

APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-wide/ Budget Activity 4					R-1 ITEM NOMENCLATURE Coalition Warfare 0603923D8Z			
COST (\$ in Millions)	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	Cost to Continue
Total 0603923D Cost	5.945	5.844	12.444	12.646	12.999	13.327	13.588	continuing
<b>Coalition Readiness Integrated Management System</b>	0.7	1.5	0	0	0	0	0	0
<b>CAESAR International Demonstration</b>	2.0	1.3	0	0	0	0	0	0
<b>Coalition Air Picture/Air Tasking Order</b>	2.0	0	0	0	0	0	0	0
<b>Coalition Asset Tracking</b>	0.5	.05	0	0	0	0	0	0
<b>Coalition Tactical Communications Interoperability</b>	0	1.0	1.2	0	0	0	0	0
<b>Pacific Coalition Operational Wide Area Network</b>	0	1.0	1.9	0	0	0	0	0
<b>Shared Tactical Ground Picture</b>	0.1	0.25	0	0	0	0	0	0
<b>Modeling &amp; Simulation in Coalition Environments</b>	0.1	0.15	0	0	0	0	0	0
<b>Coalition Warfare Program Support</b>	.545	0.545	0.545	0.545	0.545	0.545	0.545	.545
<b>Coalition Warfare Program – Future Projects</b>	0	0	8.799	12.101	12.454	12.782	13.043	continuing

The Coalition Warfare Program provides resources for the U.S. portion of bi-lateral and multi-lateral development projects, aimed at improving interoperability with allies and other likely coalition partners. Recent coalition operations, exercises and experiments have revealed the increasing complexity and difficulty of prosecuting multi-national air, land, and sea campaigns. Interoperability gaps between partners have retarded mission efficiency and jeopardized force protection. The complexity of the coalition battlefield makes it necessary to work cooperatively with our likely coalition partners to solve interoperability gaps in C3I, logistics and weapon systems as well as to improve coalition training capabilities.

This program leverages foreign and other U.S. investment in ongoing projects so as to add a coalition capability that otherwise would not have existed. Both U.S. and foreign-unique technologies and research may be applied to improve the end product. Coalition Warfare funds (no more than 50% of total project cost) and foreign contributions (50% or more) are added to planned or existing U.S.-only projects so as to add a coalition capability that would not have otherwise existed.

Candidate projects are nominated by the CINCs (through their CINC Interoperability Program Offices), Services, OSD, or potentially, foreign governmental sources. OSD performs a down-select of projects based on programmatic executability, the scope of the coalition problem being approached, the potential to spread the benefits to multiple theaters, among other factors.

Candidate programs proposals for FY03-start programs have not yet been received so no selection process has taken place.

<b>B. Program Change Summary:</b>	<b>FY2001</b>	<b>FY2002</b>	<b>FY2003</b>	<b>Total Cost</b>				
President's FY2001 Budget Submit	\$11.8M	\$12.870M	\$12.396M	continuing				
FY02 Amended President's Budget Submit	\$11.8M	\$12.943M	\$12.478M					
Appropriated Value	\$6.0M	\$6.123M	\$0					
Adjustments to Appropriated Value								
a. Congressionally Directed Undistributed Reduction	-\$0.055M	-\$0.279M	\$0					
b. Rescission/Below-threshold Reprogramming, Inflation Adjustmet	-\$0.013M	\$0	\$0					
c. Other (SBIR)	-\$0.148M	\$0	-\$0.034M					
Current President's Budget	\$5.945M	\$5.844M	\$12.444M					
C. Other Program Funding Summary	<u>PY</u> N/A	<u>CY</u> N/A	<u>BY1</u> N/A	<u>BY2</u> N/A	<u>BY2+1</u> N/A	<u>BY2+2</u> N/A	<u>BY2+3</u> N/A	<u>BY2+4</u> N/A

D. Execution

For the execution year (CY), provide a list of funding recipients within the following categories:

