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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Office of Secretary Of Defense **DATE:** February 2010

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|---|---|
| APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i> | R-1 ITEM NOMENCLATURE PE 0603200D8Z: <i>Joint Advanced Concepts (JAC)</i> |
|---|---|

| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | FY 2011 Base Estimate | FY 2011 OCO Estimate | FY 2011 Total Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
|---------------------------------------|----------------|------------------|-----------------------|----------------------|------------------------|------------------|------------------|------------------|------------------|------------------|------------|
| Total Program Element | 0.000 | 3.878 | 6.808 | 0.000 | 6.808 | 6.901 | 7.156 | 7.319 | 7.921 | Continuing | Continuing |
| P202: <i>Joint Advanced Concepts</i> | 0.000 | 2.662 | 2.287 | 0.000 | 2.287 | 2.317 | 2.501 | 2.594 | 2.770 | Continuing | Continuing |
| P203: <i>Joint Electronic Warfare</i> | 0.000 | 1.216 | 2.033 | 0.000 | 2.033 | 2.098 | 2.172 | 2.247 | 2.678 | Continuing | Continuing |
| P208: <i>Joint Interoperability</i> | 0.000 | 0.000 | 2.488 | 0.000 | 2.488 | 2.486 | 2.483 | 2.478 | 2.473 | Continuing | Continuing |

A. Mission Description and Budget Item Justification

Acquisition reform initiatives call for top down, national security strategy-driven capabilities-based planning. The Joint Advanced Concepts (JAC) program supports acquisition reform initiatives and early capabilities based strategic investment decisions that ensure joint, integrated, interoperable, system-of-system combat capability to the warfighter. Through a systematic and thorough process, including comprehensive technology assessments, net technical assessments that engage in comparative analysis of U.S. versus non-U.S. capabilities, the program will better inform early shaping of acquisition programs, to include Special Access Programs, from a capabilities portfolio management perspective to deliver improved capabilities to the current and future joint warfighter. This shaping is supported through capability-based assessments, requirements analysis, joint capability area assessments, integrated roadmap development, and the development/integration of risk-based collaborative tools to conduct capability-based assessments.

Provides funding for Joint Electronic Warfare (EW) initiatives and EW assessments. The EW Joint Analysis Team (established in November 2007) fills a void identified by the Combatant Commanders for a group to coordinate the disparate EW activities across the Department. Provides funding to the EW JAT for establishing the Joint Electronic Warfare Center (JEWEC) as the executive agent for coordination between Combatant Commanders, Services, Office of Secretary of Defense, Joint Staff, Weapon Schools, Technology Centers, Academia and DT&E organizations. Provides for EW exploitation analysis of the inter-relational effects of combined-systems evaluations in mission area needs in such domains as Integrated Air and Missile Defense, Blue Force Identification, Netted-sensors and Command and Control. The program will further work with the Joint Staff in developing a comprehensive, holistic EW architecture.

In FY 2011, a new Project Code--within this Program Element--will be addressed separately for Director, Joint Interoperability efforts; reference P208.

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| APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i> | R-1 ITEM NOMENCLATURE PE 0603200D8Z: <i>Joint Advanced Concepts (JAC)</i> |
|---|---|

B. Program Change Summary (\$ in Millions)

| | <u>FY 2009</u> | <u>FY 2010</u> | <u>FY 2011 Base</u> | <u>FY 2011 OCO</u> | <u>FY 2011 Total</u> |
|-------------------------------------|----------------|----------------|---------------------|--------------------|----------------------|
| Previous President's Budget | 0.000 | 7.817 | 0.000 | 0.000 | 0.000 |
| Current President's Budget | 0.000 | 3.878 | 6.808 | 0.000 | 6.808 |
| Total Adjustments | 0.000 | -3.939 | 6.808 | 0.000 | 6.808 |
| • Congressional General Reductions | | 0.000 | | | |
| • Congressional Directed Reductions | | 0.000 | | | |
| • Congressional Rescissions | 0.000 | 0.000 | | | |
| • Congressional Adds | | 0.000 | | | |
| • Congressional Directed Transfers | | 0.000 | | | |
| • Reprogrammings | 0.000 | 0.000 | | | |
| • SBIR/STTR Transfer | 0.000 | 0.000 | | | |
| • Other Program Adjustments | 0.000 | -3.939 | 6.808 | 0.000 | 6.808 |

