

BUDGET ACTIVITY: 06
 PROGRAM ELEMENT: 0603757D8Z PROGRAM ELEMENT TITLE: TRAINING TRANSFORMATION (T2)
 PROJECT NUMBER: PROJECT TITLE:

GENERAL COMMENTS: As directed in the National Defense Authorization Act for FY 2005, all RDT&E funding for U.S. Joint Forces Command (USJFCOM) moved from Navy Program Elements (PEs) to Defense-Wide PEs starting in FY 2007. This move affected both PE 0603727N and 0804758N. These programs are not new starts.

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
Total PE		70,824	51,752	43,404	41,483	41,767	42,360	42,946
JOINT NATIONAL TRAINING CAPABILITY (JNTC) Project Code P758		34,906	30,715	25,667	26,454	27,404	27,879	28,353
JOINT TRAINING CAPABILITY ANALYSIS OF ALTERNATIVES (TC AoA) Project Code P759		10,700	10,303	8,080	5,255	4,637	4,580	4,524
JOINT COMBINED TRAINING CENTRE (JCTC) Project Code P760		5,000	0	0	0	0	0	0
JOINT SIMULATION SYSTEMS (JSS) Project Code P761		11,991	10,734	9,657	9,774	9,726	9,901	10,069
JOINT INFORMATION OPERATIONS RANGE (JIOR) Project Code P762		8,227	0	0	0	0	0	0

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: As directed in the National Defense Authorization Act for FY 2005, RDT&E funds moved from Navy PEs to Defense-Wide starting in FY 2007.

These RDT&E programs are part of a coordinated effort to develop and deploy capabilities for rapidly linking and integrating live, virtual, and constructive (LVC) forces of Services, Combatant Commanders (COCOMs), coalition partners, and interagencies by creating a realistic battle space environment in which to train as a Joint Warfighting force to meet emerging mission requirements including the

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Long War. These investments support the Secretary of Defense's (SECDEF) T2 initiative to enable and enhance Joint Warfighting readiness by training as we intend to fight. The elements associated with this are:

- Joint National Training Capability (JNTC)
- Training Capability Analysis of Alternatives (TC AoA)
- Joint Combined Training Centre (JCTC)
- Joint Simulation Systems (JSS)
- Joint Information Operations Range (JIOR)

JNTC: Initially established in 2003, JNTC continues to develop and integrate Advanced Training Technologies (ATT) into a seamless Joint training environment. JNTC establishes the overarching Joint framework and context necessary for COCOMs and Services to achieve a Joint operating training environment through an integrated network of training sites and nodes. JNTC provides the common standards, architecture, and development processes required to link the other training transformation programs within this program element. By leveraging existing training programs or initiating specific actions, JNTC is providing credible opposing force capabilities, expanded access to assets typically unavailable in the training audience by integrating virtual or constructive representations of these capabilities, and furthering the integration of Joint Training objectives into Service training events, while capturing the objective data necessary to provide a complete and accurate after action review. These initiatives develop and enhance current and future Joint training capabilities.

TC AoA: The TC AoA effort focuses on comparing current training capabilities with training requirements in order to identify gaps in our current Joint training capability, to identify alternatives for resolution, and to assess the cost and effectiveness of the alternatives. Specifically, the TC AoA focuses on: (1) developing and integrating enhancements to the existing and programmed constructive simulations, (2) pursuing selected alternative training methodologies, (3) developing an innovative acquisition prototype, (4) developing solutions to implement recommendations from the Joint Staff's comprehensive study to re-engineer Joint training, and (5) developing a clear management and oversight structure to meet future Joint training requirements. These efforts provide solutions to the 35 gaps and seams in Joint and Service training requirements identified by the COCOMs in the SECDEF 2004 TC AoA study. These efforts increase warfighter Joint training capabilities with improved constructive simulations, streamlined acquisition processes, and leverages industry training methodologies and technologies to provide on-demand Joint training tailored to COCOM requirements for Joint Task Force headquarters staffs and individuals.

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JCTC: At the July 2004 Australia/US 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 Centre (JCTC) in Australia. This enables linkage of JCTC to Department of Defense's (DoD) JNTC, leveraging training capabilities and providing the environment to exercise Coalition mission essential tasks.

JSS: In 2003, SECDEF tasked USJFCOM with the responsibility for continued development of JSS software. Significant investments completed the transition and integration of selected residual JSS capabilities into the Joint Force Trainer Toolkit (JFTT). This effort provides warfighters with enhanced Joint LVC based training capabilities resident in the JFTT.

JIOR: The JIOR will establish a secure, flexible, and seamless environment for the services and Joint warfighters to test, train, develop tactics, and exercise simulated computer network attack and defense technologies using selected offensive electronic warfare capabilities. This environment enables the COCOM's warfighters to visualize and understand the intricate and interactive effects generated by kinetic and non-kinetic weapons and achieve the same level of confidence and expertise in employing IO weapons that they have with kinetic weapons. Transferred out starting FY 2008.

