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EXHIBIT R-2, RDT&E Budget Item Justification							DATE: <div>June 2001</div>			
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA 7					R-1 ITEM NOMENCLATURE Strategic Submarine & Weapons System Support - 0101221N					
COST (\$ in Millions)	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Total PE Cost	57.292	53.195	43.322						Cont.	Cont.
J0951 TRIDENT II	8.763	8.670	8.778						Cont.	Cont.
S0004 TRIDENT Submarine System Improvement	2.116	0.590	0.566						Cont.	Cont.
J2228 Technology Applications Program	46.413	43.935	33.978						Cont.	Cont.
Quantity of RDT&E Articles										
<div>A. Mission Description and budget Item Justification: This Navy unique program addresses all technology areas associated with Navy/Marine Corps aircraft operations aboard ships. The program includes: - (The TRIDENT II (D5) Submarine Launched Ballistic Missile (SLBM) provides the U.S. a weapon system with greater accuracy and payload capability as compared to the TRIDENT I (C4) system. TRIDENT II enhances U.S. strategic deterrence providing a survivable sea-based system capable of engaging the full spectrum of potential targets with fewer submarines. This PE supports investigations into new technologies which would help mitigate the program impact due to component obsolescence and a rapidly decreasing manufacturing support base. Efforts also include Reentry System and Guidance System Applications efforts. The TRIDENT Submarine System Improvement Program develops and integrates command and control Improvements needed to maintain TRIDENT Submarine operational capability through the life cycle of this vital strategic asset. The program conducts efforts needed to maintain strategic connectivity, ensure platform invulnerability, and reduce lifecycle costs through Obsolete Equipment Replacement (OER) and commonality.</div> <div>(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under OPERATIONAL SYSTEMS DEVELOPMENT because it encompasses engineering and manufacturing development for operational systems.</div>										

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APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA 7		R-1 ITEM NOMENCLATURE Strategic Submarine & Weapons System Support - 0101221N																					
<p>B. <u>Program Change Summary:</u></p> <table style="width: 100%; margin-top: 10px;"> <thead> <tr> <th></th> <th style="text-align: right;"><u>FY 2000</u></th> <th style="text-align: right;"><u>FY 2001</u></th> <th style="text-align: right;"><u>FY 2002</u></th> </tr> </thead> <tbody> <tr> <td>(U) FY 2001 President's Budget:</td> <td style="text-align: right;">59.600</td> <td style="text-align: right;">42.700</td> <td style="text-align: right;">43.600</td> </tr> <tr> <td>(U) Appropriated Value:</td> <td style="text-align: right;">59.600</td> <td style="text-align: right;">53.312</td> <td></td> </tr> <tr> <td>(U) Adjustment to FY00/01 Appropriated Value</td> <td style="text-align: right;">-2.179</td> <td style="text-align: right;">10.600</td> <td style="text-align: right;">-0.260</td> </tr> <tr> <td>(U) FY 2002 President's Budget:</td> <td style="text-align: right;">57.421</td> <td style="text-align: right;">53.300</td> <td style="text-align: right;">43.340</td> </tr> </tbody> </table> <p style="margin-top: 10px;">Funding:</p> <p style="margin-top: 10px;">Explanation: Changes from FY 2001 President's Budget to FY 2002 President's Budget submission: The decrease of -\$2.2M in FY 2000 is a result of: a Below Threshold Reprogramming (-\$0.7), SBIR reduction (-\$1.0), and minor pricing adjustment (\$-0.5). The increase in FY 2001 is a result of three Congressional adjustments: \$2.0M for Reentry Systems Application Program, \$2.0M for Accelerometer and Hemispherical Resonator Gyro Development, and \$7.0M for Radiation Hardened Tech Computer Aided Design program. These additions were partially offset by a Congressional pro rata reduction (-\$0.4). The decrease in FY 2002 (-\$0.2) is an NWCF rate adjustment.</p> <p style="margin-top: 10px;">C. (U) Other Program Funding Summary: See enclosed R-2a for each individual project data.</p> <p style="margin-top: 5px;">D. (U) Acquisition Strategy: See enclosed R-2a for each individual project data.</p> <p style="margin-top: 5px;">E. (U) Schedule Profile: Not Applicable.</p>					<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	(U) FY 2001 President's Budget:	59.600	42.700	43.600	(U) Appropriated Value:	59.600	53.312		(U) Adjustment to FY00/01 Appropriated Value	-2.179	10.600	-0.260	(U) FY 2002 President's Budget:	57.421	53.300	43.340
	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>																				
(U) FY 2001 President's Budget:	59.600	42.700	43.600																				
(U) Appropriated Value:	59.600	53.312																					
(U) Adjustment to FY00/01 Appropriated Value	-2.179	10.600	-0.260																				
(U) FY 2002 President's Budget:	57.421	53.300	43.340																				