- Air Force Research Labs, Rome NY
- Alphatech
- Raytheon
- Anteon Corportation

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Exhibit R-2a, RDT&E Project Justification						02/2002		
RDT&E, Defense-wide/ Budget Activity 4	PE 0603923D8Z				PROJECT/THRUST NAME AND NUMBER			
Cost (\$ in Millions)	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008
<b>Modeling &amp; Simulation in Coalition Environments</b>	0.1	0.15	0	0	0	0	0	0
<p>A. Mission Description and Budget Item                      The objectives of this program are to investigate standards based approaches for the development of a framework that enables the assessment of coalition operations and the range of possibilities for various concepts of operations (CONOPS), coalition force structures and mixes, and interoperability amongst coalition force elements. The framework will be based on leading standards in modeling and simulation, systems of systems development, and digital product models to provide an environment to investigate the pertinent issues and to demonstrate the impacts of alternate approaches for interoperability amongst coalition forces. The program will develop the framework for the environment and the initial components of that environment as a working demonstration of the approach and the basis for continued collaborative development and application.</p> <p>B. Other Program Funding Summary</p> <p style="text-align: center;"> <u>PY</u>      <u>CY</u>      <u>BY1</u>      <u>BY2</u>      <u>BY2+1</u>      <u>BY2+2</u>      <u>BY2+3</u>      <u>BY2+4</u> </p>								

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Cost (\$ in Millions)	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008
<b>Pacific Coalition Wide Area Network (COWAN)</b>	0	1.0	1.9	0	0	0	0	0
<p>Mission Description and Budget:                      The Pacific Combined Operations Wide Area Network (COWAN) is a permanent, classified coalition network service designed to bridge US classified networks and Pacific Rim partner nations' networks supporting maritime forces and shore planning staffs for escort and maritime interdiction missions for Operation Enduring Freedom as well as future training exercises and operations. The COWAN would be built as an Agile Virtual Private Network (VPN) to ensure security and privacy between U.S. users and coalition partners. The COWAN has a hub and spoke architecture, with the U.S. at the center. This model is necessary to ensure the privacy of each coalition partner's information. Imbedded tools would include secure e-mail, web, chat, and a common operational picture.</p> <p>The DoD FY02 Appropriations bill provided \$4.5M to accelerate the commercial COMSEC evaluation with NSA. The Coalition Warfare Program is providing the funding necessary to stand up the U.S. portion of the coalition capability. Equitable contributions will be made by the participating countries, to include Australia, Japan and possibly Singapore. Other countries may be added depending on the results of coalition exercises in CY02. One goal of the program is to serve as a counter-terrorism force network for over 40 participating countries.</p> <p>B. Other Program Funding Summary</p> <p style="text-align: center;"> <u>PY</u>      <u>CY</u>      <u>BY1</u>      <u>BY2</u>      <u>BY2+1</u>      <u>BY2+2</u>      <u>BY2+3</u>      <u>BY2+4</u> </p>								

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Cost (\$ in Millions)	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	Cost to Complete
<b>Coalition Warfare Program Support</b>	0.545	0.545	0.545	0.545	0.545	0.545	0.545	0.545
<p>A. Mission Description and Budget Item                      This funding represents costs to the program for Department of Defense-levied fees as well as contractor support.</p> <p>B. Other Program Funding Summary</p> <p style="text-align: center;"> <u>PY</u>      <u>CY</u>      <u>BY1</u>      <u>BY2</u>      <u>BY2+1</u>      <u>BY2+2</u>      <u>BY2+3</u>      <u>BY2+4</u> </p>								

