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

DATE: February 2007

BUDGET ACTIVITY: 03
PROGRAM ELEMENT: 0603727N
PROGRAM ELEMENT TITLE: JOINT EXPERIMENTATION

decisively to emerging crises and conflicts. In an era of uncertainty, U.S. forces must be capabilities-based rather than threat-based.

The terrorist attacks on the US homeland in September 2001, and the US and allied response in Afghanistan and Iraq have underscored the new challenges that US forces will face in the coming decades in coping with the threat of terrorism and consequence of failed states. Coordinated Joint Concept Development and Experimentation (JCDE) effort is an indispensable tool to support transformational objectives and to improve US capabilities. These capabilities will ensure the nation's ability to conduct a war on terrorism through the use of all instruments of power. This war cannot be won solely with legacy solutions. Development of advanced techniques, tools, and organizations to defeat terrorism and meet other new challenges of the 21st century requires new thinking and aggressive experimentation to develop alternatives and ensure the effectiveness of the future joint force.

The work of JCDE is imperative because emerging changes in the threat will not await the wholesale recapitalization of today's force structure and because new equipment alone will not provide the capabilities needed for future forces.

COCOMs have input to the priorities for experimentation through USJFCOM's Combatant Commander Engagement program. The future of joint warfighting is the USJFCOM area of responsibility. Joint Experimentation's purpose is to lay the foundation for national security transformation. Development of a coherent joint force starts with aggressive concept development and robust joint experimentation. USJFCOM establishes a common joint context for DOD which has already proven to be a powerful tool fostering coherence, improved stewardship and early interoperability materiel solutions that are "born joint." Concept development, both Joint and Service, happens through intellectual exploration, focus, and partnerships.

DOD priorities supported by Joint Experimentation: a) Successfully pursue the Global War on Terrorism (GWOT); b) Strengthen joint warfighting capabilities; c) Develop new concepts of global engagement; d) Transform the joint force; e) Homeland Security; f) Optimize intelligence capabilities; and g) Improve Department of Defense processes.

We ensure this transformation by exploring, testing, and then establishing new combinations of concepts, capabilities, people, and organizations. Through the process of discovering new capabilities, we can exploit our nation's strengths and advantages while protecting ourselves from asymmetric forces that threaten our strategic superiority. Joint Experimentation implements this transformation mission through a process of

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discovery, innovation, concept development, and experimentation to provide for optimal joint future force capability.

The Joint Experimentation campaign focuses on developing two distinct products as the result of a two-path strategy on which we base our approach to innovation. The first path is called the Joint Prototype Pathway. This conceptual/prototypical system or doctrine evolves from concept experimentation in concert with our partners. These systems are inserted into real world situations (e.g., U.S. Forces Korea) so that we can expand the experimental ground and refine the concept/prototype at the user level to ensure the solutions work as envisioned. This path is designed to help the Department improve near-term warfighting capabilities now by taking new ideas or concepts that originate on the joint concept development pathway and converting them into physical form, as developmental prototypes. From there, these prototypes are put into the hands of joint warfighters as quickly as possible to validate the capability at the user level. While Commanders feel that a number of new concepts offer greater promise than current capabilities, they use them with the understanding that they are part of the continuing refinement process. Some aspects of these concepts were utilized in Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF).

The second path is called the Joint Concept Development Pathway. This path and its products consist of actionable recommendations that result from collaborative experimentation with new concepts and capabilities that focus on the next decade. Based on how these concepts perform at the user level, recommendations are made to senior leaders that aid decision making to invest military resources in the next decade. Work performed on the joint concept development path is dedicated to making long-term improvements to military capability, focusing on making next decade improvements to joint warfighting. Part of the campaign strategy is continuous experimentation using Combatant Commanders' exercises and operations (engagement and combat) across a Distributed Continuous Experimentation Environment (DCEE). USJFCOM designed DCEE to be a world-class resource designed to support continuous experimentation; a sophisticated network of high-tech model and simulations with a global reach, both virtual and physical. This laboratory is capable of conducting various experiments, either locally or globally and, because of this, our partners, the Services, COCOMs, allied nations, or various agencies, may participate in experiments at levels specific to their needs and interests.

