

# UNCLASSIFIED

FY 2008/2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2

DATE: February 2007

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0604256N  
PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

COST: (Dollars in Thousands)

| Project Number & Title                                       | FY 2006 Actual | FY 2007 Estimate | FY 2008 Estimate | FY 2009 Estimate | FY 2010 Estimate | FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate |
|--|----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| <b>Total PE</b>  | 23,444         | 23,578           | 23,924           | 25,139           | 25,818           | 26,336           | 26,805           | 27,285           |
| 0602 ELECTRONIC WARFARE ENVIRONMENT SIMULATION (ECHO)        | 11,234         | 11,506           | 11,690           | 12,318           | 12,597           | 12,834           | 13,051           | 13,275           |
| 0672 EFFECTIVENESS OF NAVY ELECTRONIC WARFARE SYSEMS (ENEWS) | 12,210         | 12,072           | 12,234           | 12,821           | 13,221           | 13,502           | 13,754           | 14,010           |

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** This is a continuing program that consolidates the design, fabrication and integration of Naval Electronic Warfare (EW) threat simulators for increased managerial emphasis and coordination. These simulator development efforts provide realistic developmental and operational test and evaluation environments to test tri-services EW systems and defensive tactics. These projects develop former Soviet and free-world anti-air and anti-ship weapon systems simulators in accordance with the services' requirements.

The 0602 Project, Electronic Warfare Environment Simulation, directly supports the test and evaluation resource requirements for all Naval air EW development programs to include multi-spectral situational awareness and countermeasures. Programs in development and future programs include: Advanced Anti-Radiation Guided Missile, ALR-67 (v) 2 and (v) 3, Integrated Defensive Electronic Countermeasures suite ALQ-214, AAR-47 (v) 2 and the AAR-47 (v) 3, AVR -2, advanced 6" expendable, Advanced Strategic Tactical Expendable, ALQ-144A, Assault and Strike Directed Infrared Countermeasures, Joint Strike Fighter, EA-18G, EA-6B Improved Capability Program III, LR700 and the Low Band Transmitter. This project also supports joint service EW systems with initial operational capability in the mid to late 2000's.

The 0672 Project, Effectiveness of Navy EW Systems (ENEWS), is a Department of Navy (DON) unique project that supports Test and Evaluation (T&E) of Ships EW efforts. ENEWS provides T&E for surface and subsurface shipboard systems and tactics in digitally modeled battle scenarios at the component, fully integrated single ship, multi-ship and full-up multi-platform battle group levels. ENEWS also provides a secure anechoic closed

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loop T&E facility specifically designed to test shipboard systems at the stand alone subsystem or fully integrated systems level. The last and largest portion of this project addresses the flyable Infrared and Radio Frequency simulators flown on specially configured NP-3D aircraft to provide at-sea open air T&E for systems and tactics. All ENEWS assets are developed, operated and maintained by the Naval Research Laboratory, Washington, DC.

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**B. PROGRAM CHANGE SUMMARY:**

|  | <u>FY 2006</u> | <u>FY 2007</u> | <u>FY 2008</u> | <u>FY 2009</u> |
|--|----------------|----------------|----------------|----------------|
| FY 2007 President's Budget Submission              | 23,560         | 23,668         | 24,540         | 25,331         |
| Congressional Undistributed Reductions/Rescissions | 17             | -90            | 0              | 0              |
| Execution Adjustments                              | 27             | 0              | 0              | 0              |
| Non-Pay Inflation Adjustments                      | 0              | 0              | -156           | 145            |
| Program Adjustments                                | 0              | 0              | -489           | -463           |
| Rate Adjustments                                   | 0              | 0              | 29             | 126            |
| SBIR Assessment                                    | -160           | 0              | 0              | 0              |
| FY 2008/FY 2009 President's Budget Submission      | 23,444         | 23,578         | 23,924         | 25,139         |

**PROGRAM CHANGE SUMMARY EXPLANATION:**

Technical: Not applicable.

Schedule: Not applicable.