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Cost (\$ in Millions)		FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008																				
<b>Coalition Readiness Integrated Management System</b>		0.7	1.5	0	0	0	0	0	0																				
<p>A. Mission Description and Budget Item Justification</p> <p>The Coalition Readiness Integrated Management System is designed to leverage the U.S. Navy's developing Battle Force Tactical Training (BFTT) System to provide U.S. and coalition forces interoperability training and combined mission rehearsal capability. The program is developing an in-situation/on-board training capability where combat teams would train in the real shipboard environment, at their work-stations. Further, the system is scaled to accommodate any number of platforms into the exercise to achieve joint force or coalition force training. This capability could be used to train for a expected contingency while sailing to the operation. Scheduled releases of BFTT software will produce automated measures of performance/measures of effectiveness (MOP/MOEs), multiple after-action-review (AAR) products and mission rehearsal scenario generation capability. The system will fully incorporate and leverage the Defense Modeling &amp; Simulation Office's (DMSO) High Level Architecture and Run-Time Infrastructure (HLA/RTI) standard, which has also become a commercial standard for modeling and simulation.</p> <p>An international cooperative agreement with Australia is in place. The United Kingdom and the Netherlands have also expressed a strong interest in participating in this cooperative program. Germany has requested data for a possible purchase of the software product and architecture. Other countries, including Japan, have also expressed interest in the Coalition Readiness Integrated Management System.</p> <p>B. Other Program Funding Summary</p> <table border="1"> <thead> <tr> <th></th> <th></th> <th><u>PY</u></th> <th><u>CY</u></th> <th><u>BY1</u></th> <th><u>BY2</u></th> <th><u>BY2+1</u></th> <th><u>BY2+2</u></th> <th><u>BY2+3</u></th> <th><u>BY2+4</u></th> </tr> </thead> <tbody> <tr> <td><b>0207596F</b></td> <td><b>NAVSEA</b></td> <td><b>8.0M</b></td> <td><b>2.0M</b></td> <td><b>0</b></td> <td><b>0</b></td> <td><b>0</b></td> <td><b>0</b></td> <td><b>0</b></td> <td><b>0</b></td> </tr> </tbody> </table>												<u>PY</u>	<u>CY</u>	<u>BY1</u>	<u>BY2</u>	<u>BY2+1</u>	<u>BY2+2</u>	<u>BY2+3</u>	<u>BY2+4</u>	<b>0207596F</b>	<b>NAVSEA</b>	<b>8.0M</b>	<b>2.0M</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
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<b>0207596F</b>	<b>NAVSEA</b>	<b>8.0M</b>	<b>2.0M</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>																				

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Cost (\$ in Millions)	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	Cost to Complete
<b>Coalition Warfare Program – Future Projects</b>	0	0	9.344	12.646	12.999	13.327	13.588	continuing
<p>A. Mission Description and Budget Item</p> <ul style="list-style-type: none"> <li>The Coalition Warfare Program provides resources for the U.S. portion of bi-lateral and multi-lateral development projects, aimed at improving interoperability with allies and other likely coalition partners. Recent coalition operations, exercises and experiments have revealed the increasing complexity and difficulty of prosecuting multi-national air, land, and sea campaigns. Interoperability gaps between partners have retarded mission efficiency and jeopardized force protection. The complexity of the coalition battlefield makes it necessary to work cooperatively with our likely coalition partners to solve interoperability gaps in C3I, logistics and weapon systems as well as to improve coalition training capabilities. Specifically, the Coalition Warfare Program will provide funding to develop enhanced coalition capability in the following eight areas: Unmanned Aerial Vehicles (UAVs), Chemical-Biological/WMD Defense, Training &amp; Exercises, Combat Identification, Littoral Small Ship Technologies, Mine Countermeasures (sea and land mines), Air Refueling Technologies and Interoperable Tactical Communications.</li> </ul> <p>New projects are selected for funding on an annual basis. Each candidate project may request up to two years of Coalition Warfare Program funding.</p> <p>B. Other Program Funding Summary</p> <p align="center"> <u>PY</u>      <u>CY</u>      <u>BY1</u>      <u>BY2</u>      <u>BY2+1</u>      <u>BY2+2</u>      <u>BY2+3</u>      <u>BY2+4</u> </p>								