For joint concept experimentation to be effective, we use four common scenarios that reflect current and future threats based on the geopolitical and military realities we see emerging between now and 2015: 1) Major Combat operations against an inaccessible adversary who presents a global WMD threat; 2) Joint operations in urban environments; 3) Operations against a non-state actor with significant regional combat capability, weapons of mass effect, and ties to global terrorist operations; and 4) Operations against a

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faltering or failing state that has regional WMD of mass effect capability. These scenarios are the basis for evaluating the major military challenges that were derived from strategic guidance and input from the Services and COCOMs. USJFCOM's efforts over the next several years will focus in particular on the following concepts: Achieving decision superiority: shared-situation understanding so that we can make decisions and take action faster than any adversary; Creating coherent effects: Harmonizing military, interagency, and multinational activities at the strategic, operational, and tactical levels against any type of adversary; Conducting and supporting distributed operations: Planning, preparing, and executing simultaneously in multiple theaters and widely distributed points of action within each theater while denying sanctuaries and protecting ourselves from Homeland to point of action.

The Joint National Training Capability (JNTC) was established to develop the capabilities that integrate live, virtual and constructive elements into a seamless joint training environment. JNTC creates joint warfighting conditions through a networked collection of interoperable training sites and nodes that synthesize personnel, doctrine and technology to achieve COCOM and service training requirements.

The Secretary of Defense tasked USJFCOM with the responsibility for maintaining Joint Simulation System (JSIMS) software and establishing a Software Support Facility (SSF) at the Joint Warfighting Center, pending the results of an Analysis of Alternatives (AoA). As a result of the AoA findings, the SSF will further develop additional enhancements to constructive simulations designed to eliminate COCOM training gaps. The center provides the joint training environment with the ability to insert emerging technology or reuse existing systems in the constructive training architecture.

The Deputy Secretary of Defense conveyed the budget decision to support Training Capability Analysis of Alternatives Joint National Training Capability (TCAoA/JNTC) for FY 2006-2011. In order to meet the current and forecast gaps in Joint and Service training, this decision incorporated: (1) enhancements to the existing and programmed constructive simulations, (2) selected alternative training methodologies, (3) an innovative acquisition prototype, (4) a comprehensive study to re-engineer joint training, and (5) a clear management and oversight structure to meet future Joint training requirements with a selection of robust training tools.

At the July 2004 Australia/US Ministerial Consultations (AUSMIN), the Secretary of Defense (SECDEF) signed an Australian - United States Joint Statement of Principles of Interoperability and affirmed the development of a Joint/Combined Training Center (Capability) (JCTC). The end-state for the JCTC is to enhance high-end training and enable forces to be exercised in Joint/Combined mission essential tasks in order to increase and measure operational capability and preparedness, improve interoperability, facilitate capability development

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by identifying specific deficiencies that occur in the gaps and seams and develop recommended solutions, and lastly enhance regional security. The JCTC will be linked to DoD's JNTC as part of the Global Joint Training Infrastructure (GJTI) via USPACOM's Gaming and Simulation Facility (GSF) and eventually USPACOM's Pacific Warfighting Center as a cooperative collection of training sites, nodes, simulations, and events.

There is a critical operational need for urban modeling and simulation tools that support mission rehearsal and analysis of actual battlespace. This project funding will provide virtual tools which replicate urban areas (i.e. Fallujah) to permit real time planning for units engaged in combat operations. This capability also provides Live-Virtual-Constructive simulation requirements and capabilities to train and assess precision effects on urban targets to include large-scale urban combined arms live fire training and experimentation facilities at the Joint Urban and Operations Task Force (JTF) level. The backbone exists in the Joint Semi-Automated Force (JSAF) model federation. Additional capabilities will be developed by creating Human-in-the-Loop (HITL) distributed architecture, Operational Net Assessment product support for current theater, terrain enhancements, enhanced urban movement and fidelity for people and vehicles will also be added to the project.

Joint Experimentation Visualization requires a solution set that allows for the synthesizing of large amounts of data into coherent pictures that speed decision making loops and course corrections and support JC2 efforts at the JTF level. It is critical for the ability to understand, prioritize, and manage critical reach back decision support for a richer and timelier solution set to address operational challenges. Also, Joint Experimentation Visualization will provide an essential capability to support the new Unified Command Plan mission for leading and coordinating the Department of Defense's Joint Concept Development Experimentation efforts.

Due to the number of efforts in this PE, the programs described herein are representative of the work included in this PE.

