0.000	0.000	RDT&E Articles Quantity			
	FY 03	FY 04	FY 05											
<b>FSS</b>	0.000	0.000	0.000											
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	FY 03	FY 04	FY 05											
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	FY 03	FY 04	FY 05											
<b>Surveillance Systems</b>	0.000	0.000	0.000											
RDT&E Articles Quantity														
<b>No Activity</b>														
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td><b>Active Acoustics</b></td><td style="text-align: center;">2.531</td><td style="text-align: center;">0.659</td><td style="text-align: center;">0.000</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td></tr></tbody></table>				FY 03	FY 04	FY 05	<b>Active Acoustics</b>	2.531	0.659	0.000	RDT&E Articles Quantity			
	FY 03	FY 04	FY 05											
<b>Active Acoustics</b>	2.531	0.659	0.000											
RDT&E Articles Quantity														
<p><b>FY03:</b> Active Acoustics (\$2,531K) – Continued implementation of a multi-year sea test program focused on CONOPS and the physics of shallow water. Continued development of improvements for LFA operations in shallow water. Continued sea test program to support system improvements and demonstrate/validate operational performance.</p> <p><b>FY04:</b> Active Acoustics (\$659K) - Continue implementation of a multi-year sea test program focused on CONOPS and the physics of shallow water. Continue development of improvements for LFA operations in shallow water. Continue sea test program to support system improvements and demonstrate/validate operational concepts. Transition Active Acoustics efforts to SURTASS Active Improvement Program.</p>														
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	FY 03	FY 04	FY 05											
<b>LFA Environmental</b>	0.600	0.000	0.000											
RDT&E Articles Quantity														
<p><b>FY03:</b> LFA Environmental (\$600K) – Continued environmental research on the impact of low frequency active sonar on the marine environment. This effort transferred to ONR in FY04.</p>														

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**(U) B. Accomplishments/Planned Program**

	FY 03	FY 04	FY 05
<b>N74 ASW Study</b>	1.074	1.023	1.175
RDT&E Articles Quantity			

**FY03:** N74 ASW Study (\$1,074K) – Continued conducting trade-off and mission studies to explore networked ASW system concepts, investment alternatives and development of a community-wide strategy for common performance models.

**FY04:** N74 ASW Study (\$1,023K) – Continue conducting trade-off and mission studies to explore networked ASW system concepts, investment alternatives and development of a community-wide strategy for common performance models.

**FY05:** N74 ASW Study (\$1,175K) – Continue conducting trade-off and mission studies to explore networked ASW system concepts, investment alternatives and development of a community-wide strategy for common performance models.

	FY 03	FY 04	FY 05
<b>ASW C4I</b>	0.200	0.125	0.000
RDT&E Articles Quantity			

**FY03:** ASWC4I (\$200K) – Continued performing engineering, analysis and trade-offs; conduct proof of concept testing to support IUSS integration into the Navy's C4I architecture, including IT-21 implementation.

**FY04:** ASWC4I (\$125K) – Continue performing engineering, analysis and trade-offs; conduct proof of concept testing to support IUSS integration into the Navy's C4I architecture, including IT-21 implementation.

	FY 03	FY 04	FY 05
<b>System Engineering</b>	0.255	0.125	0.000
RDT&E Articles Quantity			

**FY03:** IUSS System Engineering (\$255K) – Continued to provide system level engineering across IUSS programs. Translate Fleet requests into system level design solutions.

**FY04:** IUSS System Engineering (\$125K) – Continue to provide system level engineering across IUSS programs. Translate Fleet requests into system level design solutions for IUSS Common Processor.

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	FY 03	FY 04	FY 05											
<b>TB-29A/Twin-Line</b>	2.400	1.740	1.500											
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	FY 03	FY 04	FY 05											
<b>Towed Array Technologies</b>	0.000	0.000	0.000											
RDT&E Articles Quantity														

R-1 SHOPPING LIST - Item No.

170

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Exhibit R-2a, RDTEN Project Justification  
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	FY 03	FY 04	FY 05											
<b>SURTASS Active Improvement Program</b>	0.000	1.386	10.463											
RDT&E Articles Quantity														
<p>FY04: (\$1,386K) Initiate design of Compact Low Frequency Active (CLFA) array suspension and handling system. Investigate compatible CLFA acoustic source variants.</p> <p>FY05: (\$10,463) Continue development of CLFA capability. Begin transmit subsystem development and Small Waterplane Area Twin Hull-Passive (SWATH-P) SOC modifications. Continue active ARCI developments and incorporate improvements into IUSS Common Processor.</p>														
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	0.000	0.000	0.000											
RDT&E Articles Quantity														
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td></td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td></tr></tbody></table>				FY 03	FY 04	FY 05		0.000	0.000	0.000	RDT&E Articles Quantity			
	FY 03	FY 04	FY 05											
	0.000	0.000	0.000											
RDT&E Articles Quantity														

R-1 SHOPPING LIST - Item No.