**C. OTHER PROGRAM FUNDING SUMMARY:**

Not applicable.

**D. ACQUISITION STRATEGY:**

Not applicable.

**E. PERFORMANCE METRICS:**

Performance metrics are discussed within each project (R2a).

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DATE: February 2007

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0604256N PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT  
PROJECT NUMBER: 0602 PROJECT TITLE: ELECTRONIC WARFARE ENVIRONMENT SIMULATION (ECHO)

COST: (Dollars in Thousands)

| Project<br>Number<br>& Title                          | FY 2006<br>Actual | FY 2007<br>Estimate | FY 2008<br>Estimate | FY 2009<br>Estimate | FY 2010<br>Estimate | FY 2011<br>Estimate | FY 2012<br>Estimate | FY 2013<br>Estimate |
|---|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 0602 ELECTRONIC WARFARE ENVIRONMENT SIMULATION (ECHO) | 11,234            | 11,506              | 11,690              | 12,318              | 12,597              | 12,834              | 13,051              | 13,275              |

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** The objective of this project is development of necessary simulation facilities and approaches to allow determination of the effectiveness of EW in real world engagement situations and to support the introduction of modern, effective systems into Naval Aviation. The heavy use of test resources by all Services demonstrates the importance of these assets. The Navy has been very successful in executing all of its major programs, and to date has had no major technical problems.

The EW Environment Simulation (ECHO) project is unique in that it is the only program within the Department of Defense (DoD) which develops and provides Naval anti-air warfare threat assets for Testing and Evaluation (T&E) and is a critical part of the Office of the Secretary of Defense (OSD) Test Resource Master Plan. The OSD Master Plan employs many ECHO project resources for planning, analysis, testing and verification of airborne EW equipment.

This project directly supports the T&E resource requirements for all Naval Air EW development programs, to include multi-spectral situational awareness and countermeasures. Programs in development and future programs include: Advanced Anti-Radiation Guided Missile (AARGM), ALR-67 (v) 2 and (v) 3, Integrated Defensive Electronic Countermeasures (IDECM) Suite ALQ-214, AAR-47 (v) 2 and the AAR-47 (v) 3, AVR -2, Advanced 6" Expendable, Advanced Strategic Tactical Expendable (ASTE), ALQ-144A, Strike and Assault Directed Infrared Countermeasures (DIRCM), Joint Strike Fighter, EA-18G, EA-6B Improved Capability Program (ICAP III), LR700 and the Low Band Transmitter (LBT). This project also supports Joint Service EW systems with initial operational capability in the mid to late 2000's.

This project provides for the development of an Integrated Air Defense T&E capability to be fielded at each of the three sites comprising the Navy's Tri-Center complex: Naval Air Warfare Center Weapons Division, China Lake and Point Mugu in CA, and Naval Air Warfare Center Aircraft Division, Patuxent River, MD.

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PROGRAM ELEMENT: 0604256N

PROJECT NUMBER: 0602

PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

PROJECT TITLE: ELECTRONIC WARFARE ENVIRONMENT SIMULATION (ECHO)

**B. ACCOMPLISHMENTS/PLANNED PROGRAM:**

|  | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
|--|---------|---------|---------|---------|
| <b>ELECTRO-OPTICAL/INFRA-RED (EO/IR) THREAT CAPABILITIES</b> | 3,660   | 5,083   | 2,675   | 2,380   |

FY 2006 - FY 2009: Provide the test community with the modern threat systems necessary for T&E of airborne Electro-Optic/InfraRed (EO/IR) passive alert systems and airborne EO/IR active response systems. Develop one versus many and many versus many integrated countermeasure assessment systems which provide spectral, power, and temporal systems to test and evaluate missile warning systems and measure the end-game effectiveness of IR expendables and directional IR countermeasures systems by simulating high speed IR missile engagements against airborne targets. Combine the capability of the existing IR seeker vans to enable testing of up to 12 seekers simultaneously to expedite data collection against tier 1 IR Surface to Air Missiles (SAMs). Upgrade the IR sensor stimulator with the capability for IR plume simulators to react to threat missile seeker guidance commands; to enable the plume stimulator to receive immediate feedback from the instrumentation observing the countermeasure's effectiveness; and to relay that "response" to the controlling software that generates the plume signature.