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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	180,106	0	0	0
Congressional Realignment	1,100	0	0	0
Congressional Undistributed Reductions/Rescissions	195	0	0	0
Execution Adjustments	440	0	0	0
SBIR Assessment	-3,983	0	0	0
FY 2008/FY 2009 President's Budget Submission	177,858	0	0	0

PROGRAM CHANGE SUMMARY EXPLANATION:

Technical: Funds transfer from Navy to Defense-Wide beginning in FY 2007.

Schedule: Not applicable.

C. OTHER PROGRAM FUNDING SUMMARY:

Not applicable.

D. ACQUISITION STRATEGY:

Not applicable.

E. PERFORMANCE METRICS:

USJFCOM Joint Concept Development and Experimentation (JCDE) transformation efforts and Campaign Plan focus on high priority tasks identified by the COCOMs and other priorities assigned to USJFCOM through the Transformation Planning Guidance (TPG) and the Chairman of the Joint Staff (CJS).

Unified Command Plan 2004 (UCP04) directed USJFCOM TO "lead and coordinate the department's experimentation activities." Using persistent, continuous experimentation in smaller events that pull together national assets, USJFCOM is agile enough to address current and future issues. USJFCOM Modeling and Simulation Toolbox supplies joint and coalition tools including complex urban modeling and simulation, providing highly capable and thinking adversaries, and building stronger links with other U.S. agencies and coalition partners.

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FY 2006 Priorities

- Joint Experimental Deployment and Support (JxDS): Develop a concept of operations for a logistics element that can synchronize logistics to satisfy operational taskings.
- Joint Information Superiority (JxI): Improve our ability to effectively use Information Operations (IO) and Information Dominance (ID) for the Joint Force Commander.
- Multinational Experimentation and Engagement: Improve our ability for the unified action efforts of our coalition partners.
- Security and Stability Operations: Provide the JFC the ability to expand situational security and create conditions from which stability can grow.
- Joint Urban Operations: Develop the ability for the JFC to deliver information-based precision operations and effects in the complex environment of urban terrain, including denying sanctuary in the urban setting.
- Other areas in concept development include Major Combat Operations, Strategic Deterrence, Homeland Security and Joint Forcible Entry Operations for Full Spectrum Operations.

For Joint Training Modeling and Simulations Development, the overall program goal is to develop capabilities in joint simulations to eliminate (COCOM) identified training gaps and to provide the joint training environment with the ability to insert emerging technology or enhance existing systems to support joint training requirements. Examples of capabilities to be developed/enhanced are common database format, terrain simulation, After Action Review process for simulation, Run Time Infrastructure component for distributed simulation, and C4I interfaces.

The JNTC will establish a robust research, development, and demonstration program to ensure that the latest S&T are incorporated quickly into Defense knowledge and superiority capabilities, as well as into globally distributed mission rehearsal and joint training systems. S&T improvements will stimulate spiral development processes in the areas of Global Joint Training Infrastructure and Advanced Training Technologies. Using database tracking and knowledge management to keep abreast of ongoing S&T programs and demonstrations, the JNTC will conduct an advanced training technology program to develop new joint training capabilities that address defined operational training requirements and known technology shortfalls.

1. Joint Experimental Deployment and Support (JxDS)
 - (JxDS) Operational Assessment Plan
 - (JxDS) Training Plan for United States Forces, Korea (USFK)
 - JxDS Plan for Demonstration for Reception, Staging, Onward movement and Integration (RSOI) 2006

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- Finalized JxDS Concept of Operation
- JxDS for USFK (Initial Operational Capability (IOC))
- Start Transition Plan

2. Security, Stability, Transition and Reconstruction Operations

- Improve capability to plan, coordinate, and execute security, stability, transition, and reconstruction within an area of responsibility

3. Joint Urban Operations (JUO)

- Identify means and potential capabilities to deny sanctuary for irregular warfare in urban environments

4. Multinational Engagement and Experimentation

- Conduct Multi-National Experiment 4
- Improve the Multi-National information Sharing (MNIS) capability to fuse and share mission related information with multi-national (MN) and Interagency (IA) partners through policy and technology
- Improve capability to include MN and IA organizations in a coordination and collaboration process

5. Joint Mission Modeling Tools (JMMT)

- Enhance the virtual, live and constructive environment for JCD&E by adding modules to the federation that are applicable to irregular warfare and the urban terrain including political, military, economic, social, information and infrastructure (PMESII)

6. Joint Experimental Information (JxI)

- Improve integration of the elements of IO and ID

7. JNTC

- Establish collaborative agreements with external scientific and technical organizations to integrate and leverage their initiatives with ongoing JNTC efforts.
- Evaluate new and emerging industry and government technologies in the JNTC Advanced Training Technologies laboratory for transition into JNTC training architectures.
- Perform system certification testing of training applications in support of the JNTC Accreditation Certification Programs.
- Perform RDT&E in new and emerging technologies, such as, immerse virtual technologies, story driven training, light simulation/federations, massive-multiplayer online games, training objective driven

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simulations, embedded training, and joint community unique simulations.