170

UNCLASSIFIED

Exhibit R-2a, RDTEN Project Justification  
(Exhibit R-2a, page 8 of 23)



# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2004</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-7</b>	PROGRAM ELEMENT NUMBER AND NAME 0204311N-Integrated Surveillance Systems	PROJECT NUMBER AND NAME <b>Q0766: IUSS Detection and Classification System</b>

**(U) C. PROGRAM CHANGE SUMMARY:**

(U) Funding:	FY 2003	FY 2004	FY 2005
Previous President's Budget (FY04 Pres Controls)	17.012	10.017	13.189
Current BES/President's Budget (FY05 Pres Controls)	16.833	9.903	13.138
Total Adjustments	-0.179	-0.114	-0.051
Summary of Adjustments			
Congressional Undistributed Adjustments		-0.114	
Inflation Adjustments			-0.043
Miscellaneous Navy Adjustments	-0.179		-0.008
Subtotal	-0.179	-0.114	-0.051

(U) Schedule:

The following projects were delayed due to FY03 funding reductions: Littoral Low Frequency Active (LLFA) System Development and Demonstration phase will be extended by one year. The incorporation of active processing into the ARCI processing system will be delayed by one year and the developmental and operational testing of the TB-29 twinline system will be expanded by 6 months.

(U) Technical:

Not Applicable

R-1 SHOPPING LIST - Item No. 170

UNCLASSIFIED

Exhibit R-2a, RDTEEN Project Justification  
(Exhibit R-2a, page 9 of 23)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2004</b>		
APPROPRIATION/BUDGET ACTIVITY <b>RDTE&amp;E, N / BA-7</b>		PROGRAM ELEMENT NUMBER AND NAME 0204311N-Integrated Surveillance Systems			PROJECT NUMBER AND NAME <b>Q0766: IUSS Detection and Classification System</b>				

  

**(U) D. OTHER PROGRAM FUNDING SUMMARY:**

<u>Line Item No. &amp; Name</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Complete</u>	<u>To Cost</u>	<u>Total</u>
OPN 2237 OMN Omitted per instructions	19.942	15.114	7.166	3.825	0.445	1.166	1.38	Continuing	Continuing	

  

**(U) E. ACQUISITION STRATEGY: \***

	FY2003	FY2004	FY2005
<b>Program</b> Milestones			
<b>Engineering</b> Milestones	ARCI VARIANT 7/03	ARCI TB29/TL VARIANT 7/04	ARCI ACTIVE VARIANT 7/05
<b>T&amp;E</b> Milestones		T-23 SEA TESTS TB29/TL SEA TESTS	T-23 SEA TESTS TB29/TL SEA TESTS
<b>Contract</b> Milestones		TB29/TL VARIANT 6/04	

  

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

R-1 SHOPPING LIST - Item No. 170

UNCLASSIFIED

**UNCLASSIFIED**

February 2004

R-1 SHOPPING LIST - Item No. 170

**Exhibit R-3, Project Cost Analysis**  
(Exhibit R-3, page 11 of 23)

**UNCLASSIFIED**

**Exhibit R-3, Project Cost Analysis**  
(Exhibit R-3, page 12 of 23)

[illegible]