|   | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
|---|---------|---------|---------|---------|
| <b>RADIO FREQUENCY (RF) THREAT CAPABILITIES</b> | 5,634   | 4,242   | 6,972   | 7,841   |

FY 2006 - FY 2009: Provide the test community with the modern threat systems necessary for T&E of airborne RF alert, situation awareness, targeting systems and airborne RF response systems. Upgrade the existing open air range and laboratory threat simulators to provide a new generation, high fidelity double digit threat I-34 (Advanced Threat Simulator). Provide advanced modulation and millimeter wave capability to the advanced multiple environment simulators. Procurement and integration of an advanced threat system through the foreign materials acquisition channels. Continue intel updates to missile, radar, and gun simulations. Upgrade the I-32 open air antenna with side lobe canceling and replace the aging transmitter; provide the I-32 simulator at electronic combat range with a second frequency for multiple-missile launch, side-lobe canceling and improved electronic counter-counter measure capabilities. Develop long range threat systems to simulate double digit SAMs, using recent intelligence and available exploitation data gathered by the Missile and Space Intelligence Center.

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PROJECT NUMBER: 0602

PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

PROJECT TITLE: ELECTRONIC WARFARE ENVIRONMENT SIMULATION (ECHO)

|                                    | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
|------------------------------------|---------|---------|---------|---------|
| <b>REQUIREMENTS AND VALIDATION</b> | 1,940   | 2,181   | 2,043   | 2,097   |

FY 2006 - FY 2009: Validate and track intel updates of the threat systems necessary for the operation and continuous improvement of Navy laboratories and ranges which provide engineering support, testing and analysis to the developers, integrators, testers and users of systems and technologies that counter or penetrate air defenses. Provide program management and systems engineering support for the development of simulators and the acquisition of foreign material to accurately reflect current and future threat scenarios.

**C. OTHER PROGRAM FUNDING SUMMARY:**

Not applicable.

**D. ACQUISITION STRATEGY:**

Not applicable.

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DATE: February 2007

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 PROGRAM ELEMENT: 0604256N      PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT  
 PROJECT NUMBER: 0672      PROJECT TITLE: EFFECTIVENESS OF NAVY ELECTRONIC WARFARE SYSEMS (ENEWS)

| Project Number & Title                                       | FY 2006 Actual | FY 2007 Estimate | FY 2008 Estimate | FY 2009 Estimate | FY 2010 Estimate | FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate |
|--|----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| 0672 EFFECTIVENESS OF NAVY ELECTRONIC WARFARE SYSEMS (ENEWS) | 12,210         | 12,072           | 12,234           | 12,821           | 13,221           | 13,502           | 13,754           | 14,010           |