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EXHIBIT R-2a, RDT&E Project Justification							DATE: June 2001			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA 7		PROGRAM ELEMENT NAME AND NUMBER Strat Sub & Wpns Sys Suppt - 0101221N			PROJECT NAME AND NUMBER TRIDENT II J0951					
COST (\$ in Millions)	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Project Cost	8.763	8.670	8.778						Cont.	Cont.
RDT&E Articles Qty										
<p>A. Mission Description and Budget Item Justification The TRIDENT II (D5) Submarine Launched Ballistic Missile (SLBM) provides the U.S. a weapon system with greater accuracy and payload capability as compared to the TRIDENT I (C4) system. TRIDENT II enhances U.S. strategic deterrence by providing a survivable sea-based system capable of engaging the full spectrum of potential targets with fewer submarines. This project supports investigations into new technologies which would help mitigate the program impact due to component obsolescence and a rapidly decreasing manufacturing support base.</p> <p>- (U) PROGRAM ACCOMPLISHMENTS AND PLANS:</p> <p>FY 2000 ACCOMPLISHMENTS: (U) (\$8.8) SRS: Effort continued in support of phase three development of the SLBM Retargeting System. 2. (U) FY 2001 PLAN: - (U) (\$8.7) SRS: Effort continues in support of phase three development and Fleet alterations for the SLBM Retargeting System. 3. (U) FY 2002 PLAN: - (U) (\$8.8) SRS: Effort continues to completion of phase three development required for deployment and final implementation of the SLBM Retargeting System Program in October 2003.</p> <p>B. (U) Other Program Funding Summary: (Dollars in Thousands) N/A (U) Related RDT&E: N/A</p> <p>C. (U) Acquisition Strategy: Contracts will continue to be awarded to those sources who were engaged in the TRIDENT II (D5) development program and are currently engaged in the production and/or operational support of the deployed D5/C4 Strategic Weapons Systems on the basis of Other Than Full and Open Competition pursuant to the authority of 10 U.S.C. 2304 ©(1) and (3) implemented by FAR 6.302.-1, 3 4.</p> <p>D. (U) Schedule Profile: Not Applicable.</p>										

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Exhibit R-3 Cost Analysis (page 1)							DATE: June 2001					
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER						
RDT&E, N / BA 7			Strat Sub & Wpns Sys Suppt - 0101221N			TRIDENT II J0951						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 00 Cost	FY 00 Award Date	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Ancillary Hardware Development	SS/CPFF	GDDS/MA.	28.000	3.200	10/99	0.000	N/A	0.000	N/A			
Ancillary Hardware Development	WR	NSWC/VA.	45.800	5.600	10/99	8.700	10/00	8.800	10/00			
Subtotal Product Development			73.800	8.800		8.700		8.800		Cont.	Cont.	Cont.
Remarks:												
											0.000	
Total Cost			73.800	8.800		8.700		8.800		0.000	100.100	
Remarks:												

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EXHIBIT R-2a, RDT&E Project Justification							DATE: June 2001			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA 7		PROGRAM ELEMENT NAME AND NUMBER Strat Sub & Wpns Sys Suppt - 0101221N			PROJECT NAME AND NUMBER TRIDENT Submarine System Improvement - S0004					
COST (\$ in Millions)	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Project Cost	2.116	0.590	0.566						Cont.	Cont.
RDT&E Articles Qty										

A. (U) Mission Description and Budget Item Justification
The TRIDENT Submarine System Improvement Program develops and integrates command and control improvements needed to maintain TRIDENT submarine operations capability through the life cycle of this vital strategic asset. The program conducts efforts needed to maintain strategic connectivity, ensure platform invulnerability, and reduce life cycle costs through Obsolete Equipment Replacement (OER) and commonality.