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	0	72,897	64,433	55,793
Congressional Action	0	-1,665	0	0
Congressional Undistributed	0	-408	0	0
Program Adjustments (transfer out of JIOR program)	0	0	-12,681	-12,389
Current BES/President's Budget Submission	0	70,824	51,752	43,404

PROGRAM CHANGE SUMMARY EXPLANATION: Funds moved from Navy PE 0603727N and 0804758N to Defense-Wide starting in FY 2007.

Technical: Not applicable.

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PROJECT TITLE:

Schedule: Not applicable.

C. Other Program Funding Summary: Not applicable.

D. ACQUISITION STRATEGY: Not applicable.

E. PERFORMANCE METRICS:

Performance metrics apply to four of the five projects (JNTC, TC AoA, JCTC, and JSS) of the Joint Force Trainer RDT&E program through the USJFCOM Joint War Fighting Center (JWFC) Joint Force Trainer Technology Planning Board. The board consists of senior technical, operational, program manager, and stakeholder representatives within the Joint Force Trainer Community. The board's responsibilities encompass merging and prioritizing technical training requirements. The board evaluates the efficacy of development efforts based upon achievement of performance metrics and votes on whether or not to continue the effort. This process ensures the Joint Force Trainer capabilities development effort synchronizes with warfighter requirements. Performance metrics include, but are not limited to, time, money, realism, and fidelity as defined below:

- Time – Will the effort enable the Joint Force Trainer to prepare and execute training faster than current capabilities allow?
- Money – Will the effort enable the Joint Force Trainer to prepare and execute training at a more effective and efficient cost than current capabilities allow?
- Realism – Will the effort enable the Joint Force Trainer to create a training environment that is closer to the real world environment than current capabilities allow?
- Fidelity – Will the effort enable the Joint Force Trainer to create more detailed capabilities in the training environment than current capabilities allow?

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PROGRAM ELEMENT TITLE: TRAINING TRANSFORMATION (T2)

PROJECT NUMBER: P758

PROJECT TITLE: JOINT NATIONAL TRAINING CAPABILITY (JNTC)

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
JOINT NATIONAL TRAINING CAPABILITY (JNTC) Project Code P758	0	34,906	30,715	25,667	26,454	27,404	27,879	28,353

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: DoD directed USJFCOM to establish the JNTC Advanced Training Technology (JNTC/ATT) to develop future training concepts and capabilities. The mission is to develop 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” for COCOMs and Service training requirements. JNTC provides research and development (R&D) within an LVC distributed test-bed supporting the advancement of training technologies in the context of a Joint integrated battlespace. The test bed operates as a continuous training R&D environment, providing the foundation for a distributed and deployable Mission Rehearsal System, integrating live Intelligence, Surveillance and Reconnaissance feeds into the Common Operational Picture. These funds provide critical Joint/Coalition Service members and interagency partners enhanced training to allow requisite enhancements to existing training systems, capabilities, and technologies. These enhancements improve training efficiencies and provide an integrated LVC environment. This capability precludes the necessity for conducting large-scale live exercises to achieve the SECDEF’s T2 vision.

B. FY 2006 ACCOMPLISHMENTS (under the Navy’s PE 0603727):

- Established the JNTC/ATT Laboratory’s initial infrastructure support for a robust RDT&E lab environment to support the JNTC certification program and the LVC test-bed. The certification program provided the standards and architecture for identification, development, and support for multiple R&D projects in technical focus areas such as: networking, Joint Command and Control, instrumentation, data collection, after action review, opposing forces technologies, LVC technologies, knowledge management, information management, and training systems operations research.

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PROGRAM ELEMENT TITLE: TRAINING TRANSFORMATION (T2)

PROJECT NUMBER: P758

PROJECT TITLE: JOINT NATIONAL TRAINING CAPABILITY (JNTC)

FY 2006 ACCOMPLISHMENTS CONTINUED:

- The LVC test-bed enabled new training Concept of Operations efficiently streamlining the mechanism of planning and conducting complex Joint training events. It also provided the capability to identify, evaluate, and resolve training system shortfalls. This test-bed laboratory interacts with other facilities through distributed communication links.
- Developed the Initial Capabilities Document for the Joint Rapid Distributed Database Development Capability (JRD3C) and implemented it into the Joint Capability Improvement Document System process.
- Designed, developed, tested, and evaluated JRD3C proof of concept.
- Prototyped a knowledge management framework by providing access to digital libraries and distributing to centers of excellence in support of Standing Joint Force Headquarters training and mission rehearsal.
- Developed a real world database and distribution system for geospatial intelligence data and force data sharing to facilitate training and mission rehearsal capability.
- Developed Opposing Forces (OPFOR) Threat Systems to include service instrumentation, interoperability standards, weapons models, simulated terrain, and virtual training capabilities.