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** The objective of the Effectiveness of Navy Electronic Warfare (EW) Systems (ENEWS) Project is the development and application of necessary simulation assets to determine the effectiveness of EW for navy ships in simulated real-world engagement situations. The project primarily supports the introduction of modern, effective shipboard and offboard EW systems, and tactics for the Surface Navy. The heavy use of ENEWS resources by Naval Sea Systems Command, Operational Test and Evaluation (OT&E) Force, Special Operations, and other EW Research, Development, Test and Evaluation (T&E) agencies speaks to the overall importance of this project. The project provides support for EW system design Engineering Test (ET), Development Test (DT), Operational Test (OT), and the development of utilization tactics. Its quick reaction capabilities have had great impact on crisis situations such as the Lebanon and Libyan crises, Iran Harpoon threat, Persian Gulf crisis, and Operation Desert Shield/Storm. Simulation Display is another ENEWS modeling tool that was developed to support T&E. The display has been adopted by most Department of Defense (DoD) T&E and training ranges to provide visualization of T&E and training scenarios. The primary threat to surface ships is Anti-Ship Capable Missile systems. The ENEWS Project is unique in that it is the only project within DoD dedicated to developing and providing realistic Anti-Ship Capable Missile assets to test and evaluate the effectiveness of shipboard EW systems and tactics against these type threats. The ENEWS Project is a critical part of the Office of the Secretary of Defense Test Resource Master Plan. This plan employs many of the ENEWS assets for planning, analysis, testing, and verification of shipboard and offboard EW systems techniques and tactics. As part of its normal activities, ENEWS provides Development Test and Evaluation (DT&E), OT&E, and Follow-on Operations Test and Evaluation (FOT&E) support to the surface Navy for all ship classes. DT, OT and FOT&E support includes AN/SLQ-32 Surface Electronic Warfare Improvement Program (SEWIP), R17.OX NULKA, Rapid Anti-ship Integrated Defense System, all MK245 Giant tests, advanced InfraRed (IR) decoys, decoy placement, ship IR signature and radar cross section measurement of DDG-51, LPD-17, DD-21 and PC class ships, High Power Microwave program, and other ship self-defense initiatives, including T&E of Future Naval Capability process. In addition, ENEWS assets are regularly employed to test the effectiveness of North Atlantic Treaty Organization ships' EW systems in joint allied exercises.

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PROJECT NUMBER: 0672

PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

PROJECT TITLE: EFFECTIVENESS OF NAVY ELECTRONIC WARFARE SYSEMS (ENEWS)

## B. ACCOMPLISHMENTS/PLANNED PROGRAM:

|                                    | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
|------------------------------------|---------|---------|---------|---------|
| <b>SIMULATOR HARDWARE UPGRADES</b> | 69      | 77      | 240     | 250     |

Provides simulator upgrades to ENEWS flyable and shore based IR and RF simulators.

The increase between FY 2007 and FY 2008 is due to an increased tempo of operational testing.

### FY 2006 Accomplishments:

- Initiated and completed intelligence upgrades to MEIR 3, SUMMIT and FOXTROT 1 Standard Instrumentation Pods (SIP).
- Initiated intelligence upgrades to MIKE 3 SIP, and VICTOR 1 SIP.

### FY 2007 Plans:

- Continue all efforts of FY 2006.
- Complete intelligence upgrades to Mike 3 and VICTOR 1 SIPs.
- Initiate intelligence upgrades to FOXTROT 3 and MIKE 4 SIPs.

### FY 2008 Plans:

- Continue all efforts of FY 2007 less those noted as completed above.
- Complete intelligence upgrades to FOXTROT 3 and MIKE 4 SIPs.
- Initiate intelligence upgrades to FOXTROT 2 and VICTOR 2 SIPs.

### FY 2009 Plans:

- Continue all efforts of FY 2008 less those noted as completed above.
- Complete intelligence upgrades to FOXTROT 2 and VICTOR 2 SIPs.

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PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

PROJECT TITLE: EFFECTIVENESS OF NAVY ELECTRONIC WARFARE SYSEMS (ENEWS)

|                                    | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
|------------------------------------|---------|---------|---------|---------|
| <b>SIMULATOR SOFTWARE UPGRADES</b> | 60      | 68      | 130     | 100     |

Provides software upgrades to existing ENEWS flyable and shore based simulations required due to either hardware upgrades or new intelligence information. FY 2006 - FY 2007 focus is on upgrades to existing simulators.

The increase between FY 2007 and FY 2008 is due to an increased tempo of operational testing.

#### **FY 2006 Accomplishments:**

- Initiated intelligence upgrades to MIKE 3 and VICTOR 1 SIPs. There will be 2 simulations: visible band and sim 4.
- Completed software intelligence upgrades to MEIR 3, SUMMIT and FOXTROT 1 SIP.

#### **FY 2007 Plans:**

- Continue all efforts of FY 2006 less those noted as completed above.
- Complete software intelligence upgrades to MIKE 3 and VICTOR 1 SIPs.
- Initiate software intelligence upgrades to FOXTROT 3 and MIKE 4 SIPs.

