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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Air Force **DATE:** February 2012

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| APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i> | R-1 ITEM NOMENCLATURE PE 0604604F: <i>Submunitions</i> |
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| COST (\$ in Millions) | FY 2011 | FY 2012 | FY 2013 Base | FY 2013 OCO | FY 2013 Total | FY 2014 | FY 2015 | FY 2016 | FY 2017 | Cost To Complete | Total Cost |
|--|---------|---------|--------------|-------------|---------------|---------|---------|---------|---------|------------------|------------|
| Total Program Element | 1.614 | 2.427 | 2.567 | - | 2.567 | 2.564 | 2.574 | 2.647 | 2.682 | Continuing | Continuing |
| 653166: <i>Joint Smart Munitions Test and Evaluation</i> | 1.614 | 2.427 | 2.567 | - | 2.567 | 2.564 | 2.574 | 2.647 | 2.682 | Continuing | Continuing |
| Quantity of RDT&E Articles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |

A. Mission Description and Budget Item Justification

Project Chicken Little continues to provide vital research, development, test and evaluation (RDT&E) support to developmental smart munitions, seekers/sensors and their platforms, networked weapons, advanced weapon concepts, and innovative targeting technologies employed against a wide variety of vehicle targets, theater air defense units, and an extensive array of foreign threat systems and associated equipment. Hostile combat systems and related equipment exhibit physical characteristics (i.e. signatures), as well as certain vulnerabilities, which can be exploited by various targeting technologies leading to the elimination or incapacitation of the threat through the application of force (e.g. smart munitions or directed energy) or application of intelligence, surveillance, reconnaissance (ISR) methods. Chicken Little collects physical, functional, and signature attributes of actual foreign threat systems and related equipment to construct high-fidelity models for use in scientific analysis (e.g. vulnerability and effectiveness assessments) and weapon/targeting system design. Chicken Little collects high resolution signature data using a variety of ground, air, and space-based sensors against both new and existing (obtained, sustained, and maintained to be signature representative) foreign targets; with and without the presence of camouflage, concealment, and deception materials; and operated using enemy tactics/CONOPS. The resulting highly reliable, realistic data directly supports munitions/targeting development programs and helps mitigate overall acquisition risk. The project serves as a major focal point for joint signature exploitation, collection, and dissemination amongst the DoD and intelligence community (IC). Chicken Little is a prime contributor in the time critical process to rapidly exploit, assess, and determine US and allied weapon/targeting performance against high value targets. Customers include: the major Defense and Service Intelligence Centers, all Services, the Joint Technical Coordinating Group (JTTCG) who develop the Joint Munitions Effectiveness Manuals (JMEMs), Combatant Commands, AF Major Commands, US Air Force Weapons School curriculum support, and others. Current projects include, but are not limited to: target signature exploitation, target geometric modeling (for identifying vulnerabilities), improving air capabilities against protected structures (specifically hard and deeply buried targets), and the testing of multiple seekers, sensors, and targeting technologies in representative environments against COCOM/MAJCOM/IC high value targets.

This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production.

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| B. Program Change Summary (\$ in Millions) | FY 2011 | FY 2012 | FY 2013 Base | FY 2013 OCO | FY 2013 Total |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Previous President's Budget | 1.622 | 2.427 | 2.562 | - | 2.562 |
| Current President's Budget | 1.614 | 2.427 | 2.567 | - | 2.567 |
| Total Adjustments | -0.008 | - | 0.005 | - | 0.005 |
| • Congressional General Reductions | - | - | | | |
| • Congressional Directed Reductions | - | - | | | |
| • Congressional Rescissions | - | - | | | |
| • Congressional Adds | - | - | | | |
| • Congressional Directed Transfers | - | - | | | |
| • Reprogrammings | - | - | | | |
| • SBIR/STTR Transfer | - | - | | | |
| • Other Adjustments | -0.008 | - | 0.005 | - | 0.005 |

Change Summary Explanation

FY11 adjustment Congressional General Reductions -\$0.008

| C. Accomplishments/Planned Programs (\$ in Millions) | FY 2011 | FY 2012 | FY 2013 Base | FY 2013 OCO | FY 2013 Total |
|--|----------------|----------------|---------------------|--------------------|----------------------|
| Title: Predictive Tool Development | 0.250 | - | - | - | - |
| Description: Continue to develop predictive tools for weapon/target interactions in order to support improvements to mission planning and bomb damage assessment. | | | | | |
| FY 2011 Accomplishments: Conduct additional sub-scale and full scale test events with high strength and ultra-high strength concrete; use test results to improve damage models. | | | | | |
| FY 2012 Plans: Task completed in FY11 | | | | | |
| FY 2013 Base Plans: Task completed in FY11 | | | | | |
| FY 2013 OCO Plans: No OCONUS requirement | | | | | |
| Title: Model Development and Vulnerability Analysis | 0.325 | 0.365 | 0.375 | - | 0.375 |

UNCLASSIFIED

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|--|----------------------------|