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| Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense | | | | | | | | DATE: February 2010 | | | |
| APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i> | | | | R-1 ITEM NOMENCLATURE PE 0603200D8Z: <i>Joint Advanced Concepts (JAC)</i> | | | | PROJECT P202: <i>Joint Advanced Concepts</i> | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | FY 2011 Base Estimate | FY 2011 OCO Estimate | FY 2011 Total Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| P202: <i>Joint Advanced Concepts</i> | 0.000 | 2.662 | 2.287 | 0.000 | 2.287 | 2.317 | 2.501 | 2.594 | 2.770 | Continuing | Continuing |

A. Mission Description and Budget Item Justification

Acquisition reform initiatives call for top down, national security strategy-driven capabilities-based planning. The Joint Advanced Concepts (JAC) program supports acquisition reform initiatives and early capabilities based strategic investment decisions that ensure joint, integrated, interoperable, system-of-system combat capability to the warfighter. Through a systematic and thorough process, including comprehensive technology assessments, net technical assessments that engage in comparative analysis of U.S. versus non-U.S. capabilities, the program will better inform early shaping of acquisition programs, to include Special Access Programs, from a capabilities portfolio management perspective to deliver improved capabilities to the current and future joint warfighter. This shaping is supported through capability-based assessments, requirements analysis, joint capability area assessments, integrated roadmap development, and the development/integration of risk-based collaborative tools to conduct capability-based assessments. These efforts were previously funded under PE0604875D8Z, Joint Systems Architecture Development.

B. Accomplishments/Planned Program (\$ in Millions)

| | FY 2009 | FY 2010 | FY 2011 Base | FY 2011 OCO | FY 2011 Total |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Joint Advanced Concepts | 0.000 | 2.662 | 2.287 | 0.000 | 2.287 |
| <i>FY 2009 Accomplishments:</i> N/A | | | | | |
| <i>FY 2010 Plans:</i> This project supports focus areas in portfolio management and activities associated with our program evaluation responsibilities providing for early shaping of Pre-Milestone A programs. Provide early shaping of Department-wide portfolio based investment decisions, development, coordination and institutionalization of enterprise wide Business Rules and procedures for investment strategies and resource balancing, integration of the requirements process with the acquisition process to bridge our military and civilian areas of responsibility with all Combatant Commands (COCOMS), Services and Agencies. Provides the Deputy Secretary of Defense and DoD Components advice on how | | | | | |

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| Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense | | | | DATE: February 2010 | | | | |
| APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i> | | R-1 ITEM NOMENCLATURE PE 0603200D8Z: <i>Joint Advanced Concepts (JAC)</i> | | PROJECT P202: <i>Joint Advanced Concepts</i> | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | | | |
| | | | | FY 2009 | FY 2010 | FY 2011 Base | FY 2011 OCO | FY 2011 Total |
| <p>to maximize capability investment to meet warfighter needs. Leads the development of integrated capability roadmaps, and supports acquisition program reviews and Guidance for Development of the Force. Represents Acquisition, Technology & Logistics (AT&L) interests in requirements for future acquisition systems. Develops and updates capability roadmaps to inform decision makers for portfolio investment decisions, DoD Requirements and POM decisions.</p> <p>Beginning in FY 20110, Director, Joint Interoperability efforts will be transferred to a new Project (P208) within this Program Element.</p> <p><i>FY 2011 Base Plans:</i> This project supports focus areas in portfolio management and activities associated with our program evaluation responsibilities providing for early shaping of Pre-Milestone A programs. Provide early shaping of Department-wide portfolio based investment decisions, development, coordination and institutionalization of enterprise wide Business Rules and procedures for investment strategies and resource balancing, integration of the requirements process with the acquisition process to bridge our military and civilian areas of responsibility with all COCOMS, Services and Agencies. Provides Deputy Secretary of Defense and DoD Components advice on how to maximize capability investment to meet warfighter needs. Leads the development of integrated capability roadmaps, and supports acquisition program reviews and Guidance for Development of the Force. Represents A&T interests in requirements for future acquisition systems. Develops and updates capability roadmaps to inform decision makers for portfolio investment decisions, DoD Requirements and Program Objective Memorandum (POM) decisions.</p> | | | | | | | | |
| Accomplishments/Planned Programs Subtotals | | | | 0.000 | 2.662 | 2.287 | 0.000 | 2.287 |