#### **FY 2008 Plans:**

- Continue all efforts of FY 2007 less those noted as completed above.
- Complete software intelligence upgrades to FOXTROT 3 and MIKE 4 SIPs.
- Initiate software intelligence upgrades to FOXTROT 2 and VICTOR 2 SIPs.

#### **FY 2009 Plans:**

- Continue all efforts of FY 2008 less those noted as completed above.
- Complete software intelligence upgrades to FOXTROT 2 and VICTOR 2 SIPs.

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PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

PROJECT TITLE: EFFECTIVENESS OF NAVY ELECTRONIC WARFARE SYSEMS (ENEWS)

|                                   | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
|-----------------------------------|---------|---------|---------|---------|
| <b>SIMULATOR CHARACTERIZATION</b> | 26      | 29      | 35      | 40      |

Provides characterization of IR and RF simulators as part of the periodic checks on simulator performance and collects performance data for comparison with previously recorded data.

Operational requirements demand that these simulators to be available to support testing events. Simulator baselines must be established, updated and documented in order to ensure the simulators are operating in accordance with their design specifications.

**FY 2006 Accomplishments:**

- Initiated and completed characterization of INDIA I.

**FY 2007 Plans:**

- Initiate and complete characterization of NOVEMBER Va, NOVEMBER Vb and 3rd generation INDIA II control panel.

**FY 2008 Plans:**

- Initiate and complete characterization of KILO, QUEBEC AND TANGO.

**FY 2009 Plans:**

- Initiate and complete characterization of INDIA III and PAPA.

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|                              | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
|------------------------------|---------|---------|---------|---------|
| <b>SIMULATOR MAINTENANCE</b> | 1,100   | 1,071   | 992     | 1,176   |

Provides required simulator maintenance to ensure that the hardware simulators are available for customer testing. Preventative maintenance, troubleshooting, and repairs are performed as required.

Operational requirements demand that these simulators be available to support testing events. Maintenance is the key to having them available.

#### **FY 2006 Accomplishments:**

- Continued annual maintenance on 21 simulators - 15 RF and 6 IR simulators to support 15 flight/shore based tests.
- Initiated and completed transition of the INDIA II and TANGO simulators into the Naval Research Laboratory (NRL) Learjet Electronics Pod (LEP).

#### **FY 2007 Plans:**

- Continue all efforts of FY 2006.
- Initiate and complete transition of NOVEMBER and QUEBEC simulators into the NRL LEP.

#### **FY 2008 Plans:**

- Continue all efforts of FY 2007.
- Initiate and complete transition of the ROMEO simulator into the NRL LEP.

#### **FY 2009 Plans:**

- Continue all efforts of FY 2008.
- Initiate and complete transition of the INDIA III into the NRL LEP.

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|                                 | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
|---------------------------------|---------|---------|---------|---------|
| <b>SIMULATOR CONTROL PANELS</b> | 253     | 244     | 217     | 270     |

Supports the development and maintenance of all simulator control panels.

Operational requirements demand that these simulator control panels be available to support testing events.

**FY 2006 Accomplishments:**

- Completed FOXTROT 1 SIP and INDIA I simulator control panels with 10 assemblies.
- Initiated INDIA II simulator control panel.

**FY 2007 Plans:**

- Continue all efforts of FY 2006 less those noted as completed above.
- Complete INDIA II simulator control panel.

**FY 2008 Plans:**

- Continue all efforts of FY 2007 less those noted as completed above.
- Initiate QUEBEC control panel.

**FY 2009 Plans:**

- Continue all efforts of FY 2008.
- Complete QUEBEC control panel.
- Initiate and complete VICTOR 1 SIP control panel.

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|                              | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
|------------------------------|---------|---------|---------|---------|
| <b>LABORATORY FACILITIES</b> | 1,022   | 1,027   | 900     | 940     |

Provides maintenance and upgrades to the indoor laboratory and outdoor land based facilities required to perform testing of surface EW systems.

Change reflects slowdown of upgrades and increased tempo of operational testing.

