Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Office of Secretary Of Defense		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 6: *RDT&E Management Support*	**R-1 ITEM NOMENCLATURE** PE 0303166D8Z: *Support to Information Operations Capability*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	29.488	31.500	12.209	-	12.209	11.630	11.155	10.869	9.254	Continuing	Continuing
001: *IO Capability Activities*	6.982	4.861	3.433	-	3.433	3.126	3.199	3.268	3.638	Continuing	Continuing
002: *IO Range*	9.254	11.669	4.202	-	4.202	4.300	4.357	4.514	3.736	Continuing	Continuing
003: *VisIOn*	8.532	14.970	4.574	-	4.574	4.204	3.599	3.087	1.880	Continuing	Continuing
004: *Enhanced Simulation for Information Operations Capabilities*	4.720	-	-	-	-	-	-	-	-	Continuing	Continuing

A. Mission Description and Budget Item Justification

These programs are part of the Defense Department's coordinated effort to integrate Information Operations (IO), Cyber, and Intelligence Operations Integrations (IOI) test and evaluation capabilities to assess IO, Cyber, and IOI technologies and tactics in a representative operational environment against realistic targets. The Defensewide IO Program Review revalidated the need for a suite of automated data analysis and decision support software tools to facilitate joint-IO. The advent of critical Cyberspace Operations mandate Cyber Technologies be assessed in a like environment. In addition, joint warfighter requirements are driving the need for the integration of intelligence and operations capabilities/capacities. These efforts enable users to accomplish Joint Intelligence Preparation of the Operational Environment (JIPOE), develop effective IO, Cyber, and operational strategies and candidate campaign targets, plan missions, and monitor and assess execution of operations. The objectives of the programs are to create a flexible, seamless and persistent environment enabling Combatant Commanders to achieve the same level of confidence and expertise in employing IO and Cyber capabilities that they have in kinetic weapons; to lead the development of joint IOI capabilities and capacity that facilitate operational and intelligence planning activities by the Services and COCOMs; and to transform IO, Cyber, and IOI activities to support joint IO training, education, and exercises.

Exhibit R-2, **RDT&E Budget Item Justification:** PB 2012 Office of Secretary Of Defense	**DATE:** February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 6: *RDT&E Management Support*	**R-1 ITEM NOMENCLATURE** PE 0303166D8Z: *Support to Information Operations Capability*

B. Program Change Summary ($ in Millions)	**FY 2010**	**FY 2011**	**FY 2012 Base**	**FY 2012 OCO**	**FY 2012 Total**
Previous President's Budget	30.376	31.500	30.491	-	30.491
Current President's Budget	29.488	31.500	12.209	-	12.209
Total Adjustments	-0.888	-	-18.282	-	-18.282
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.849	-			
• Operational Efficiency - Discontinued participation in Department of Energy effort to provide research and development spt and service to establish analysis of energy related critical infrastructure	-	-	-1.000	-	-1.000
• IO PSA mission transfer to USD(Policy)	-	-	-0.265	-	-0.265
• Service Support Contractor adjustment	-	-	-0.185	-	-0.185
• Department Adjustment	-0.039	-	-0.039	-	-0.039
• JFCOM Efficiencies - Baseline Review. As part of the DOD reform agenda, implements a zero-based review of the organization to align resources to the most critical priorities.	-	-	-16.793	-	-16.793

Exhibit R-2A, RDT&E Project Justification: PB 2012 Office of Secretary Of Defense		DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0303166D8Z: *Support to Information Operations Capability*	PROJECT 001: *IO Capability Activities*

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
001: *IO Capability Activities*	6.982	4.861	3.433	-	3.433	3.126	3.199	3.268	3.638	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

Details provided in the Defense-wide classified book.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
Title: IO Capability Activities	6.982	4.861	3.433
Description: Funds the development of IO, Cyber and IOI capabilities and capacity to support COCOMs and Services executing operations during current and future conflicts. Supports the development of IO, Cyber and IOI capabilities, particularly critical emerging IO abd Cyber needs that support IO/Cyber planners and operators. *FY 2010 Accomplishments:* Details provided in the Defense-wide classified book. *FY 2011 Plans:* Details provided in the Defense-wide classified book. *FY 2012 Plans:* Continue to develop IO, Cyber and IOI capabilities that support COCOMs and Services executing operations during current and future conflicts. Support the development of IO, Cyber and IOI capabilities, particularly critical emerging IO abd Cyber needs that support IO/Cyber planners and operators.			
Accomplishments/Planned Programs Subtotals	6.982	4.861	3.433

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

Details provided in the Defense-wide classified book.