	FY 2006	FY 2007	FY 2008	FY 2009
JOINT NATIONAL TRAINING CENTER (JNTC) ADVANCED TRAINING TECHNOLOGY (ATT) P758	0	34,906	30,715	25,667

FY 2007 Plans: Perform the Research, development, test, evaluation and integration of new or improved technologies, standards, processes, and concepts that support the Joint National Training Capability as follows:

- New and emerging technologies to include: immersive virtual technologies, story driven training, light simulation/federations, massive-multiplayer online games, training objective driven simulations, embedded training, and Joint community unique simulations.
- Enhance and integrate space domain representations into Joint training environment.

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PROGRAM ELEMENT TITLE: TRAINING TRANSFORMATION (T2)

PROJECT TITLE: JOINT NATIONAL TRAINING CAPABILITY (JNTC)

FY 2007 Plans Continued:

- Develop and integrate Messaging, Collaboration, Discovery, Mediation, and Information Assurance/Security Net-Centric Enterprise Services (NCES) for training applications to Global Information Grid (GIG) Infrastructure.
- Joint Instrumentation Capabilities: Initiate Joint Urban Operations Instrumentation Implementation Plan.
- Joint C4I Systems and Communications Capabilities: Provide for Peer to Peer connectivity between the Joint Training and Experimentation Network (JTEN) to the Defense Research and Engineering Network (DREN).
- OPFOR Capabilities: Expanded development of Multi-Spectral Threat Emitter (MTES) and Man Portable Air Defense (MANPADS) systems. Continue development of Direction Finding/Signals Intelligent (DF/SIGINT) Systems and transition Initial Systems into production. Initiate Chemical Biological Radiological/Nuclear and Explosive (CBRNE) Tools Development. Continue development of GPS Micro-Jammers. Transition initial variants into production. Initiate development of Maritime Threat Systems. Expand development of Virtual Joint Suppression of Enemy Air Defenses (V-JSEAD) to include additional systems.
- Live, Virtual, and Constructive (and their integration) Capabilities: Continuing development and transition to fielding of LVC Common Gateway to maximize commonality and supportability of gateways. Begin development of net centric, service oriented architecture for joint training, in collaboration with the test community.
- Information/Knowledge Management Capabilities: Continue the development of the collaborative information environment tools, ensuring transition to the Net Centric Enterprise Solution, when available.
- Training System Capabilities: Field prototypes of Joint Terminal Control Training and Rehearsal System (JTC TRS) Virtual Trainer.
- After Action Review Capabilities: Conclude requirements analysis and begin prototyping of Joint After Action Review Capability.
- Information / Knowledge Management Capabilities: Continue the development of the Collaborative Information Environment (CIE) tools, ensuring transition to the Net Centric Enterprise Solution, when available. Continue the development of the Certification and Accreditation Repository System tracking the mitigation shortfalls and the development of solution sets.

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PROGRAM ELEMENT TITLE: TRAINING TRANSFORMATION (T2)

PROJECT NUMBER: P758

PROJECT TITLE: JOINT NATIONAL TRAINING CAPABILITY (JNTC)

FY 2008 Plans: Perform the Research, development, test, evaluation and integration of new or improved technologies, standards, processes, and concepts that support the Joint National Training Capability as follows:

- New and emerging technologies to include: immersive virtual technologies, story driven training, light simulation/federations, massive-multiplayer online games, training objective driven simulations, embedded training, and Joint community unique simulations.
- Enhance and integrate space domain representations into Joint training environment.
- Perform migration testing and transition of Messaging, Collaboration, Discovery, Mediation, and Information Assurance/Security NCES for training applications to GIG Infrastructure. Develop and Integrate Application, Enterprise Service Management, Storage, and User Assistant NCES for training applications to GIG Infrastructure.
- Joint Instrumentation Capabilities: Develop Joint Urban Operations Instrumentation integration.
- Joint C4I Systems and Communications Capabilities: Transition to operations the Peer to Peer connectivity between the Joint Training and Experimentation Network (JTEN) to the Defense Research and Engineering Network (DREN), and begin development of like capability for the Navy's Continuous Training Environment network.
- OPFOR Capabilities: Continue development of MTES and MANPADS systems. Transition initial variants into production. Initiate upgrade development of C3 Battle Management Systems. Continue development of Maritime Threat Systems. Transition initial systems into production. Continue V-JSEAD development. Transition initial network into appropriate exercises.
- Live, Virtual, and Constructive (and their integration) Capabilities: Begin development of net centric, service oriented architecture for joint training, in collaboration with the test community.
- Information/Knowledge Management Capabilities: Continue the development of the collaborative information environment tools, ensuring transition to the Net Centric Enterprise Solution, when available.
- Training System Capabilities: Field prototypes of Joint Terminal Control Training and Rehearsal System (JTC TRS) Virtual Trainer
- After Action Review Capabilities: Demonstrate/Test and transition Joint After Action Review Capability to operational use.
- Information / Knowledge Management Capabilities: Integrate the Collaborative Information Environment (CIE) based on the approved Net Centric products. Ensure that Net Centric Enterprise Services and the CIE integrate to provide a global collaborative

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PROJECT NUMBER: P758

PROJECT TITLE: JOINT NATIONAL TRAINING CAPABILITY (JNTC)

planning capability for joint training. Develop an Enterprise capability from a Net Centric model providing the capability to track Joint requirements, cradle to grave.