8. JCTC

- Complete the JCTC enabling study.
- Publish a JCTC CONOPS for establishing and maintaining through spiral development an integrating architecture that links Australian/US training management systems, training areas, constructive simulations, virtual simulators, headquarters, and units.
- Design the C4I architecture to connect JNTC persistent and nonpersistent sites to the future Australian JCTC Management Centre and outlying Australian training areas.

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PROGRAM ELEMENT: 0603727N PROGRAM ELEMENT TITLE: JOINT EXPERIMENTATION
PROJECT NUMBER: 2497 PROJECT TITLE: JOINT EXPERIMENTATION

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
2497 JOINT EXPERIMENTATION	104,395	0	0	0	0	0	0	0

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Joint Experimentation Campaign Plan focuses on high priority tasks assigned to USJFCOM through the DPG and the Chairman of the Joint Staff (CJS) instructions on Joint Concept Development and Experimentation. Additionally the top priorities are designed to enable joint support to unified action by experimenting with concepts and prototypes that assist the department in:

1. Deter, detect, engage, and defeat asymmetric global threats.
2. Win Information Superiority fight.
3. Integrate MN capabilities to support Combined Operations.
4. Support interagency planning and execution to accomplish stability, reconstruction and transition operations.
5. Deny sanctuary to threats in complex environments.
6. Rapidly deploy, project and sustain joint capabilities on a global scale.
7. Improve methods and means to integrate and execute Joint Operations.

USJFCOM synchronized Joint and Service efforts in a "battle rhythm" that balances concept development with experimentation and smaller events that are more agile and adaptable. Unified Command Plan 2004 (UCP 2004) strengthened the JCD&E role by directing USJFCOM to "lead and coordinate the department's experimentation activities." Additionally, USJFCOM continues to strengthen these tools for conducting joint concept development and experimentation, including scalable parallel processing for modeling and simulation, providing highly capable and thinking adversaries through more effective red teaming initiatives, and building stronger links with other U.S. agencies and potential coalition partners.

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B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 2006	FY 2007	FY 2008	FY 2009
JOINT EXECUTABLE CONCEPT REFINEMENT	31,380	0	0	0

Previously known as Standing Joint Force Headquarters (SJFHQ) Enabling Concept in the FY 2005 President's Budget, the title was changed to eliminate confusion with work being done by the Joint Battle Center to support the Standing Joint Forces HQ Interoperability Technical Demonstration Center (ITDC).

FY 2006 Accomplishments:

- Continued concept refinement activities and identify capabilities mature enough for insertion into COCOM's infrastructure to evaluate capabilities in real world operational environments. USJFCOM goal is to identify maturing applications through experimentation spirals and move them forward into real world situations to provide an increased capability for joint warfighting.
- Knowledge Advantage: Synthesized information into a construct that provides the JFC a strategic and operational edge.
- Multinational and Coalition Information Sharing: Stratified information sharing applications through portal technology.
- Multinational Forces: Iraq Portal deployed and utilized in Iraq.
- Expanded and continued multinational experimentation for multinational and coalition integration and operations coherently across the JFC operational needs.
- Multinational Experiment 5: Expanded and continued multinational and coalition integration and operations coherently across the JFC's operational needs.

FY 2007 Plans:

- Funds transfer from NAVY to Defense-Wide beginning in FY 2007.

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	FY 2006	FY 2007	FY 2008	FY 2009
MULTI-NATIONAL AND COALITION CONCEPT DEVELOPMENT	5,225	0	0	0

FY 2006 Accomplishments:

-Built lessons learned from real world and experimental coalition experimentation. Worked on Content-Based Information Security and other options to fully engage partners in the ways and means of joint/coalition warfighting. MN experimentation efforts included work with other nations to identify and support coalition operations with leading technology or innovations from their national capabilities to export across the coalition collaborative needs.

FY 2007 Plans:

-Funds transfer from NAVY to Defense-Wide beginning in FY 2007.