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense **DATE:** February 2010

| APPROPRIATION/BUDGET ACTIVITY | R-1 ITEM NOMENCLATURE | PROJECT |
|---|---|--------------------------------------|
| 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i> | PE 0603200D8Z: <i>Joint Advanced Concepts (JAC)</i> | P202: <i>Joint Advanced Concepts</i> |

C. Other Program Funding Summary (\$ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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| APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i> | | | | R-1 ITEM NOMENCLATURE PE 0603200D8Z: <i>Joint Advanced Concepts (JAC)</i> | | | | PROJECT P203: <i>Joint Electronic Warfare</i> | | | |
| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | FY 2011 Base Estimate | FY 2011 OCO Estimate | FY 2011 Total Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| P203: <i>Joint Electronic Warfare</i> | 0.000 | 1.216 | 2.033 | 0.000 | 2.033 | 2.098 | 2.172 | 2.247 | 2.678 | Continuing | Continuing |

A. Mission Description and Budget Item Justification

Provides funding for Joint Electronic Warfare (EW) initiatives and EW assessments. The EW Joint Analysis Team (JAT) (established in November 2007) fills a void identified by the Combatant Commanders for a group to coordinate the disparate EW activities across the Department. Provides funding to the EW JAT for establishing the Joint Electronic Warfare Center (JEWEC) as the executive agent for coordination between Combatant Commanders, Services, Office of Secretary of Defense, Joint Staff, Weapon Schools, Technology Centers, Academia and Developmental Test and Evaluation (DT&E) organizations. Provides for EW exploitation analysis of the inter-relational effects of combined-systems evaluations in mission area needs in such domains as Integrated Air and Missile Defense, Blue Force Identification, Netted-sensors and Command and Control. The program will further work with the Joint Staff in developing a comprehensive, holistic EW architecture.

B. Accomplishments/Planned Program (\$ in Millions)

| | FY 2009 | FY 2010 | FY 2011 Base | FY 2011 OCO | FY 2011 Total |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Joint Electronic Warfare <i>FY 2009 Accomplishments:</i> N/A <i>FY 2010 Plans:</i> This project supports Joint Electronic Warfare Center Support to the Electronic Warfare Joint Analysis Team as the conduit between Combatant Commanders, who determine EW Requirements, and the EW JATs analytical team. Perform comparative analysis to determine blue force operations throughout the Electro-Magnetic Spectrum, determine adversary technology trends, provide modeling, analysis, and simulation expertise for concept testing and validation, and provide objective oversight of field testing to ensure real world dynamics are considered. This analysis will assess asymmetric strengths and weaknesses, as well as how EW interacts with other warfighting areas. It will draw upon combined-systems evaluation events geared to mission area needs in such domains as Integrated | 0.000 | 1.216 | 2.033 | 0.000 | 2.033 |