**FY 2006 Accomplishments:**

- Initiated and completed upgrades to the mobile IR simulator van, adding 400 cycle power and 27 volt DC to support 5 simulators.

**FY 2007 Plans:**

- Initiate maintenance and upgrades to shore based test facilities and mobile test vans as required to conduct tests in support of SEWIP, NULKA and multi function EW programs.

**FY 2008 Plans:**

- Continue all efforts of FY 2007.

**FY 2009 Plans:**

- Continue all efforts of FY 2008.

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|                                     | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
|-------------------------------------|---------|---------|---------|---------|
| <b>SIMULATION THREAT REPOSITORY</b> | 40      | 43      | 30      | 35      |

Provides management, access, and configuration control of the classified document and simulations library.

Operational requirements demand that these digital simulators be available to support testing events. It requires the most up-to-date and accurate information on threat systems in order to model the realistic simulators.

#### **FY 2006 Accomplishments:**

- Continued transitioning NRL Codes 5750 and 5770's environmental, threat and platform simulations to the subversion software configuration management program. Upgraded subversion software library as new releases became available - 100 updates annually.
- Initiated and completed evaluation of subversion database software analyzing new capabilities to improve configuration management.
- Initiated new digital models of Anti-ship Cruise Missile (ASCM) threats as they became available.

#### **FY 2007 Plans:**

- Continue all efforts of FY 2006.

#### **FY 2008 Plans:**

- Continue all efforts of FY 2007.

#### **FY 2009 Plans:**

- Continue all efforts of FY 2008.

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|                                   | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
|-----------------------------------|---------|---------|---------|---------|
| <b>SIMULATION INSTRUMENTATION</b> | 482     | 566     | 555     | 670     |

Provides development and maintenance of flight support instrumentation such as oscilloscopes, global positioning systems, videocassette systems, and monitors.

Operational capabilities demand that these instrumentation systems be available to support testing events.

#### **FY 2006 Accomplishments:**

- Continued upgrades and maintenance of flight support systems as necessary to support the IR/RF ENEWS simulators. There are 15 RF and 6 IR simulators.
- Initiated and completed TANGO console for the Learjet to support scheduled fleet testing.
- Initiated and completed installing digital video recorder on INDIA II console.

#### **FY 2007 Plans:**

- Continue all efforts of FY 2006.

#### **FY 2008 Plans:**

- Continue all efforts of FY 2007.

#### **FY 2009 Plans:**

- Continue all efforts of FY 2008.

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|                              | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
|------------------------------|---------|---------|---------|---------|
| <b>SIMULATION VALIDATION</b> | 677     | 606     | 530     | 590     |

Provides for the validation of hardware simulators and digital models. Develops reports that contain detailed descriptions and parametric data of the threat simulators or digital models and compares the simulator's parametric data to the actual threat parametric data.

DoD and Department of the Navy regulations require validation of all threat simulations used in an OT&E event.

#### **FY 2006 Accomplishments:**

- Completed MIKE 2, MEIR 2, QUESTION and NOVEMBER II hardware validation reports. Provided reports to the Simulator Validation Working Group (SVWG).
- Initiated INDIA II, MIKE 3, NOVEMBER III and IV, FOXTROT 1 SIP and QUEBEC hardware validation reports.

#### **FY 2007 Plans:**

- Continue all efforts of FY 2006 less those noted as completed above.
- Complete INDIA II, MIKE 3, NOVEMBER III and IV, FOXTROT 1 SIP, and QUEBEC hardware validation reports. Provide reports to SVWG.
- Initiate TANGO, NOVEMBER Va and Vb hardware validation reports.

#### **FY 2008 Plans:**

- Continue all efforts of FY 2007 less those noted as completed above.
- Complete NOVEMBER Va and submit report to the SVWG.
- Initiate INDIA I, PAPA and KILO hardware validation reports.

#### **FY 2009 Plans:**

- Continue all efforts of FY 2008 less those noted as completed above.
- Complete NOVEMBER Vb and TANGO hardware validation reports and submit to the SVWG.