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Cost (\$ in Millions)	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008																		
<b>Coalition Tactical Communications Interoperability</b>	0	1.0	1.2	0	0	0	0	0																		
<p>A. Mission Description and Budget Item Justification</p> <p>The Joint Tactical Radio System/Bowman Interoperability Program between the U.S. and the UK will co-develop, implement and test a Common Tactical Interoperable Waveform (CTIW) for BOWMAN and JTRS radios, and will conduct coalition/joint field testing to demonstrate the resultant UK-US waveform interoperability. An international agreement will be negotiated for this program. The JTR System will be software-reprogrammable, multi-band/multi-mode capable, networkable, and provide simultaneous voice, data, and video communications. The threshold goal for interoperability between the JTRS and Bowman systems will be in voice communication. This cooperation will help define the waveforms for the more robust UK Programmable Digital Radio currently in early development.</p> <p>The JTRS Joint Program Office, in conjunction with the Air Force and Army, is working to develop waveforms that will be interoperable with the legacy and developing tactical communication systems of Japan, Germany and France as well.</p> <p>B. Other Program Funding Summary</p> <table border="1"> <thead> <tr> <th></th> <th><u>PY</u></th> <th><u>CY</u></th> <th><u>BY1</u></th> <th><u>BY2</u></th> <th><u>BY2+1</u></th> <th><u>BY2+2</u></th> <th><u>BY2+3</u></th> <th><u>BY2+4</u></th> </tr> </thead> <tbody> <tr> <td><b>0604280D</b></td> <td><b>0</b></td> <td><b>0.3M</b></td> <td><b>0.3M</b></td> <td><b>0.3M</b></td> <td><b>0.2M</b></td> <td><b>0.1M</b></td> <td><b>0</b></td> <td><b>0</b></td> </tr> </tbody> </table>										<u>PY</u>	<u>CY</u>	<u>BY1</u>	<u>BY2</u>	<u>BY2+1</u>	<u>BY2+2</u>	<u>BY2+3</u>	<u>BY2+4</u>	<b>0604280D</b>	<b>0</b>	<b>0.3M</b>	<b>0.3M</b>	<b>0.3M</b>	<b>0.2M</b>	<b>0.1M</b>	<b>0</b>	<b>0</b>
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<b>0604280D</b>	<b>0</b>	<b>0.3M</b>	<b>0.3M</b>	<b>0.3M</b>	<b>0.2M</b>	<b>0.1M</b>	<b>0</b>	<b>0</b>																		

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Cost (\$ in Millions)	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008
<b>Shared Tactical Ground Picture</b>	0.1	0.25	0	0	0	0	0	0
<p>A. Mission Description and Budget Item</p> <p>The development of a Shared Tactical Ground Picture Capability will provide a stream of knowledge and products directly enhancing each nation's existing tactical ground picture. The increased sharing of data, engineering of solutions, and demonstration of new capabilities will leverage each nations individual efforts. As a leadership activity, the Shared Tactical Ground Picture team will share and publicise its activities and products for full NATO use, and as appropriate for additional Partner-for-Peace nation member use.</p> <p>At the conclusion of the Shared Tactical Ground Picture (STGP) initiative the tactical warfighter through collaborative use of data and value added engineering of existing systems will be provided an increased understanding and visibility of the tactical battlespace. Through the investigation of new technologies STGP will provide a new data sharing mechanism which will provide the tactical commander with a better perception of the battlespace then what currently exists in a multinational environment. This perception will be provided into existing command and control systems through the developed data display and management activity of the initiative. Enhanced data sharing will be accomplished over a communications architecture developed which supports the tactical warfighter through a shared information grid concept. Information from integrated sensors and the linkage of these sensors to shooters to support the mobile targeting of mobile objects will be achieved. In addition the shared information at all levels of command will allow for the exchange of command and control information from multinational participants to facilitate the situational awareness of the tactical warfighter and limit the occurrence of blue on blue engagements.</p> <p>B. Other Program Funding Summary</p> <p style="text-align: center;"> <u>PY</u>      <u>CY</u>      <u>BY1</u>      <u>BY2</u>      <u>BY2+1</u>      <u>BY2+2</u>      <u>BY2+3</u>      <u>BY2+4</u> </p>								

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