	FY 2006	FY 2007	FY 2008	FY 2009
JOINT CONCEPT DEVELOPMENT PATHWAY	44,027	0	0	0

FY 2006 Accomplishments:

-Joint Information Superiority (JxI). JFC used information to create knowledge across the joint force.
 -Multinational Interagency Coordination Group provided JFC the ability to integrate Multinational and Coalition agencies efforts through collaborative efforts.
 -Stability Operations - provided the JFC the ability to expand situational security and create conditions from which stability can grow.
 -Joint Urban Operations developed the ability for the JFC to deliver information-based precision operations and effects in the complex environment of urban terrain. Includes denying sanctuary in the urban setting.
 -Continued other areas in concept development include Major Combat Operations, Strategic Deterrence, Homeland Security and Joint Forcible Entry Operations, for Full Spectrum Operations.

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FY 2007 Plans:

-Funds transfer from NAVY to Defense-Wide beginning in FY 2007.

	FY 2006	FY 2007	FY 2008	FY 2009
JOINT DEPLOYMENT, EMPLOYMENT AND SUSTAINMENT (JDES)	8,402	0	0	0

FY 2006 Accomplishments:

-Continued design work on a "blank sheet of paper" next generation logistics system. Construct is to work a new process, procedure and system that is not bogged down by the non-integrated multiple logistics systems currently in place.

-Continued efforts to meet Basing Alternatives, Force Projection, and Sustainment.

-Provided focused logistics concept development for operating in an adaptive, elastic and ubiquitous distribution-based sustainment system along with the required information architecture to provide and receive time-definite support measured in hours, not days and weeks. Establish a joint sustainment force that is rapidly deployable, fully capable, immediately employable, and responsive to supported forces.

-Joint Experimental Deployment and Sustainment: Developed a construct for joint force asset visibility allowing adaptive planning and application of the joint force as well as ensure sustainment operations occur logically and timely.

-Joint Deployment Systems Business Process Reengineered Prototype Implementation: Processed workflow portal to manage the deployment and sustainment of forces for 1) increased effectiveness to deploy and sustain forces in execution of joint operations; 2) enterprise application integration platform to share data and tools and 3) established functional and technical development "battle rhythm" to delivery rapid operational spirals providing enhanced transformation change solution sets to the warfighter every 9-12 months.

-Joint Deployment Data Transparency: Developed the start point for joint deployment common data model/data standards, and Extensible Machine Language (XML) data schema for shared data and increased system to system interoperability, and provide the strategic framework to plan, influence acquisition, and sustain Joint Deployment Capability for the development and management execution of an Integrated Master Plan and Integrated Master Schedule.

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FY 2007 Plans:

-Funds transfer from NAVY to Defense-Wide beginning in FY 2007.

	FY 2006	FY 2007	FY 2008	FY 2009
INNOVATION AND EXPLORATION	7,580	0	0	0

FY 2006 Accomplishments:

-Continued to expand efforts to tie Department Joint science and technology efforts to identified joint warfighting capabilities gaps.
-Investigated in areas of application, such as swarming entities, use of compressive receivers in detecting and locating "hard-to-get" threat emitters, medical operations transformation, and pattern recognition for time-critical targeting, near space applications, special weapons and effects assessment.

FY 2007 Plans:

-Funds transfer from NAVY to Defense-Wide beginning in FY 2007.

	FY 2006	FY 2007	FY 2008	FY 2009
INTEGRATION WITH OTHER REGIONAL COMBATANT COMMANDERS, MILITARY SERVICES AND AGENCIES	7,781	0	0	0

FY 2006 Accomplishments:

-Ensured all joint warfighting capability needs of combatant commanders are addressed in experimentation efforts.
-Identified emerging capability gaps identified by ongoing operations.

FY 2007 Plans:

-Funds transfer from NAVY to Defense-Wide beginning in FY 2007.

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C. OTHER PROGRAM FUNDING SUMMARY:

Not applicable.

D. ACQUISITION STRATEGY:

Not applicable.