E. Performance Metrics

Performance metrics are measured through internal management controls and external assessments. Performance metrics include, but are not limited to time, money, realism, and fidelity as defined below:

Exhibit R-2A, **RDT&E Project Justification:** PB 2012 Office of Secretary Of Defense		**DATE:** February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 6: *RDT&E Management Support*	**R-1 ITEM NOMENCLATURE** PE 0303166D8Z: *Support to Information Operations Capability*	**PROJECT** 001: *IO Capability Activities*

• Time – Will the effort enable the warfighter to speed up processes faster than current capabilities allow?

• Money – Will the effort enable the warfighter to reduce duplication of effort and to prepare and execute events at a more effective and efficient cost than current capabilities allow?

• Realism – Will the effort enable the warfighter to create an environment that is closer to the real world environment than current capabilities allow?

• Fidelity – Will the effort ensure unity of efforts throughout the IO, Cyber, and IOI Communities?

Exhibit R-2A, RDT&E Project Justification: PB 2012 Office of Secretary Of Defense		DATE: February 2011

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COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
002: *IO Range*	9.254	11.669	4.202	-	4.202	4.300	4.357	4.514	3.736	Continuing	Continuing
Quantity of RDT&E Articles											

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. The Defense-Wide IO Program Review revalidated a requirement for an integrated range supporting "exercises, testing, and development of IO capabilities." Further direction by the Office of the Secretary of Defense (OSD) identified the need for an "integrated IO test and evaluation capability to assess IO technologies and tactics in a representative operational environment against realistic targets." The 2006 National Security Strategy identifies "Strengthen Alliances to Defeat Global Terrorism and Work to Prevent Attacks Against Us and Our Friends", which involves significant Information Operations (IO) and Cyber operations as a goal. Through the Defense Planning Guidance (DPG) and the Integrated Priority Lists, COCOMs repeatedly state the need to expand IO/Cyber training and education for the developing cadre of IO/Cyber professionals and provide an environment for analysis, testing, training, combat assessments, and measures of effectiveness for more reliable IO/Cyber capabilities. Deputy Secretary of Defense Memorandum on the IO Range established the requirement for creating a cooperative IO range among the Military Services.

The IO Range provides a secure, flexible, and seamless environment for the Military Services and Joint warfighters to test, train, develop tactics, and exercise selected IO/Cyber capabilities. The basis of the functional structure of the IO Range is the integration of existing ranges, laboratories, information warfare centers, and other Government facilities that currently support IO/Cyber test, training, exercise, and experimentation events. Capabilities at the selected sites are securely connected and integrated into the IO Range. A key feature of this concept is a persistent, secure connection that links the sites together, allowing the exchange of data and the visualization of effects as we employ capabilities. Creation of a "virtual range" based on persistent connections significantly reduces the amount of lead-time required to set up each new warfighter event. The long-term goal for the IO Range is to be a full spectrum IO/Cyber Range supporting: operations security (OPSEC), computer network operations (CNO), electronic warfare (EW), military information support operations (MISO), and military deception (MILDEC). This environment enables the warfighters to visualize non-kinetic weapons effects, 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/Cyber capabilities as they have with kinetic capabilities.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
Title: IO Range	9.254	11.669	4.202
FY 2010 Accomplishments: • Developed, tested and evaluated IO Range concepts during events based on a list of prioritized requirements and available funding. • Continued to evolve full spectrum IO towards full range of capabilities to include Computer Network Operations, Electronic Warfare (EW), Deception, and other related targets.			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Office of Secretary Of Defense		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 6: *RDT&E Management Support*	**R-1 ITEM NOMENCLATURE** PE 0303166D8Z: *Support to Information Operations Capability*	**PROJECT** 002: *IO Range*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
• Continued the implementation of IO capabilities at the Range sites. This continuing effort supports progress toward reaching full capability in which more than 70 persistent IO Range sites will be connected and integrated for IO Range use. *FY 2011 Plans:* • Develop, test and evaluate IO Range concepts during events based on a list of prioritized requirements and available funding. • Continue to evolve full spectrum IO/Cyber towards full range of capabilities to include Computer Network Operations, EW, Deception, and other related targets. • Continue the implementation of IO/Cyber capabilities at the Range sites. This continuing effort supports progress toward reaching full capability in which more than 90 persistent IO Range sites will be connected and integrated for IO Range use. *FY 2012 Plans:* • Develop, test and evaluate IO Range concepts during events based on a list of prioritized requirements and available funding. • Development toward full spectrum IO/Cyber will continue to evolve with the addition of a more robust set of Electronic Attack targets. • Continue the implementation of IO/Cyber capabilities at the Range sites. This continuing effort supports progress toward reaching full capability in which more than 90 persistent IO Range sites will be connected and integrated for IO Range use.			
Accomplishments/Planned Programs Subtotals	9.254	11.669	4.202