FY 2009 Plans: Perform the Research, development, test, evaluation and integration of new or improved technologies, standards, processes, and concepts that the support the Joint National Training Capability as follows:

- New and emerging technologies to include: immersive virtual technologies, story driven training, light simulation/federations, massive-multiplayer online games, training objective driven simulations, embedded training, and Joint community unique simulations.
- Enhance and integrate space domain representations into Joint training environment.
- Complete transition of Messaging, Collaboration, Discovery, Mediation, and Information Assurance/Security NCES for training applications to GIG Infrastructure. Perform migration testing and transition of Application, Enterprise Service Management, Storage, and User Assistant NCES for training applications to GIG Infrastructure.
- Joint Instrumentation Capabilities: Develop Joint Urban Operations Instrumentation integration.
- Joint C4I Systems and Communications Capabilities: Transition to operations the Peer to Peer connectivity between the JTEN and the Navy's Continuous Training Environment network. Begin development of capability to link to SIPRNET.
- OPFOR Capabilities: Continue development of MTES and MANPADS systems. Transition developed variants into production. Continue development of V-JSEAD. Transition expanded network into appropriate exercises. Complete DF/SIGINT development. Transition developed variants into production. Continue Maritime Threat System development. Transition developed variants into production.
- Live, Virtual, and Constructive (and their integration) capabilities.
- Information/Knowledge Management Capabilities: Continue the development of the collaborative information environment tools, ensuring transition to the Net Centric Enterprise Solution, when available. Develop transition plans for the developed systems to integrate into Net Centric Enterprise Service solutions.

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PROGRAM ELEMENT TITLE: TRAINING TRANSFORMATION (T2)

PROJECT NUMBER: P758

PROJECT TITLE: JOINT NATIONAL TRAINING CAPABILITY (JNTC)

C. OTHER PROGRAM FUNDING SUMMARY: As directed in the National Defense Authorization Act for FY 2005, RDT&E funds moved from Navy PE 0603727 to Defense-Wide starting in FY 2007. Related RDT&E funding under Navy PE 0603727:

Project Number & Title	FY 2006 Actual (under Navy)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate
Related RDT&E: 0603727N, Joint Experimentation	44,523	0	0	0

D. ACQUISITION STRATEGY: Not applicable.

E. MAJOR PERFORMERS:

Recipients

City/State

Description

No performer in this PE received, or will receive in FY 2007/08/09 more than 15% of the program or \$10 million.

UNCLASSIFIED
 FY 2007 RDT&E,D BUDGET ITEM JUSTIFICATION SHEET DATE: JULY 2006
 Exhibit R-2a

BUDGET ACTIVITY: 06
 PROGRAM ELEMENT: 0603757D8Z PROGRAM ELEMENT TITLE: TRAINING TRANSFORMATION (T2)
 PROJECT NUMBER: P759 PROJECT TITLE: JOINT TRAINING CAPABILITY ANALYSIS OF ALTERNATIVES (TCAoA)

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
JOINT TRAINING CAPABILITY ANALYSIS OF ALTERNATIVES (TC AoA) Project Code P759	0	10,700	10,303	8,080	5,255	4,637	4,580	4,524

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: Joint Force Trainer supports development capabilities in Joint simulations to eliminate training gaps identified by the COCOMs and in accordance with SECDEF's T2 objectives. In accordance with the Unified Command Plan (2004), USJFCOM JWFC is the lead in 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. The underlying premise of TC AoA centers on privatization of training support and development with competitive market forces driving the development of technologies to reduce the cost of training. The creation of a JFCOM Joint Oversight Board establishes a governance process to review the effectiveness of the tools and the providers. Management of the toolkit is a government-led Consortium with industry and academia that ensure the tools in the toolkit comply with the requirements of the common architecture. A number of emerging technologies from Industry, Government, and Academic sources that offer the greatest potential to reengineer Joint training will be identified for training use. These technologies include Light Simulations, Light Federations, Story-Driven Training, Massively-Multi-player Games, Training Objective Driven Simulation, Embedded Training, and Joint Community Unique Simulations.