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BUDGET ACTIVITY: 03
 PROGRAM ELEMENT: 0603727N PROGRAM ELEMENT TITLE: JOINT EXPERIMENTATION
 PROJECT NUMBER: 3145 PROJECT TITLE: JOINT COMBINED TRAINING CENTER (JCTC)

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
3145 JOINT COMBINED TRAINING CENTER (JCTC)	4,139	0	0	0	0	0	0	0

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: At the July 2004 Australia/U.S. Ministerial Consultations (AUSMIN), the SECDEF signed an Australian - United States Joint Statement of Principles of Interoperability and affirmed the development of a Joint/Combined Training Center (Capability) (JCTC). This was reaffirmed at AUSMIN 2005 with the signing of a Memorandum of Understanding between the Department of Defense of the United States of America and the Department of Defense Australia concerning the Joint Combined Training Center. The end-state for the JCTC is to enhance high-end training and enable forces to be exercised in Joint/Combined mission essential tasks in order to increase and measure operational capability and preparedness, improve interoperability, facilitate capability development by identifying specific deficiencies that occur in the gaps and seams and develop recommended solutions, and lastly enhance regional security. The JCTC will be linked to DoD's Joint National Training Capability (JNTC) as part of the Global Joint Training Infrastructure (GJTI) via USPACOM's Gaming and Simulation Facility (GSF) and eventually USPACOM's Pacific Warfighting Center as a cooperative collection of training sites, nodes, simulations, and events.

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 2006	FY 2007	FY 2008	FY 2009
JOINT COMBINED TRAINING CENTER (JCTC)	4,139	0	0	0

FY 2006 Accomplishments:

- Prepared initial draft of Enabling Study for consideration at AUSMIN 2006 and a series of Planning and Design studies of desired capabilities to describe Initial and Full Operating Capabilities of the JCTC.
- Established connectivity between USPACOM and Australia JCTC Management Center (ADFWC).
- Continued to set up and integrate those elements of a deployable and permanent Live and Constructive environments required to support Proof of Concept during Talisman Saber 07 and mature JCTC.

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PROGRAM ELEMENT TITLE: JOINT EXPERIMENTATION

PROJECT TITLE: JOINT COMBINED TRAINING CENTER (JCTC)

FY 2007 Plans:

-Funds transfer from NAVY to Defense-Wide beginning in FY 2007.

C. OTHER PROGRAM FUNDING SUMMARY:

Not applicable.

D. ACQUISITION STRATEGY:

Not applicable.

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PROJECT NUMBER: 3149 PROJECT TITLE: JOINT TRAINING

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
3149 JOINT TRAINING	15,145	0	0	0	0	0	0	0

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Secretary of Defense tasked USJFCOM with the responsibility for maintaining JSIMS software and establishing a SSF at the JWFC, pending the results of an AoA. As a result of the AoA findings, JWFC will fund development capabilities in joint simulations to eliminate COCOM identified training gaps. The center provides the joint training environment with the ability to insert emerging technology or enhance existing systems in the constructive training architecture. In accordance with UCP 04, JWFC-JFCOM leads the development and operation of systems and architectures that directly support distributed joint training requirements of other COCOMs, Joint Task Forces (JTFs) and Defense Agencies.

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 2006	FY 2007	FY 2008	FY 2009
JOINT SIMULATION SYSTEM (JSIMS)	12,840	0	0	0

FY 2006 Accomplishments:

- Incorporated Effects Based Operations and Information Operations into the Joint Conflict and Tactical Simulation (JCATS)
- Increased intelligence capability for the Joint-Live, Virtual Constructive (JLVC) Federation; Developed additional logistics capability for JLVC
- Enhanced the After Action Review tool for JLVC
- Increased size and scale of JLVC
- Established Verification, Validation and Accreditation Cell at Joint Development Integration Facility
- Established a Data Production Cell for Terrain and Database development
- Developed a Rapid Database Development capability

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- Improved terrain simulation in the Joint Theater Level Simulation (JTLS)
- Increased maritime capability in JTLS
- Established Coordinating Office for Team Orlando.
- Increased the fidelity of GWOT training by the COCOMs.

FY 2007 Plans:

- Funds transfer from NAVY to Defense-Wide beginning in FY 2007.

	FY 2006	FY 2007	FY 2008	FY 2009
TRAINING CAPABILITY ANALYSIS OF ALTERNATIVES JOINT NATIONAL TRAINING CAPABILITY (TCAOA/JNTC)	2,305	0	0	0

FY 2006 Accomplishments:

- Provided manpower and travel costs associated with Joint Training System Specialists in support of the Joint Training System for FY 2006.
- Assisted with the integration of select agencies within Combatant Commander's training events.
- Executed Training Programs within the guidelines of the Joint Training System.

FY 2007 Plans:

- Funds transfer from NAVY to Defense-Wide beginning in FY 2007.