C. Other Program Funding Summary ($ in Millions)

  N/A

D. Acquisition Strategy

  Details provided in the Defense-wide classified book.

E. Performance Metrics

  Performance metrics are measured through internal management controls and external assessments. Performance metrics include, but are not limited to time, money, realism, and fidelity as defined below:

  • Time – Will the effort enable the warfighter to speed up processes faster than current capabilities allow?
  • Money – Will the effort enable the warfighter to reduce duplication of effort and to prepare and execute events at a more effective and efficient cost than current capabilities allow?
  • Realism – Will the effort enable the warfighter to create an environment that is closer to the real world environment than current capabilities allow?
  • Fidelity – Will the effort ensure unity of efforts throughout the IO/Cyber Community?

Exhibit R-2A, RDT&E Project Justification: PB 2012 Office of Secretary Of Defense		DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0303166D8Z: *Support to Information Operations Capability*	PROJECT 003: *VisIOn*

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
003: *VisIOn*	8.532	14.970	4.574	-	4.574	4.204	3.599	3.087	1.880	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

The Virtual Support for the Information Operations Environment (VisIOn) is the DoD primary Joint IO/Cyber decision support system for analysis, planning, and assessment of IO and Cyber operations. VisIOn will be accessible to the Joint Force Commander (JFC), Combatant Commanders (CCDRs), and their components for integration of intelligence, operational processes, and databases in support of IO/Cyber planning to include courses of action development, analysis, and assessment. As such, it is being designed to improve data discovery, integrative analysis, requests for information tracking, and integration of multi-discipline data. VisIOn will integrate and couple decision support capabilities with analytic capabilities to develop products such as Joint Intelligence Preparation of the Operational Environment, centers of gravity analysis, information environment characterizations, adversary tactics/techniques, and diagnostic/predictive assessment products. VisIOn will support planning, execution, and assessment of IO and Cyber operations, to include Military Information Support to Operations (MISO), Electronic Warfare (EW), Operations Security (OPSEC), Computer Network Operations (CNO), and Military Deception (MILDEC); and integration of other critical capabilities (Physical Destruction, Physical Security, Counter-Intelligence, Information Assurance, and Combat Camera) and related activities (Public Affairs, Civil Affairs, and Defense Support to Public Diplomacy capabilities).

VisIOn will support and enhance the IO/Cyber operations mission by creating a collaborative environment to connect people, processes, and technology that will merge and automate IO/Cyber/IOI analysis, planning, and assessment functions to meet operational needs. VisIOn will bring together communities of interest and facilitate the resolution of specific IO/Cyber/IOI problem sets. VisIOn will leverage existing analysis and data sets to the fullest extent by integrating with existing planning services, via a Service-Oriented Architecture.

VisIOn will be a web-based system for integrating joint IO analysis, planning and assessment in the Joint Net-centric Operations (JNO) environment. It will include a suite of scalable, modular, data and software services that are to the maximum extent practical, platform independent.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
Title: VIsIOn	8.532	14.970	4.574

FY 2010 Accomplishments:
• Continued development toward Initial Operational Capability (IOC) in FY 2011
• Continued program development in preparation for Operational Test and Evaluation
• Efforts underway to establish Milestone Decision Authority and declare VisIOn as ACAT III level program

FY 2011 Plans:
• Achieve successful Operational Test and Evaluation
• Establish Milestone Decision Authority and declare VisIOn as ACAT III level program

Exhibit R-2A, **RDT&E Project Justification:** PB 2012 Office of Secretary Of Defense		**DATE:** February 2011
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B. Accomplishments/Planned Programs ($ in Millions)	**FY 2010**	**FY 2011**	**FY 2012**
• Achieve IOC and continue spiral development, integrating new tools and other IO capabilities towards Full Operational Capability (FOC) ***FY 2012 Plans:*** • Continue spiral development, integrating new tools and other IO capabilities towards FOC • Continue fielding to COCOMs/Services/Agencies.			
Accomplishments/Planned Programs Subtotals	8.532	14.970	4.574

