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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 Defense Advanced Research Projects Agency **DATE:** February 2010

| <b>APPROPRIATION/BUDGET ACTIVITY</b>                                    |                       |                         | <b>R-1 ITEM NOMENCLATURE</b>                  |                             |                               |                         |                         |                         |                         |                         |                   |
|---|-----------------------|-------------------------|---|-----------------------------|-------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------|
| 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> |                       |                         | PE 0305103E: <i>CYBER SECURITY INITIATIVE</i> |                             |                               |                         |                         |                         |                         |                         |                   |
| BA 6: <i>RDT&amp;E Management Support</i>                               |                       |                         |   |                             |                               |                         |                         |                         |                         |                         |                   |
| <b>COST (\$ in Millions)</b>  | <b>FY 2009 Actual</b> | <b>FY 2010 Estimate</b> | <b>FY 2011 Base Estimate</b>                  | <b>FY 2011 OCO Estimate</b> | <b>FY 2011 Total Estimate</b> | <b>FY 2012 Estimate</b> | <b>FY 2013 Estimate</b> | <b>FY 2014 Estimate</b> | <b>FY 2015 Estimate</b> | <b>Cost To Complete</b> | <b>Total Cost</b> |
| Total Program Element   | 49.865                | 49.791                  | 10.000  | 0.000                       | 10.000                        | 10.000                  | 10.000                  | 0.000                   | 0.000                   | Continuing              | Continuing        |
| CYB-01: <i>CYBER SECURITY INITIATIVE</i>                                | 49.865                | 49.791                  | 10.000  | 0.000                       | 10.000                        | 10.000                  | 10.000                  | 0.000                   | 0.000                   | Continuing              | Continuing        |

**A. Mission Description and Budget Item Justification**

(U) The National Cyber Security Initiative will foster a revolution in the Nation's ability to protect and defend its cyber operations. DARPA's responsibility as part of the overall Cyber Security Initiative (CSI) is to create a cyber test range that will become a National resource for testing the resiliency of cyber programs in the face of hostile action. The Cyber Range will be capable of supporting multiple, simultaneous, segmented tests in realistically configured or simulated testbed environments.

**B. Program Change Summary (\$ in Millions)**

|                                     | <b>FY 2009</b> | <b>FY 2010</b> | <b>FY 2011 Base</b> | <b>FY 2011 OCO</b> | <b>FY 2011 Total</b> |
|-------------------------------------|----------------|----------------|---------------------|--------------------|----------------------|
| Previous President's Budget         | 49.865         | 50.000         | 0.000               | 0.000              | 0.000                |
| Current President's Budget          | 49.865         | 49.791         | 10.000              | 0.000              | 10.000               |
| Total Adjustments                   | 0.000          | -0.209         | 10.000              | 0.000              | 10.000               |
| • Congressional General Reductions  |                | -0.209         |                     |                    |                      |
| • 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          |                     |                    |                      |
| • TotalOtherAdjustments             | 0.000          | 0.000          | 10.000              | 0.000              | 10.000               |

**Change Summary Explanation**

FY 2010  
Decrease reflects the Section 8097 Economic Assumption.  
FY 2011  
Not Applicable

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| <b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2011 Defense Advanced Research Projects Agency  |  |   |                | <b>DATE:</b> February 2010 |                        |                          |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i><br>BA 6: <i>RDT&amp;E Management Support</i>  |  | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0305103E: <i>CYBER SECURITY INITIATIVE</i> |                |                            |                        |                          |
| <b>C. Accomplishments/Planned Program (\$ in Millions)</b>  |  |   |                |                            |                        |                          |
|   |  | <b>FY 2009</b>  | <b>FY 2010</b> | <b>FY 2011<br/>Base</b>    | <b>FY 2011<br/>OCO</b> | <b>FY 2011<br/>Total</b> |
| Cyber Security Initiative   |  | 49.865  | 49.791         | 10.000                     | 0.000                  | 10.000                   |
| <p>(U) The goal of the Cyber Security Initiative is to revolutionize the Nation's ability to conduct cyber operations by developing a persistent and cost effective cyber testing environment. The National Cyber Range (NCR) will produce qualitative and quantitative assessments of cyber security research and development programs through a safe, fully-automated and instrumented environment. The range will replicate complex, large-scale, heterogeneous networks and users of current and future systems and operations. It will revolutionize cyber testing by enabling multiple, independent, simultaneous experiments on the same infrastructure to facilitate realistic testing of global scale research, and develop and revolutionize the state-of-the-art in cyber testing in order to facilitate rapid transition of research programs to operations.</p> <p><i>FY 2009 Accomplishments:</i></p> <ul style="list-style-type: none"> <li>- Developed detailed engineering plans, system engineering plans, and concepts of operations.</li> <li>- Refined the specifications leading to prototype development.</li> <li>- Completed operational partner transition study.</li> </ul> <p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> <li>- Develop prototype range and demonstration technologies.</li> <li>- Develop key technologies relevant to cyber testing.</li> <li>- Complete NCR prototype development and complete planning for full-scale system development.</li> </ul> <p><i>FY 2011 Base Plans:</i></p> <ul style="list-style-type: none"> <li>- Complete transition of program to a transition partner.</li> <li>- Continue development of high-risk, high payoff cyber testing technologies.</li> </ul> |  |   |                |                            |                        |                          |
| Accomplishments/Planned Programs Subtotals  |  | 49.865  | 49.791         | 10.000                     | 0.000                  | 10.000                   |

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 Defense Advanced Research Projects Agency **DATE:** February 2010

**APPROPRIATION/BUDGET ACTIVITY**  
0400: *Research, Development, Test & Evaluation, Defense-Wide*  
BA 6: *RDT&E Management Support*

**R-1 ITEM NOMENCLATURE**  
PE 0305103E: *CYBER SECURITY INITIATIVE*

**D. Other Program Funding Summary (\$ in Millions)**

N/A

**E. Acquisition Strategy**

N/A

**F. Performance Metrics**

Specific programmatic performance metrics are listed above in the program accomplishments and plans section.

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