B. FY 2006 ACCOMPLISHMENTS (under the Navy's PE 0603727):

- Developed combat support agencies training in support of the Joint Training Policy.
- Innovated some training methods other than use of large-scale constructive simulations.
- Provided COCOMs with expertise in Joint Training Systems, Joint Interagency, and Joint Lessons Learned. This enabling capability gives each COCOM developmental Subject Matter Experts for the integration of these emerging capabilities with Modeling and Simulation Technology.

UNCLASSIFIED

FY 2007 RDT&E,D BUDGET ITEM JUSTIFICATION SHEET

DATE: JULY 2006

Exhibit R-2a

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0603757D8Z

PROGRAM ELEMENT TITLE: TRAINING TRANSFORMATION (T2)

PROJECT NUMBER: P759

PROJECT TITLE: JOINT TRAINING CAPABILITY ANALYSIS OF ALTERNATIVES (TCAoA)

	FY 2006	FY 2007	FY 2008	FY 2009
JOINT TRAINING CAPABILITY ANALYSIS OF ALTERNATIVES (TC AoA) P759	0	10,700	10,303	8,080

FY 2007 Plans:

- Form governance and execution management groups to review the effectiveness of the tools and the providers.
- Develop contract models for Light Simulations and Light Federations.
- Develop program assessment/exit criteria.
- Identify sites/program for training implementation.
- Develop, initiate, and target a Training Support Provider acquisition plan.
- Identify capabilities shortfalls for targeted market-maker incentive investments.
- Fund select development/integration proposals.
- Select Training Support Providers in 1st quarter FY 2007.

FY 2008 Plans:

- Continue Training Support Providers Plan of Action and Milestones (POA&M) of FY 2007 start-up target.
- Start training with continuous cycle of training evaluation.
- Conduct objective third-party evaluation process and methods feedback to Governance and Execution Management Groups.
- Incorporate changes/enhancements to capability as training progresses.

FY 2009 Plans:

- Expand training with continuous cycle of training evaluation.
- Continue objective third party evaluation process and methods feedback to Governance and Execution Management Groups.
- Incorporate changes/enhancements to capability as training progresses.

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PROGRAM ELEMENT: 0603757D8Z PROGRAM ELEMENT TITLE: TRAINING TRANSFORMATION (T2)

PROJECT NUMBER: P759 PROJECT TITLE: JOINT TRAINING CAPABILITY ANALYSIS OF ALTERNATIVES (TCAoA)

C. OTHER PROGRAM FUNDING SUMMARY: As directed in the National Defense Authorization Act for FY 2005, RDT&E funds moved from Navy PE 0603727 to Defense-Wide starting in FY 2007. Related RDT&E funding under Navy PE 0603727:

Project Number & Title	FY 2006 Actual (under Navy)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate
Related RDT&E: 0603727N, Joint Experimentation	2,052	0	0	0

D. ACQUISITION STRATEGY: Not applicable.

E. MAJOR PERFORMERS:

Recipients	City/State	Description
No performer in this PE received, or will receive in FY 2007/08/09 more than 15% of the program or \$10 million.		

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 FY 2007 RDT&E,D BUDGET ITEM JUSTIFICATION SHEET DATE: JULY 2006
 Exhibit R-2a

BUDGET ACTIVITY: 06
 PROGRAM ELEMENT: 0603757D8Z PROGRAM ELEMENT TITLE: TRAINING TRANSFORMATION (T2)
 PROJECT NUMBER: P760 PROJECT TITLE: JOINT COMBINED TRAINING CENTRE (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
JOINT COMBINED TRAINING CENTRE (JCTC) Project Code P760	0	5,000	0	0	0	0	0	0

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: At the July 2004 AUSMIN, the SECDEF signed an Australian – United States Joint Statement of Principles of Interoperability and affirmed the development of a JCTC. The end-state for the JCTC is to enhance coalition training in Joint/Combined mission essential tasks in order to assess operational capability and preparedness, improve interoperability, facilitate capability development and develop recommended solutions, and enhance regional security. The JCTC will link DoD’s Joint National Training Capability (JNTC) as part of the Global Joint Training Infrastructure (GJTI) via United States Pacific Command’s (USPACOM) Gaming and Simulation Facility (GSF) and eventually USPACOM’s Pacific Warfighting Center as a cooperative collection of training sites, nodes, simulations, and events. This strategic initiative has AU\$23 Million commitment from Australia that requires U.S. funding enhancement to prevent possible withdrawal from Australia of this project thus reducing coalition readiness in emerging world situations.

B. FY 2006 ACCOMPLISHMENTS (under the Navy’s PE 0603727):

- Initiated connectivity to the U.S. JNTC Joint Training and Experimentation Network (JTEN).
- Determined what US capabilities will be trained in Australian range spaces, in support of US Joint Task Force Certification requirements.
- Defined the Initial Operating Capabilities and Full Operating Capabilities.
- Determined what Joint Context requirements were needed for incorporation into the bi-lateral training environment.