C. OTHER PROGRAM FUNDING SUMMARY:

Not applicable.

D. ACQUISITION STRATEGY:

Not applicable.

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

DATE: February 2007

BUDGET ACTIVITY: 03
 PROGRAM ELEMENT: 0603727N PROGRAM ELEMENT TITLE: JOINT EXPERIMENTATION
 PROJECT NUMBER: 3153 PROJECT TITLE: JOINT NATIONAL TRAINING CAPABILITY (JNTC)

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
3153 JOINT NATIONAL TRAINING CAPABILITY (JNTC)	45,691	0	0	0	0	0	0	0

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: US Joint Forces Command (USJFCOM) was directed to establish the Advanced Training Technologies (ATT) group to support JNTC operations. The mission is to develop the robust RDT&E capabilities that integrate Live, Virtual and Constructive (LVC) elements into a seamless joint training environment. JNTC creates joint warfighting conditions through a networked collection of interoperable training sites, ranges and nodes that synthesize personnel, doctrine and technology to deliver and achieve "Joint Context" to COCOM and Service training requirements.

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 2006	FY 2007	FY 2008	FY 2009
JOINT NATIONAL TRAINING CENTER (JNTC) ADVANCED TRAINING TECHNOLOGIES (ATT)	45,691	0	0	0

FY 2006 Accomplishments:

- Continued all efforts of FY 2005 except work on Collaborative Information Environment.
- Completed the Joint Training and Experimentation Network (JTEN) test bed with 3 hub sites and 5 persistent nodes online in the Joint ATT Laboratory (JATTL). JTEN test bed is currently being used to support RTI and Multicast testing efforts.
- Designed and engineered the JTEN Internet Protocol Peering connectivity and finalized all offline development testing.
- Developed Joint Rapid Distributed Database Development Capability, a rapid reconfiguration capability that can be deployed to core simulation centers.
- Continued the development of the Joint Virtual Tactical Radio as a part of the Joint Communications Framework, which is now being used by the Marines, Army, and Air Force.

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DATE: February 2007

BUDGET ACTIVITY: 03

PROGRAM ELEMENT: 0603727N

PROGRAM ELEMENT TITLE: JOINT EXPERIMENTATION

PROJECT NUMBER: 3153

PROJECT TITLE: JOINT NATIONAL TRAINING CAPABILITY (JNTC)

- Coordinated with the Joint Experimentation directorate, developed the Multinational Information Sharing (MNIS)/Cross Domain Solution (CDS) road map, concept model, and initial matrix for Joint Force Trainer.
- Designed and installed JATTTL equipment and communications system in support of Joint Force Trainer R&D programs.
- Designed and installed JATTTL Coalition lab equipment and communications systems in support of JFT MNIS and CDS R&D testing.
- Developed Joint After Action Review tool set.
- Integrated Air Force/Navy P5 instrumentation capability into joint training environment.
- Enhanced and integrated space domain representations into joint training environment.
- Continued RDT&E in new and emerging technologies, such as, immerse virtual technologies, story driven training, light simulation/federations, massive-multiplayer online games, training objective driven simulations, embedded training, and joint community unique simulations.
- Leveraged and integrated DoD investments in existing research efforts such as DARWARS and Real World projects.
- Continued development of web-based mission rehearsal capability.
- Completed systems certification assessments on 12 Terminal Fury 06 (TF06) training federation federates, 3 Test & Training Enabling Architecture (TENA) applications, Joint Mission Preparation, Rehearsal & Operations (JMPRO) Capability, and 9 Command and Control (C2) Opposing Force systems, ensuring training capabilities are architecturally consistent and ready for operations within the JNTC architecture.
- Continued five Focused Call efforts begun in FY 2005 and planned six new efforts to fund COCOM and Service efforts to research potential solutions to transformational training issues.
- Awarded contracts to multiple contractors who responded to this year's BAA solicitation with R&D proposals which will provide potential solutions pertaining to transformational training concepts and Joint Virtual and Constructive Battlespace.
- Developed a realistic multi-spectral mobile ground target threat system that is self contained and able to operate in stand-alone, portable, and mobile configurations. Finalized design and completed initial assembly for a Surface to Air Missile (SA-6 Straight Flush) multi-spectral threat capability; ordered major components for assembly of the ZSU-23 portable target system. Ongoing studies related to antenna configurations/power requirements, radar cross section (RCS) and infrared (IR) enhancement studies.
- Developed and fielded a closed-loop cellular infrastructure based on Global System for Mobile Communication (GSM) 1800 system capability to provide OPFOR with a real-world insurgent system used to coordinate activities such as Improvised Explosive Devices (IED) and allowed the blue force Intelligence, Reconnaissance and Surveillance (ISR) assets to train against a true threat.