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| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | | | |
| | | | | FY 2009 | FY 2010 | FY 2011 Base | FY 2011 OCO | FY 2011 Total |
| Air and Missile Defense, Blue Force Identification, Netted-sensors and Command and Control. The project will also support the Joint Staff effort to develop a comprehensive, holistic plan for EW. <i>FY 2011 Base Plans:</i> See above. | | | | | | | | |
| Accomplishments/Planned Programs Subtotals | | | | 0.000 | 1.216 | 2.033 | 0.000 | 2.033 |
| C. Other Program Funding Summary (\$ in Millions) N/A | | | | | | | | |
| D. Acquisition Strategy Not applicable. | | | | | | | | |
| E. Performance Metrics Not applicable. | | | | | | | | |

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| COST (\$ in Millions) | FY 2009 Actual | FY 2010 Estimate | FY 2011 Base Estimate | FY 2011 OCO Estimate | FY 2011 Total Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| P208: <i>Joint Interoperability</i> | 0.000 | 0.000 | 2.488 | 0.000 | 2.488 | 2.486 | 2.483 | 2.478 | 2.473 | Continuing | Continuing |

A. Mission Description and Budget Item Justification

The Director, Joint Interoperability provides oversight and guidance to initiatives and programs that support the joint tactical warfighter to enable reduced fratricide, increased force effectiveness, and decreased taxpayer cost through fully interoperable weapons systems, down to the tactical level of engagement. Joint interoperability is a force multiplier that will enable our warfighters to fight jointly, be more efficient and effective in the battle space, allow warfighters to fight the battle and not the tactical C2 displays, and reduce fratricide. Sharing of systems and information across Services, and with coalition and non-DoD partners, has the benefit of a more rapid and better coordinated response to an ever more agile adversary. It also enables the full exploitation of our costly (legacy and future) weapon systems at full kinematic range and makes full use of the assets in theater. The taxpayers also benefit from reducing the cost of weapon system procurement by paying once vs. many times for weapons systems that are used by multiple Services in the battlespace.

B. Accomplishments/Planned Program (\$ in Millions)

| | FY 2009 | FY 2010 | FY 2011 Base | FY 2011 OCO | FY 2011 Total |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Joint Interoperability | 0.000 | 0.000 | 2.488 | 0.000 | 2.488 |
| <p><i>FY 2011 Base Plans:</i></p> <ul style="list-style-type: none"> • Chair the Combat Identification (CID) Defense Support Team. • Identify Friend or Foe (IFF) M5 Technology Synchronization. • IFF M5 North Atlantic Treaty Organization (NATO) Interoperability and technology export. • Joint Cooperative Target Identification–Ground (JCTI-G). • Personnel Recovery – DAMA-C lead w/Defense Information Systems Agency (DISA), Services, & Joint Staff; Interoperability of radios and interrogators. • Sensor Signatures Oversight. • Blue Force Tracking – Device Interoperability, Single Card Solution. • Interoperability Commission (IOC). <ul style="list-style-type: none"> – US Chair for CID bilateral w/United Kingdom (UK). – US Chair for Joint Fires bilateral w/UK. | | | | | |

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| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | | | |
| | | | | FY 2009 | FY 2010 | FY 2011 Base | FY 2011 OCO | FY 2011 Total |
| <ul style="list-style-type: none"> • Digital Joint Close Air Support – Lead for AT&L – interoperability technology. • Net Centric (NC), Battlespace Awareness (BA), and Command & Control (C2) FCB and Working Group support. • Address policies and procedures used to ensure net-centric joint interoperability. • Program Support Reviews (PSR) technical support to Systems Engineering. • Application of advanced mathematics to DoD battlefield interoperability technologies. • Model Driven Architecture exploitation in DoD. • Net-enabled Interoperability Technologies. • All Domain Tactical Picture. | | | | | | | | |
| Accomplishments/Planned Programs Subtotals | | | | 0.000 | 0.000 | 2.488 | 0.000 | 2.488 |
| C. Other Program Funding Summary (\$ in Millions) | | | | | | | | |
| N/A | | | | | | | | |
| D. Acquisition Strategy | | | | | | | | |
| Not applicable for this item. | | | | | | | | |
| E. Performance Metrics | | | | | | | | |
| Not applicable for this item | | | | | | | | |

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