	FY 2006	FY 2007	FY 2008	FY 2009
JOINT COMBINED TRAINING CENTRE (JCTC) P760	0	5,000	0	0

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PROGRAM ELEMENT: 0603757D8Z

PROGRAM ELEMENT TITLE: TRAINING TRANSFORMATION (T2)

PROJECT NUMBER: P760

PROJECT TITLE: JOINT COMBINED TRAINING CENTRE (JCTC)

FY 2007 Plans:

- Commission a Program Study and/or a series of planning and design studies of desired capabilities as described in the JCTC Enabling Study. These studies establish the Modeling and Simulation baseline systems to support Australian participation with the US Joint training community, the technical requirements for US-Australian network interconnection and explore resolution to the policy and technical requirements to satisfy Multinational Information Sharing for authorizing network interconnection.
- Establish connectivity between USPACOM and Australia JCTC Management Center.
- Prepare instrumented ranges as described in the JCTC scoping study to support a proof of concept demonstration.
- Lease and transport supporting architecture for a deployable and/or permanent live, virtual, and constructive environment to support proof of concept demonstration.

FY 2008 Plans: Not applicable.**FY 2009 Plans:** Not applicable.

C. OTHER PROGRAM FUNDING SUMMARY: As directed in the National Defense Authorization Act for FY 2005, RDT&E funds moved from Navy PE 0603727 to Defense-Wide starting in FY 2007. Related RDT&E funding under Navy PE 0603727:

Project Number & Title	FY 2006 Actual (under Navy)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate
Related RDT&E: 0603727N, Joint Experimentation	4,000	0	0	0

D. ACQUISITION STRATEGY: Not applicable.

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PROGRAM ELEMENT: 0603757D8Z

PROJECT NUMBER: P760

PROGRAM ELEMENT TITLE: TRAINING TRANSFORMATION (T2)

PROJECT TITLE: JOINT COMBINED TRAINING CENTRE (JCTC)

E. MAJOR PERFORMERS:

Recipients

City/State

Description

No performer in this PE received, or will receive in FY 2007/08/09 more than 15% of the program or \$10 million.

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PROGRAM ELEMENT: 0603757D8Z

PROGRAM ELEMENT TITLE: TRAINING TRANSFORMATION (T2)

PROJECT NUMBER: P761

PROJECT TITLE: JOINT SIMULATIONS SYSTEMS (JSS)

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
JOINT SIMULATION SYSTEMS (JSS) Project Code P761	0	11,991	10,734	9,657	9,774	9,726	9,901	10,069

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Secretary of Defense Program Decision Memorandum (dated 12 Dec 2003) tasked USJFCOM with the responsibility for maintaining JSS software and establishing a Software Support Facility (SSF) at the Joint Warfighting Center (JWFC), pending the results of a Training Capabilities Analysis of Alternatives (TC AoA). As a result of the TC AoA findings, JWFC will fund development capabilities in Joint simulations to eliminate COCOM identified training gaps. JWFC provides the Joint training environment with the ability to insert emerging research and development technology to enhance existing systems in the Joint, Live, Virtual and Constructive (JLVC) and Joint Multi-Resolution Model training architectures. In accordance with Unified Command Plan 04, USJFCOM J7/JWFC leads the development, integration, and operation of systems and architectures that directly support distributed Joint training requirements of other COCOMs, Joint Task Forces (JTFs), and Defense Agencies.

B. FY 2006 ACCOMPLISHMENTS (under the Navy's PE 0603727): The accomplishments listed below increased the fidelity and capabilities of the Long War training to the COCOMs.

- Initiated 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, and increased size and scale of JLVC.
- Established a Verification, Validation, and Accreditation Cell at the Joint Development Integration Facility.
- Established a Data Production Cell for Terrain and Database development, improving terrain simulation in the Joint Theater Level Simulation (JTLS). Developed requirements for level II terrain for use in future exercises (two-year development effort).
- Increased maritime capability in JTLS.

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0603757D8Z

PROGRAM ELEMENT TITLE: TRAINING TRANSFORMATION (T2)

PROJECT NUMBER: P761

PROJECT TITLE: JOINT SIMULATIONS SYSTEMS (JSS)

FY 2006 ACCOMPLISHMENTS CONTINUED:

- Integrate JSS Theater Battle Management Core System adapter with Joint Multi-Resolution Model (JMRM). Complete and ready for use for Terminal Fury 06 exercise.
- Built Run Time Manager Command, Control, Communications, Computers, and Intelligence (C4I) interface completed for FY 2006 COCOM exercises to stimulate real-world C4I info.
- Developed High Level Architecture (HLA) Interface with Multiple Unified Simulation Environment/Air Force Synthetic Environment for Reconnaissance and Surveillance unmanned aerial vehicle simulation.
- Purchased Run Time Infrastructure for testing and developmental support during Terminal Fury 06.
- Developed HLA Interface for Tactical Simulations (TACSIM).
- Developed HLA Interface with Missile Defense Space Tool for Terminal Fury 06.
- Developed Entity Level Server for Joint Theater Level Simulation (JTLS) for use in the JMRM Federation.
- Developed web-enabled JTLS for use in all future COCOM exercises.
- Funded analysis and documentation for weapons effects data for Joint Conflict and Tactical Simulations (JCATS) as authoritative data repository for all Joint exercises.
- Integrated After/Action Report tool for JMRM.
- Developed and integrated a JMRM Federation diagnostic tool, Simulation Interoperability Test Harness.