R-1 SHOPPING LIST - Item No. 170

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: <b>February 2004</b>		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
<b>RDTE&amp;E, N / BA-7</b>			0204311N-Integrated Surveillance Systems			<b>Q0766: IUSS Detection and Classification System</b>						
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
IUSS Common Architecture	Var/ WX	VARIOUS	1.051	0.500	11/02	0.286	11/03	0.000		0.000	1.837	
LFA Improvements	Var/ WX	VARIOUS	5.866	1.500	11/02	0.653	11/03	1.000	11/04	Continuing	Continuing	
Passive Signal Processing/ Sonar	Var/ WX	VARIOUS		0.950	11/02	0.350	11/03	0.000		0.000	1.300	
Array Improvements	Var/ WX	VARIOUS		0.250		0.340	11/03	0.250	11/04	Continuing	Continuing	
											0.000	
											0.000	
											0.000	
Subtotal T&E			6.917	3.200		1.629		1.250		0.000	12.996	
Remarks:												
LFA Improvements /C4ISR	Var/ WX	VARIOUS	1.737	0.150	11/02	0.130	11/03	0.150	11/04	Continuing	Continuing	
Passive Signal Processing/ Sonar	Var/ WX	VARIOUS		0.100	11/02	0.150	11/03	0.000		0.000	0.250	
Array Improvements	Var/ WX	VARIOUS		0.200	11/02	0.200	11/03	0.200	11/04	Continuing	Continuing	
											0.000	
											0.000	
											0.000	
Subtotal Management			1.737	0.450		0.480		0.350		0.000	3.017	
Remarks:												
Total Cost			224.154	16.833		9.903		13.138		0.000	264.028	
Remarks:												

R-1 SHOPPING LIST - Item No. 170

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis  
(Exhibit R-3, page 13 of 23)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R4, Schedule Profile																								DATE: February 2004									
APPROPRIATION/BUDGET ACTIVITY										PROGRAM ELEMENT NUMBER AND NAME														PROJECT NUMBER AND NAME									
RDT&E, N / BA-7										0204311N-Integrated Surveillance Systems														X0766: IUSS Detection and Classification System									
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					
Acquisition Milestones Inactive ACAT II Status Eff 15 Jul 2002																																	
Test & Evaluation Milestones																																	
T-23 DT																																	
TB-29A/Twinline																																	
LFA / ARCI FOT& E																																	
Production Milestones																																	
Complete																																	

R-1 SHOPPING LIST - Item No. 172

\* Not required for Budget Activities 1, 2, 3, and 6  
FOT & E: Follow-on Test and Evaluation

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Exhibit R-4, Schedule Profile  
(Exhibit R-4, page 14 of 23 ]

**UNCLASSIFIED**

**CLASSIFICATION:**

[illegible]

R-1 SHOPPING LIST - Item No. 172

**UNCLASSIFIED**

**Exhibit R-4, Schedule Profile**  
(Exhibit R-4,15 page 15 of 23)

# UNCLASSIFIED

## 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	0204311N-Integrated Surveillance Systems					9102: IUSS Mission Planning					
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	6.686		2.927	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.613
RDT&E Articles Qty											0

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

A. (U) IUSS provides the Navy with its primary means of submarine detection both nuclear and diesel. The program has undergone a major transition from emphasis on maintaining a large dispersed surveillance force keyed to detection and tracking of submarines to a much smaller force that is effective against modern diesel and nuclear submarines in regional/littoral or broad ocean areas of interest. This transition preserves the ability to continue open ocean surveillance. PEO LMW is involved with the development and upgrade of various IUSS systems. These systems include FDS, FDS-C, SDS, SURTASS, and ADS.

R-1 SHOPPING LIST - Item No. 170

UNCLASSIFIED

Exhibit R-2a, RDTEN Project Justification  
(Exhibit R-2a, page 16 of 23)



# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2004</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA 7</b>	PROGRAM ELEMENT NUMBER AND NAME 0204311N-Integrated Surveillance Systems	PROJECT NUMBER AND NAME <b>9102: IUSS Mission Planning</b>	
<b>(U) B. Accomplishments/Planned Program</b>			
	FY 03	FY 04	FY 05
<b>IUSS Mission Planning</b>	2.927	0.000	0.000
RDT&E Articles Quantity			
<b>FY03</b> (\$2,927K) - Phase II : User Automation and data fusion efforts.			
	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.000
RDT&E Articles Quantity			
	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.000
RDT&E Articles Quantity			

R-1 SHOPPING LIST - Item No.

170

UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2004</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-7</b>	PROGRAM ELEMENT NUMBER AND NAME 0204311N-Integrated Surveillance Systems	PROJECT NUMBER AND NAME <b>9102: IUSS Mission Planning</b>

**(U) C. PROGRAM CHANGE SUMMARY:**

(U) Funding:	FY 2003	FY 2004	FY 2005
Previous President's Budget (FY04 Pres Controls)	2.927	0.000	0.000
Current BES/President's Budget (FY05 Pres Controls)	2.927	0.000	0.000
Total Adjustments	0.000	0.000	0.000
Summary of Adjustments			
Congressional Undistributed Adjustments			
Inflation Adjustments			
Miscellaneous Navy Adjustments			
Subtotal	0.000	0.000	0.000