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DATE: February 2007

BUDGET ACTIVITY: 03

PROGRAM ELEMENT: 0603727N

PROGRAM ELEMENT TITLE: JOINT EXPERIMENTATION

PROJECT NUMBER: 3153

PROJECT TITLE: JOINT NATIONAL TRAINING CAPABILITY (JNTC)

- Developed a micro Global Positioning System jammer design concept. Coordinated with 746th Test Squadron to develop a technique generator that is threat representative with multi-mode capability to properly emulate real world threat systems.
- Built a comprehensive network that encompasses the key characteristics of a distributed Information Operations range for development and testing purposes. The system is capable of emulating network traffic that is programmable and operationally representative of adversary computer users as well as friendly and neutral traffic.
- Identified and developed a family of training systems consisting of a Foreign Military Exploitation (FME) instrumented and/or pyrotechnic capable Surface-to-Air Missile systems (SA-7/14/16/18) with sufficient technology capable of stimulating blue force Aircraft Survivability Equipment (ASE) on rotary and fixed wing aircraft.
- Continued development for the Distributed Net Guard.
- Expanded the ability to transfer control of the constructive ground entities in the Joint Ground Game (JGG) and Joint Conflict And Tactical Simulation (JCATS) simulations to live and/or virtual drivers adding capability between Air Warfare Simulation Model (AWSIM) and Next Generation Threat System (NGTS) to not only transfer the basic entity information but all of its mission data as well.
- Continued to develop requirements for Joint Urban Operations (JUO) instrumentation that can be used in the JNTC live architecture.
- Partnered with JNTC to develop upgrades to the Test and Training Enabling Architecture (TENA).
- Supported implementation of a Navy Continuous Training Environment that is part of a global, multi-national network of integrated live, virtual, and constructive components for seamless joint and service training
- Supported implementation of a standardized training architecture to conduct Fleet Synthetic Training.
- Participated in JNTC Joint Architectures and Technical Standards Process Action Team and provided engineering support to develop JNTC architecture drawings to incorporate current and emerging training architectures into the defined Joint architectures while leveraging SOCOM Virtual and Constructive training (LVC) capabilities.

FY 2007 Plans:

- Funds transfer from NAVY to Defense-Wide beginning in FY 2007.

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FY 2008/2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
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DATE: February 2007

BUDGET ACTIVITY: 03

PROGRAM ELEMENT: 0603727N

PROJECT NUMBER: 3153

PROGRAM ELEMENT TITLE: JOINT EXPERIMENTATION

PROJECT TITLE: JOINT NATIONAL TRAINING CAPABILITY (JNTC)

C. OTHER PROGRAM FUNDING SUMMARY:

Not applicable.

D. ACQUISITION STRATEGY:

Not applicable.

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

DATE: February 2007

BUDGET ACTIVITY: 03

PROGRAM ELEMENT: 0603727N

PROJECT NUMBER: 9999

PROGRAM ELEMENT TITLE: JOINT EXPERIMENTATION

PROJECT TITLE: Congressional Plus-Ups

CONGRESSIONAL PLUS-UPS:

	FY 2006	FY 2007
JOINT EXPERIMENTATION VISUALIZATION	1,915	0

This effort supported Joint Experimentation Visualization resources.

	FY 2006	FY 2007
MODELING AND SIMULATION FOR URBAN OPERATIONS	5,520	0

This effort supported Modeling and Simulation for Urban Operations.

	FY 2006	FY 2007
PLAYAS TECHNICAL INSTRUMENTATION NETWORK DESIGN AND DEVELOPMENT	1,053	0

The New Mexico Institute of Mining and Technology (NM Tech) Director, Energetic Materials Research and Testing Center (EMRTC) worked with JNTC on the "Playas Instrumentation Network Design and Development" to convert the town of Playas, NM into a training and RDT&E complex supporting urban operations training. JNTC equity in this project is focused on the requirement for interoperability of distributed instrumentation systems folded into the development of the Instrumentation Network Master Plan. JFCOM worked with the project execution organizations to ensure that products and activities were integrated into the overall JNTC effort and are compatible with JNTC standards in support of interoperability.