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|   | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
|---|---------|---------|---------|---------|
| <b>ELECTRONIC ATTACK/ELECTRONIC SUPPORT SIMULATIONS</b> | 567     | 571     | 485     | 447     |

Provides improvements and intelligence upgrades to ASCM Digital Models to include fly-out models, NULKA and other off-board decoys including chaff models. Also, supports the maintenance of the Threat Database to provide threat intelligence for the development of T&E digital scenarios.

Operational requirements demand that these digital models and scenarios simulations be available to support testing events.

#### **FY 2006 Accomplishments:**

- Continued improvements and intelligence upgrades to ALPHA I, INDIA I, II, III, LIMA, NOVEMBER III, QUEBEC, TANGO, and TANGO II. In all, a total of 9 digital models.
- Initiated and completed analysis of NOVEMBER digital model to resolve discrepancies in production runs.
- Initiated upgrade to cruise missile simulation suite to improve capability to model advanced threats by adding graphical user interface (GUI).

#### **FY 2007 Plans:**

- Continue all efforts of FY 2006.

#### **FY 2008 Plans:**

- Continue all efforts of FY 2007.

#### **FY 2009 Plans:**

- Continue all efforts of FY 2008.
- Complete upgrade to cruise missile simulation suite to improve capability to model advanced threats by adding GUI.

# UNCLASSIFIED

FY 2008/2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2007

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0604256N

PROJECT NUMBER: 0672

PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

PROJECT TITLE: EFFECTIVENESS OF NAVY ELECTRONIC WARFARE SYSEMS (ENEWS)

|                           | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
|---------------------------|---------|---------|---------|---------|
| <b>PROGRAM MANAGEMENT</b> | 330     | 416     | 400     | 465     |

Provides technical management functions in support of the ENEWS project; engineering and technical support required for the overall efforts of ASCM Simulator and Digital Models development to meet DT/OT testing requirements, development of detailed test resource requirements, and provide an interface between N-912, N-433, Office of Naval Research, and other ENEWS oversight activities. Also, provides technical leadership to the Navy Surface ASCM Threat SVWG.

Needed operational capabilities require increased effort towards these simulators and simulations to be available for testing of critical systems for future deployment. This results in additional management costs.

#### **FY 2006 Accomplishments:**

- Continued management of the SVWG.
- Initiated and completed update of FY 2006 Program Management Plan.
- Initiated and completed FY 2006 quarterly reports, earned value management analysis, and progress tracking and analysis.

#### **FY 2007 Plans:**

- Continue all efforts of FY 2006.
- Initiate and complete update of FY 2007 Program Management Plan.
- Initiate and complete FY 2007 quarterly reports, earned value management analysis, progress tracking and analysis.

#### **FY 2008 Plans:**

- Continue all efforts of FY 2007.
- Initiate and complete update of FY 2008 Program Management Plan.
- Initiate and complete FY 2008 quarterly reports, earned value management analysis, progress tracking and analysis.

# UNCLASSIFIED

FY 2008/2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2007

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0604256N

PROJECT NUMBER: 0672

PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

PROJECT TITLE: EFFECTIVENESS OF NAVY ELECTRONIC WARFARE SYSEMS (ENEWS)

## **FY 2009 Plans:**

- Continue all efforts of FY 2008.
- Initiate and complete update of FY 2009 Program Management Plan.
- Initiate and complete FY 2009 quarterly reports, earned value management analysis, progress tracking and analysis.

|                           | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
|---------------------------|---------|---------|---------|---------|
| <b>CLASSIFIED PROGRAM</b> | 7,584   | 7,354   | 7,720   | 7,838   |

Details about this program are classified.

## **FY 2006 Accomplishments:**

- Details are of a higher classification.

## **FY 2007 Plans:**

- Details are of a higher classification.

## **FY 2008 Plans:**

- Details are of a higher classification.

## **FY 2009 Plans:**

- Details are of a higher classification.

## **C. OTHER PROGRAM FUNDING SUMMARY:**

Not applicable.

## **D. ACQUISITION STRATEGY:**

Not applicable.