	FY 2006	FY 2007	FY 2008	FY 2009
JOINT SIMULATION SYSTEM (JSS) P761	0	11,991	10,734	9,657

FY 2007 Plans:

- Initiate research and development to incorporate Effects Based Operations and Information Operations into the Joint Conflict and Tactical Simulation (JCATS).
- Merge federation object models for the JLVC and JMRM federations.
- Increase fidelity and capability of the Joint Theater Level Simulation.

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0603757D8Z

PROGRAM ELEMENT TITLE: TRAINING TRANSFORMATION (T2)

PROJECT NUMBER: P761

PROJECT TITLE: JOINT SIMULATIONS SYSTEMS (JSS)

- Improve common operating picture, while increasing the research and development of irregular warfare capabilities.
- Integrate, enhance, and/or reengineer selected existing JSS capabilities into Joint Force Trainer Toolkit
 - Decision support tools
 - Modeling and Simulation (M&S) interfaces to command and control systems
 - Software utilities for rapidly translating and building simulation databases

FY 2008 Plans:

- Develop a rapidly reconfigurable M&S architecture that will allow delivery of Joint training to the warfighter in a more proficient and effective cost model than currently capable.
- Develop interfaces for delivery of M&S data into future command and control systems, such as Joint Command and Control (JC2) systems, and the replacement for Global Command and Control System (GCCS).

FY 2009 Plans:

- Continue development of a rapidly reconfigurable M&S architecture that will allow delivery of Joint training to the warfighter with focus on minimizing time and cost than current capabilities allow.
- Continue development of interfaces for delivery of M&S data into future command and control systems such as JC2 systems, and the replacement for GCCS.

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0603757D8Z

PROGRAM ELEMENT TITLE: TRAINING TRANSFORMATION (T2)

PROJECT NUMBER: P761

PROJECT TITLE: JOINT SIMULATIONS SYSTEMS (JSS)

C. OTHER PROGRAM FUNDING SUMMARY: As directed in the National Defense Authorization Act for FY 2005, RDT&E funds moved from Navy PE 0603727 to Defense-Wide starting in FY 2007. Related RDT&E funding under Navy PE 0603727:

Project Number & Title	FY 2006 Actual (under Navy)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate
Related RDT&E: 0603727N, Joint Experimentation	12,648	0	0	0

D. ACQUISITION STRATEGY: Not applicable

E. MAJOR PERFORMERS:

Recipients

City/State

Description

No performer in this PE received, or will receive in FY 2007/08/09 more than 15% of the program or \$10 million.

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0603757D8Z PROGRAM ELEMENT TITLE: TRAINING TRANSFORMATION (T2)

PROJECT NUMBER: P762 PROJECT TITLE: JOINT INFORMATION OPERATIONS RANGE (JIOR)

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
JOINT INFORMATION OPERATIONS RANGE (JIOR) Project Code P762	0	8,227	0	0	0	0	0	0

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The National Military Strategy of the United States stresses the importance of integrating Information Operations (IO) capabilities for the success of Joint Operations and Decision Superiority. “Assuring information systems in the face of attack and conducting effective Information Operations” was one of the six critical operational goals in DoD’s transformation efforts (2001 Quadrennial Defense Review). In addition, the DoD IO Roadmap, signed on 30 October 2003, explicitly identified DoD’s need for the IO Range. The FY04-09 Defense Planning Guidance (DPG) stated the need to expand IO training and education for the developing cadre of IO professionals and provide an environment for analysis, testing, training, combat assessments, and measures of effectiveness for more reliable IO capabilities. Deputy SECDEF Memorandum on the IO Range signed 18 November 2005 established the requirement for creating a cooperative IO range among military services under the leadership of USJFCOM.

The basis of the functional structure of the Joint IO Range is the integration of existing ranges, laboratories, information warfare centers, and other government facilities that currently support IO test, training, exercise, and experimentation events. Capabilities at the selected sites will be securely connected and integrated into the IO Range. A key feature of this concept is the persistent, secure connection that links the sites together, allowing the exchange of data and the visualization of effects as capabilities are employed. Creation of a “virtual range” based on persistent connections significantly reduces the amount of lead-time required to establish the electronic infrastructure for each new warfighter event. The long-term goal for the IO Range is to be a full spectrum IO Range, supporting all the disciplines of IO: computer network operations, electronic warfare, operational security, psychological operations, and military deception.