(U) Program Accomplishments and Plans:

- (U) FY 2000 Accomplishments:
 - (U) (\$.506) Completed development of TRIDENT CCS MK2 Block 1C DWS Program.
 - (U) (\$1.610) Continued Architecture Model Maintenance and COTS Technical Refresher.
- (U) FY 2001 Plan:
 - (U) (\$.5910) Continue Architecture Model Maintenance and COTS Technical Refresher.
- (U) FY 2002 Plan:
 - (U) (\$.566) Continue Architecture Model Maintenance and COTS Technical Refresher.

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EXHIBIT R-2a, RDT&E Project Justification				DATE: June 2001	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA 7		PROGRAM ELEMENT NAME AND NUMBER Strat Sub & Wpns Sys Suppt - 0101221N		PROJECT NAME AND NUMBER TRIDENT Submarine System Improvement - S0004	
B. Other Program Funding Summary					
Related OPN:	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Complete</u>	<u>Total Cost</u>
267600 (BA-2) Strategic Platform Suppt Equip 24.1		15.2	11.4	Cont.	Cont.
535500 (BA-4) Strategic Platform Suppt Equip 9.2		2.9	9.8	Cont.	Cont.

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Exhibit R-2a, RDT&E Project Justification
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EXHIBIT R-2a, RDT&E Project Justification		DATE: June 2001
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA 7	PROGRAM ELEMENT NAME AND NUMBER Strat Sub & Wpns Sys Suppt - 0101221N	PROJECT NAME AND NUMBER TRIDENT Submarine System Improvement - S0004
<p>(U) Related RDT&E: These PEs develop submarine software and hardware that are directly related to efforts conducted by the program element.</p> <p>(U) PE 0101224N (SSBN Security Survivability Program) (U) PE 0101402N (Navy Strategic Communications) (U) PE 0604562N (Submarine Tactical Warfare System) (U) PE 0604503N (Submarine System Equipment Development)</p> <p>D. (U) Acquisition Strategy:</p> <p>The TRIDENT operational systems development program results in improvements to the baseline TRIDENT Combat System. Current TRIDENT Combat Systems were first developed in the early 1970s and are becoming increasingly difficult to maintain and offer comparatively less performance than more recently designed systems. Previous efforts to upgrade portions of the TRIDENT Combat System include improvements via sonar and combat control hardware and software (e.g., QE2 programs), feasibility of increased countermeasure capability and a concept evaluation of a Submarine Force Mission Program Library (SF MPL) interface. Due to the sensitivity of TRIDENT programs it is assessed that international technology will not have a major impact or be a recipient of the benefits derived from this effort. Development strategies will significantly enhance the sustainability and operability of the sonar, communications and Combat Control Systems on TRIDENTs by evaluating both OER possibilities and potential improvements.</p> <p>E. (U) Schedule Profile:</p> <p>Successful program development will lead to the submission and approval of system and subsystem Engineering Changes for installation during SSBN 726 class submarine backfits. Specific deliverable dates for the RDT&E,N and OP,N programs are:</p> <p>Adv Rapid COTS Insertion (ARCI) Phase I/II - FY97 (2nd Qtr) – Program Inception FY00 (4th Qtr) – Install and Test Prototype FY02 (1st Qtr) – ARCI Certification/IOC</p> <p>Combat Control System (CCS) MK2 Block 1C - FY98 (2nd Qtr) – Program Inception FY00 (4th Qtr) – Install and Test Prototype FY02 (1st Qtr) – Certification/IOC</p> <p>Architecture Model Maint. & COTS Technology Refresh - FY98 (2nd Qtr) – Program Inception FY00 – CONT. – COTS Supportability, Architecture Maintenance and COTS Management Processes</p> <p>Q6 to Q5 Translator - FY98 (2nd Qtr) – Program Inception; Installation and Test; Certification/IOC</p>		