C. Other Program Funding Summary ($ in Millions)

   N/A

D. Acquisition Strategy

   The VisIOn acquisition, management, and contracting strategy consists of the application of management tools and quarterly reviews by the System Development Integrated Process Team (SDIPT) made up of customers and functional oversight managers. Effort ensures adherence to guidance outlined in the DoD 5000 series directives, Directive 7, Federal Acquisition Regulations, and FAR Supplement Policies and Procedures required to acquire and sustain capabilities, systems, tools, products, and services through a disciplined, yet agile, process that enables the defense establishment to provide and protect vital information and support IO for the nation and the warfighters.

E. Performance Metrics

   Performance metrics are measured through internal management controls and external assessments. Performance metrics include, but are not limited to time, money, realism, and fidelity as defined below:

• Time – Will the effort enable the warfighter to speed up processes faster than current capabilities allow?
• Money – Will the effort enable the warfighter to reduce duplication of effort and to prepare and execute events at a more effective and efficient cost than current capabilities allow?
• Realism – Will the effort enable the warfighter to create an environment that is closer to the real world environment than current capabilities allow?
• Fidelity – Will the effort ensure unity of efforts throughout the IO, Cyber, and IOI Communities?

Exhibit R-2A, RDT&E Project Justification: PB 2012 Office of Secretary Of Defense		DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0303166D8Z: *Support to Information Operations Capability*	PROJECT 004: *Enhanced Simulation for Information Operations Capabilities*

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
004: *Enhanced Simulation for Information Operations Capabilities*	4.720	-	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

Enhanced Simulation for IO, Cyber, and IOI Capabilities provides a software architecture that can bring network management to the Deputy Secretary of Defense Chartered Information Operations Range and VisIOn initiatives. The IO Range and VisIOn programs require the transfer of large amounts of data to accomplish their mission and must mitigate or overcome latency and bandwidth limitation inherent in all networks. These network limitations are especially prevalent in field operations where connectivity to networks is erratic. The DoD leadership recognizes the need to improve efficiency in utilizing non- kinetic weapons. Currently, however, the ability to create and operate the realistic operational environment required to support effective integration of these systems is limited because data transfer requirements exceed real world bandwidth limitations. The software architecture supports IO Range and VisIOn objectives to provide analysis, planning, rehearsal, and execution environments for US and coalition forces by enabling large-scale data transfer, and providing a central integration point with new standards, and enhancing simulation capabilities. This saves considerable time and money by eliminating rewrites of existing simulations and filtering of critical data thus providing a mission critical solution.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
Title: Enhanced Simulation for IO, Cyber, and IOI Capabilities	4.720	-	-
Description: The IO Range and VisIOn programs require the transfer of large amounts of data to accomplish their mission and must mitigate or overcome latency and bandwidth limitation inherent in all networks. These network limitations are especially prevalent in field operations where connectivity to networks is erratic. IO Range and VisIOn objectives provide planners the ability to analyze, plan, rehearse, and execute environments for US and coalition forces by enabling large-scale data transfer, and providing a central integration point with new standards, and enhancing simulation capabilities. *FY 2010 Accomplishments:* Continued integration of data bases and toolsets for planners. *FY 2011 Plans:* N/A *FY 2012 Plans:* N/A			
Accomplishments/Planned Programs Subtotals	4.720	-	-

Exhibit R-2A, **RDT&E Project Justification:** PB 2012 Office of Secretary Of Defense		**DATE:** February 2011
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C. Other Program Funding Summary ($ in Millions)

  N/A

D. Acquisition Strategy

  Through the Modeling and Simulation Board, identify and fund intelligence and information operations related projects that increase the effectiveness and clarity of intelligence products to the operational planner and provide commanders actionable recommendations

E. Performance Metrics

  Performance metrics are measured through internal management controls and external assessments. Performance metrics include, but are not limited to time, money, realism, and fidelity as defined below:

  • Time – Will the effort enable the warfighter to speed up processes faster than current capabilities allow?
  • Money – Will the effort enable the warfighter to reduce duplication of effort and to prepare and execute events at a more effective and efficient cost than current capabilities allow?
  • Realism – Will the effort enable the warfighter to create an environment that is closer to the real world environment than current capabilities allow?
  • Fidelity – Will the effort ensure unity of efforts throughout the IO, Cyber, and IOI Communities?