The objective of the Joint IO Range is to establish a secure, flexible, seamless, and realistic test, training, and exercise environment for developing and operationalizing IO weapon systems and their associated tactics, techniques, and procedures. It allows for effective and thorough Service and COCOM-sponsored training and exercises in a realistic environment representative of actual combat targets and

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0603757D8Z PROGRAM ELEMENT TITLE: TRAINING TRANSFORMATION (T2)

PROJECT NUMBER: P762 PROJECT TITLE: JOINT INFORMATION OPERATIONS RANGE (JIOR)

systems. Creating this capability requires a concerted effort across the IO community to achieve an interoperable infrastructure incorporating representative operational environments, resources, capabilities, and intelligence necessary to effectively evaluate, characterize, and certify IO weapon systems and tactics. The IO Range provides an environment enabling the Services and COCOMs to visualize and understand the intricate and interactive effects generated by kinetic and non-kinetic weapons, and achieve the same level of confidence and expertise in employing IO weapons that they have with kinetic weapons.

B. FY 2006 ACCOMPLISHMENTS (under the Navy's PE 0804758): JIOR links existing Service, Agency, and Department of Energy range capabilities, enhances those capabilities, creates new capabilities where they do not exist, and provides Services and Joint warfighters a robust, realistic environment for test, training, tactics development, exercising computer network attacks, computer network defense, and electronic warfare capabilities.

- The Joint IO Range achieved initial capability in July 2006. Ten sites were linked together to create a new, transformational, IO Range capability (USJFCOM serves as the Lead Agent).
- Computer Network Attack (CNA) capabilities, as the initial focus of the range, were tested and implemented.
- Development of an Electronic Warfare study began.

	FY 2006	FY 2007	FY 2008	FY 2009
JOINT INFORMATION OPERATIONS RANGE (JIOR)	0	8,227	0	0

FY 2007 Plans:

- Demonstrate an IO "use case" in a COCOM exercise to test readiness for future events.
- Test and evaluate IO Range concepts during a minimum of two (2) test events.
- Develop, test, and evaluate IO Range concepts during a minimum of two COCOM-sponsored events.
- Develop and publish a Computer Network Defense (CND) study.
- Publish the Electronic Warfare (EW) study begun in FY 06.

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0603757D8Z PROGRAM ELEMENT TITLE: TRAINING TRANSFORMATION (T2)

PROJECT NUMBER: P762 PROJECT TITLE: JOINT INFORMATION OPERATIONS RANGE (JIOR)

- In late FY07, begin to implement CND and EW as part of the expansion to full spectrum IO.
- Conduct the research and analysis to select an additional ten IO Range sites (#11-20) to continue expansion of the Range towards full capability.
- Begin development of Performance Metrics to continuously evaluate the IO Range and Site performances.
- Develop a Psychological Operations (PSYOP) study in late FY07.

FY 2008 Plans:

- Develop, test, and evaluate IO Range concepts during a minimum of six (6) Joint training events.
- Test and evaluate IO Range concepts during a minimum of three (3) test events.
- Develop and fully implement a scheduling tool and data repository.
- Publish the PSYOP study begun in FY 07.
- Implement PSYOP capabilities.
- Initiate spiral implementation of IO capabilities (CNA, CND, EW, and PSYOP) at the IO Range sites.
- Expand customer access to the IO Range capabilities.

FY 2009 Plans:

- Develop, test, and evaluate IO Range concepts during a minimum of nine (9) Joint training events.
- Test and evaluate IO Range concepts during a minimum of four (4) test events.
- Development toward full spectrum IO will continue to evolve with the addition of a more robust set of Electronic Attack (EA) targets.
- Continue the spiral implementation of IO capabilities (CNA, CND, EW, and PSYOP) at the IO Range sites. This continuing effort supports progress toward reaching full capability in FY 2011 in which twenty (20) persistent IO Range sites will be connected and integrated for IO Range use and operation.
- Develop and publish an Operational Security (OPSEC) study.

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0603757D8Z PROGRAM ELEMENT TITLE: TRAINING TRANSFORMATION (T2)

PROJECT NUMBER: P762 PROJECT TITLE: JOINT INFORMATION OPERATIONS RANGE (JIOR)

C. OTHER PROGRAM FUNDING SUMMARY: As directed in the National Defense Authorization Act for FY 2005, RDT&E funds moved from Navy PE 0804758 to Defense-Wide starting in FY 2007. Related RDT&E funding under Navy PE 0804758:

Project Number & Title	FY 2006 Actual (under Navy)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate
Related RDT&E: 060372N, Joint Experimentation	9,750	0	0	0

D. ACQUISITION STRATEGY: Not applicable.

E. MAJOR PERFORMERS:

Recipients

City/State

Description

No performer in this PE received, or will receive in FY 2007/08/09 more than 15% of the program or \$10 million.