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Exhibit R-2a, RDT&E Project Justification
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Exhibit R-3 Cost Analysis (page 1)						DATE: June 2001						
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER						
RDT&E, N / BA 4			Strat Sub & Wpns Sys Suppt - 0101221N			TRIDENT Submarine System Improvement - S0004						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 00 Cost	FY 00 Award Date	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Design/Development Engineering	SS-CPIF	Raytheon, Portsmouth, RI	5.910	0.000	N/A	0.000	N/A	0.000	N/A	0.000	5.910	5.910
Software Development			0.600	0.000	N/A	0.000	N/A	0.000	N/A	0.000	0.600	0.600
Design/Development Engineering	SS-CPFF	Lockheed Martin, Manassas, VA.	4.984	0.506	12/98	0.000	N/A	0.000	N/A	0.000	5.490	5.490
Design/Development Engineering	Various	Various	11.700	0.000	N/A	0.000	N/A	0.000	N/A	0.000	11.700	11.700
Subtotal Product Development			23.194	0.506	N/A	0.000	N/A	0.000	N/A	0.000	23.700	23.700
Remarks:												
Development Support Equipment											0.000	
Support & Management			0.020	0.000		0.000		0.000		0.000	0.020	
Subtotal Support			0.020	0.000		0.000		0.000		0.000	0.020	
Remarks:												

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Exhibit R-3 Cost Analysis (page 2)								DATE: June 2001				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER						
RDT&E, N/BA-7			Strategic Sub & Wpns Sys Spt 0101221N			TRIDENT Submarine System Improvement/S0004						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 00 Cost	FY 00 Award Date	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation											0.000	
Test and Certification	WR	NUWC, Newport RI	0.854	1.610	10/99	0.590	10/00	0.566	10/00	0.000	3.629	3.629
Test and Certification	Various	Various	0.700	0.000	N/A	0.000	N/A	0.000	N/A	0.000	0.700	0.700
Operational Test & Evaluation											0.000	
Tooling											0.000	
GFE											0.000	
Subtotal T&E			1.554	1.610		0.590		0.566		0.000	4.329	4.329
Remarks: After transition to Commercial Off-The-Shelf (COTS) based systems, obsolescence becomes a major issue. To keep current, it is necessary to support the development and maintenance of a RDT&E process to maintain TRIDENT subsystems using commercial technology and parts. This model will continue the evaluation and implementation of COTS Technology.												
Contractor Engineering Support											0.000	
Government Engineering Support											0.000	
Program Management Support											0.000	
Travel											0.000	
Labor (Research Personnel)											0.000	
Overhead											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks: Government Furnished Property - not applicable.												
Total Cost			24.768	2.116		0.590		0.566		CONT.	CONT.	CONT.
Remarks:												

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EXHIBIT R-2a, RDT&E Project Justification							DATE: June 2001				
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NAME AND NUMBER				PROJECT NAME AND NUMBER						
RDT&E, N / BA 7	Strat Sub & Wpns Sys Suppt - 0101221N				Technology Applications - J2228						
COST (\$ in Millions)	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost	
Project Cost	46.413	43.935	33.978						Cont.	Cont.	
RDT&E Articles Qty											
A. (U) <u>Mission Description and Budget Item Justification:</u> This supports implementation of a coordinated Air Force/Navy Reentry System Applications Program as well as the implementation of a Strategic Guidance Applications Program. Reentry Vehicle and Guidance Technology is rapidly eroding beyond the point of being capable to respond to increasing aging phenomena and future requirements. • Through sustainment of the reentry vehicle technology base, confidence in the dependability and reliability of strategic SLBM and ICBM weapon systems will be maintained over the long term when no new systems will be in development. Critical and unique attributes necessary for the design, development and in-service support of current and modernized SLBM reentry systems have been defined and will be maintained to insure a functioning readiness application technical capability in reentry is preserved. Working closely with the Air Force, Navy requirements have been integrated with the Air Force requirements into a comprehensive program. • This program provides a minimum strategic guidance core technology development capability consistent with the Strategic Advisory Group (SAG) recommendations to CINCPACSTRAT. The SAG recommended that SSP establish a program which preserves this critical design and development core. It is a basic bridge program which develops critical guidance technology applicable to any of the existing Air Force/Navy strategic missiles. The objective is to transition from current capability to a long term readiness status required to support deployed systems. Air Force and Navy guidance technology requirements are integrated and needs prioritized. Efforts are focused on alternatives to currently utilized technologies identified as system "weak links". Current system accuracy and functionality depends upon key technologies which provide radiation hardened velocity, attitude and stellar sensing capabilities. As the underlying technologies that currently provide these capabilities age and are no longer technically supportable, modern alternatives must be made available in order to allow for orderly replacement. • Funding is included in FY 2003 and outyears to support D-5 Life Extension program requirements.											
- (U) PROGRAM ACCOMPLISHMENTS AND PLANS: FY 2000 ACOMPLISHMENTS: - (U) (\$18.6) Continued Reentry System Applications Program (RSAP). FY 2000 efforts included: (U) Continued development and ground testing of reentry vehicle candidate heatshield, nosetip, and aft closure including those available from Science & Technology (S&T). (U) Continued down-select process of low-cost candidate replacement materials. (U) Initiated planning and procurement of required hardware and instrumentation for demonstration of low-cost replacement heatshield. (U) Initiated build-up of heavily instrumented flight unit for aged hardware evaluation. (U) Continued ground testing of reentry components exposed to operational environments beyond their design life, and evaluated FY 1999 ground testing data. (U) Maintained RSAP technical program plan, conducted system assessments and initiated vulnerability & hardening certification process in absence of nuclear under ground testing (UGT) facilities. (U) Evaluated Arming, Fuzing & Firing (AF&F) flight data.											
• (U) (\$27.8) Continued Strategic Guidance Applications Programs (GAP). FY 2000 efforts included: (U) Completed and more fully utilized the Integrated Engineering Environment (IEE) virtual system capability. Continued with IEE/Strategic Inertial Guidance Hardware Technology Synthesizer (SIGHTS) towards a "real time" hardware-in-loop simulation capability targeted for completion in late FY 2001. Began to utilize the IEE/SIGHTS capability to perform system architecture/design tradeoffs. Initiated prototype alternate PIGA fabrication and subassembly testing. (U) Continued Interferometric Fiber Optic Gyro (IFOG) work started in FY 1999. Initiated stellar subsystem prototype using English Electric Valve (EEV) or alternate sensor technology. (U) Developed unique integrated circuits (IC) using Radiation Hard Technology (RHT) to be infused into Computer Aided Design (CAD) tools. These RHTCAD tools will provide the Navy with a capability to replace and develop new RADHARD components as required for											