(U) Schedule:  
Not applicable

(U) Technical:  
Not applicable

R-1 SHOPPING LIST - Item No. 170

UNCLASSIFIED

**UNCLASSIFIED**

**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			0204311N-Integrated Surveillance Systems			9102: IUSS Mission Planning			
(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
NONE									
Related RDTEN:									
(U) PE 0204311N/0766 Integrated Surveillance System	16.833	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
(U) PE 0604784N Advanced Deployable System	37.591	32.907	7.776	65.131	67.637	40.748	9.874	Continuing	Continuing
(U) E. ACQUISITION STRATEGY: *									
Program Milestones Engineering Milestones T&E Milestones Contract Milestones									
(U) F. MAJOR PERFORMERS: **									
* Not required for Budget Activities 1,2,3, and 6 ** Required for DON and OSD submit only.									

R-1 SHOPPING LIST - Item No. 170

**UNCLASSIFIED**

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: <b>February 2004</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA 7</b>		PROGRAM ELEMENT NUMBER AND NAME 0204311N-Integrated Surveillance Systems				PROJECT NUMBER AND NAME <b>9270: Fiberoptic Wavelength Division Multiplier</b>					
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	<b>0.000</b>		<b>2.529</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>2.529</b>
RDT&E Articles Qty											<b>0</b>
<p><b>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b></p> <p>A. (U) Copper wiring and interconnects pose reliability issues. Copper interconnects are limited in bandwidth and are susceptible to EMI and EMP and compromise digital systems. These funds are directed to support the technical development of implementing broadband (WDM) networks, optical computer interconnects and optically based control systems for new and legacy surveillance platforms.</p>											

R-1 SHOPPING LIST - Item No. 170

UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2004</b>												
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA 7</b>	PROGRAM ELEMENT NUMBER AND NAME 0204311N-Integrated Surveillance Systems	PROJECT NUMBER AND NAME <b>9270: Fiberoptic Wavelength Division Multiplier</b>												
<b>(U) B. Accomplishments/Planned Program</b>														
<table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 30%;"></td><td style="width: 15%; text-align: center;">FY 03</td><td style="width: 15%; text-align: center;">FY 04</td><td style="width: 15%; text-align: center;">FY 05</td></tr><tr><td><b>WDM Network Technology Development</b></td><td style="text-align: center;">2.529</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td></tr></table>		FY 03	FY 04	FY 05	<b>WDM Network Technology Development</b>	2.529	0.000	0.000	RDT&E Articles Quantity					
	FY 03	FY 04	FY 05											
<b>WDM Network Technology Development</b>	2.529	0.000	0.000											
RDT&E Articles Quantity														
<div style="border: 1px solid black; min-height: 100px; margin-top: 10px;"></div>														
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	FY 03	FY 04	FY 05											
Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.000											
RDT&E Articles Quantity														
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	FY 03	FY 04	FY 05											
Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.000											
RDT&E Articles Quantity														
<div style="border: 1px solid black; min-height: 100px; margin-top: 10px;"></div>														

R-1 SHOPPING LIST - Item No.

170

UNCLASSIFIED

Exhibit R-2a, RDTEN Project Justification  
(Exhibit R-2a, page 21 of 23)

**UNCLASSIFIED**

**CLASSIFICATION:**

EXHIBIT R-2a, RDT&E Project Justification		DATE:	February 2004
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME	
<b>RDT&amp;E, N / BA-7</b>	0204311N-Integrated Surveillance Systems	<b>9270: Fiberoptic Wavelength Division Multiplier</b>	
<b>(U) C. PROGRAM CHANGE SUMMARY:</b>			
(U) Funding:	FY 2003	FY 2004	FY 2005
Previous President's Budget (FY04 Pres Controls)	0.000	0.000	0.000
Current BES/President's Budget (FY05 Pres Controls)	2.529	0.000	0.000
Total Adjustments	2.529	0.000	0.000
Summary of Adjustments			
Congressional Add	2.600		
Congressional Undistributed Adjustments	-0.038		
Inflation Adjustments	-0.033		
Miscellaneous Navy Adjustments			
Subtotal	2.529	0.000	0.000
(U) Schedule:			
Not applicable			
(U) Technical:			
Not applicable			

**UNCLASSIFIED**

DATE: **February 2004**

R-1 SHOPPING LIST - Item No. 170

**Exhibit R-2a, RD TEN Project Justification**  
(Exhibit R-2a, page 23 of 23)