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EXHIBIT R-2a, RDT&E Project Justification		DATE: June 2001
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA 7	PROGRAM ELEMENT NAME AND NUMBER Strat Sub & Wpns Sys Suppt - 0101221N	PROJECT NAME AND NUMBER Technology Applications - J2228
<p>FY 2001 PLAN:</p> <p>-(U) (\$20.5) Continue Reentry System Applications Program (RSAP).</p> <p>(U) Continue development and ground testing of reentry vehicle candidate heatshield, nosetip and aft closure materials including those available from Science & Technology (S&T).</p> <p>(U) Conduct low-cost replacement heatshield flight test demonstration.</p> <p>(U) Evaluate aged hardware flight data and observed ground test anomalies; develop risk mitigation concepts for known aging mechanisms.</p> <p>(U) Identify and evaluate low-cost design approaches and components (including COTS) for arming and fuzing applications.</p> <p>(U) Identify and evaluate low-cost inertial sensor technology for reentry body flight test instrumentation.</p> <p>(U) Maintain RSAP technical program plan, conduct system assessments and continue vulnerability & hardening certification process in absence of nuclear under ground testing (UGT) facilities.</p> <ul style="list-style-type: none"> • (U) (\$23.4) Continue Strategic Guidance Applications Programs (GAP). FY 2001 efforts include: <p>(U) Continue initial IEE/SIGHTS integration to provide a "real time" hardware-in-the-loop simulation capability for FY 2002. Initiate development of alternative models for incorporation in IEE.</p> <p>(U) Complete the prototype accelerometer fabrication and initiate testing. Continue IFOG fabrication and test the stellar subsystem prototype technology task initiated in FY 2000. Evaluate alternate stellar sensor technology. Evaluate circumvention methodology using SIGHTS hardware.</p> <p>(U) Pursue alternate strategies in order to attain strategic performance from the Hemispherical Resonator Gyro (HRG). Assess producibility for various Alternate PIGA technologies.</p> <p>(U) Provide Chemical Mechanical Planarization (CMP) capability to the SPAWAR micro-electronic fabrication facility. This metal interconnect technology enhancement allows SPAWAR to manufacture electronic devices using methods compatible with the latest commercial practices. This equipment is required for the development and validation of Radiation Hardened Technology Computer Aided Design (RHTCAD) dose rate response modeling.</p> <p>FY 2002 PLAN:</p> <p>(U) (\$19.0) Continue Reentry System Applications Program. FY 2002 efforts include:</p> <p>(U) Continue development and ground testing of reentry vehicle candidate heatshield, nosetip, and aft closure materials including those available from Science & Technology (S&T).</p> <p>(U) Evaluate low-cost replacement heatshield flight test demonstration data.</p> <p>(U) Conduct updated ground and flight test program to assess performance of reentry components exposed to operational environments beyond their design life; develop risk mitigation concepts for known aging mechanisms.</p> <p>(U) Identify and evaluate low-cost design approaches and components (including COTS) for arming and fuzing applications.</p> <p>(U) Continue evaluation of low-cost inertial sensor technology for reentry body flight test instrumentation.</p> <p>(U) Maintain RSAP technical program plan, conduct system assessments and continue vulnerability & hardening certification process in absence of nuclear under ground testing (UGT) facilities.</p> <ul style="list-style-type: none"> • (U) (\$15.0) Continue Strategic Guidance Applications Programs (GAP). FY 2002 efforts include: <p>(U) Initiate IEE virtual implementation validation. Complete IEE/SIGHTS integration to evaluate alternate system architectures. Initiate incorporation of alternate sensor technologies, PIGA and system circumvention methodology into SIGHTS.</p> <p>(U) Complete the prototype IFOG fabrication and initiate testing. Initiate alternate stellar subsystem design based on current sensor technology. Survey emergent technologies for alternate gyro and PIGA. Perform radiation testing of current electronics technology.</p> <p>(U) Continue build and test of Hemispherical Resonator Gyro (HRG) prototype hardware. Testing will assess the best approach to attain Strategic Performance.</p>		

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EXHIBIT R-2a, RDT&E Project Justification		DATE: June 2001
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA 7	PROGRAM ELEMENT NAME AND NUMBER Strat Sub & Wpns Sys Suppt - 0101221N	PROJECT NAME AND NUMBER Technology Applications - J2228
B. Other Program Funding Summary N/A		
C. <u>Acquisition Strategy</u> : Contracts will continue to be awarded to those sources who were engaged in the TRIDENT II (D5) development program and are currently engaged in the production and/or operational support of the deployed D5/C4 Strategic Weapons Systems on the basis of Other Than Full and Open Competition pursuant to the authority of 10 U.S.C. 2304 (c) (1) and (3) implemented by FAR 6.302.-1, 3 4.		
D (U) Schedule Profile: Not Applicable		

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Exhibit R-3 Cost Analysis (page 1)								DATE: June 2001				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER						
RDTE&E, N / BA 4			Strat Sub & Wpns Sys Suppt - 0101221N			Technology Applications - J2228						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 00 Cost	FY 00 Award Date	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Technology Applications	SS, CPFF	LMMS/CAL	25.500	8.600	10/99	6.500	10/00	6.100	N/A	Cont.	Cont.	Cont.
Technology Applications	WR	NSWC/VA	19.800	6.700	10/99	5.500	10/00	5.500	10/01	Cont.	Cont.	Cont.
Technology Applications	MIPR	DOE/NM	3.700	1.600	10/99	4.400	10/00	2.200	10/01	Cont.	Cont.	Cont.
Technology Applications	SS-CPFF	CSDL/MA	1.400	1.200	10/99	3.400	10/00	4.300	10/01	Cont.	Cont.	Cont.
Technology Applications	SS-CPFF	KAMAN/CO	2.200	0.600	10/99	0.700	10/00	0.900	10/01	Cont.	Cont.	Cont.
Technology Applications	SS-CPFF	CSDL/MA	46.000	27.800	10/99	16.500	10/00	15.000	10/01	Cont.	Cont.	Cont.
Technology Applications	SS-CPFF	CNSW/IN	0.000	0.000	N/A	6.900	10/00	0.000	N/A	Cont.	Cont.	Cont.
Subtotal Product Development			98.600	46.400		43.900		34.000		Cont.	Cont.	Cont.
Remarks:												
Development Support Equipment											0.000	
Software Development											0.000	
Training Development											0.000	
Integrated Logistics Support											0.000	
Configuration Management											0.000	
Technical Data											0.000	
GFE											0.000	
Subtotal Support			0.000	46.400		43.900		34.000		0.000	124.300	
Remarks:												

R-1 SHOPPING LIST - Item No. 177-13 of 177-13

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