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| C. Accomplishments/Planned Programs (\$ in Millions) | FY 2011 | FY 2012 | FY 2013 Base | FY 2013 OCO | FY 2013 Total |
|--|---------|---------|--------------|-------------|---------------|
| <p>Description: Develop, validate, and accredit improved models for target vulnerability and weapons effectiveness in support of Combatant Commands' (CoCOMs) requirements.</p> <p>FY 2011 Accomplishments: Construct at least two more geometric models based on CoCOMs' requirements.</p> <p>FY 2012 Plans: Construct at least two more geometric models based on CoCOMs' requirements.</p> <p>FY 2013 Base Plans: Develop, validate, and accredit improved models for target vulnerability and weapons effectiveness in support of Combatant Commands' (CoCOMs) requirements.</p> <p>FY 2013 OCO Plans: No OCONUS requirements.</p> | | | | | |
| <p>Title: System Exploitation</p> <p>Description: Provide the DoD community accurate multi-spectral signatures obtained from high-value, signature representative modern threat systems using advanced collection technologies.</p> <p>FY 2011 Accomplishments: Exploit 3-4 high value threat systems. Provide signature data from multiple threat systems in various environments using advanced and developmental seeker/sensor technologies.</p> <p>FY 2012 Plans: Exploit 3-4 high value threat systems. Provide signature data from multiple threat systems in various environments using advanced and developmental seeker/sensor technologies</p> <p>FY 2013 Base Plans:</p> | 0.900 | 1.026 | 1.035 | - | 1.035 |

UNCLASSIFIED

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| C. Accomplishments/Planned Programs (\$ in Millions) | FY 2011 | FY 2012 | FY 2013 Base | FY 2013 OCO | FY 2013 Total |
|---|----------------|----------------|-------------------------|------------------------|--------------------------|
| Exploit high value threat systems (typically 4 per year). Provide signature data from multiple threat systems in various environments using advanced and developmental seeker/sensor technologies FY 2013 OCO Plans: No OCONUS requirements. | | | | | |
| Title: Bi-Annual Sensor Week Description: Previously included in the System Exploitation line. Provides unique air/ground demo of candidate seekers/sensors/ISR assets. FY 2011 Accomplishments: Previously included in the System Exploitation line. Provides unique air/ground demo of candidate seekers/sensors/ISR assets. FY 2012 Plans: Previously included in the System Exploitation line. Provides unique air/ground demo of candidate seekers/sensors/ISR assets. FY 2013 Base Plans: (Note: Not a new start, previously addressed within System Exploitation, delineated here for improved traceability.) Sensor Week (SW) provides a singularly unique forum for joint service demonstration of developmental and operational seekers/sensors/ISR assets against a wide array of US, coalition, and foreign national ground targets. FY 2013 OCO Plans: No OCONUS requirements. | - | - | 0.020 | - | 0.020 |
| Title: ISR Exploitation Description: Plan and conduct captive carry flight tests and signature collection for seeker/sensor technology evaluations. FY 2011 Accomplishments: | 0.139 | 0.250 | 0.337 | - | 0.337 |

UNCLASSIFIED

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|--|--|

| C. Accomplishments/Planned Programs (\$ in Millions) | FY 2011 | FY 2012 | FY 2013 Base | FY 2013 OCO | FY 2013 Total |
|---|---------|---------|-----------------|----------------|------------------|
| <p>Investigate some or all of the following technologies for utility in ISR activities: Hyperspectral Imagery (HIS), shortwave IR and Polarmetric Imaging.</p> <p>FY 2012 Plans: Investigate some or all of the following technologies for utility in ISR activities: Hyper Spectral Imagery (HSI), shortwave IR and Polarmetric Imaging.</p> <p>FY 2013 Base Plans: Exploit the signatures of ISR targets; conduct rapid reaction performance analysis & evaluations in support of COCOM/MAJCOM immediate/urgent warfighter needs; optimize current project methods to support ISR testing</p> <p>FY 2013 OCO Plans: No OCONUS requirements.</p> | | | | | |
| <p>Title: Fleet Relevance</p> <p>Description: Previously included in the System Exploitation line. Obtain/maintain high value signature quality threat assets.</p> <p>FY 2011 Accomplishments: Previously included in the System Exploitation line. Obtain/maintain high value signature quality threat assets.</p> <p>FY 2012 Plans: (Note: Not a new start, previously addressed within System Exploitation, delineated here for improved traceability.) Attain new emerging threat assets and/or decoys. Sustain and maintain existing foreign threat assets to ensure proper "signature representative" nature for systems development and testing.</p> <p>FY 2013 Base Plans: Assist in obtaining relevant, high value, and emergent threat assets and/or decoys. Ensure the fleet foreign threat assets remain properly "signature representative" for systems development and testing.</p> <p>FY 2013 OCO Plans:</p> | - | 0.786 | 0.800 | - | 0.800 |

UNCLASSIFIED

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| C. Accomplishments/Planned Programs (\$ in Millions) | FY 2011 | FY 2012 | FY 2013 Base | FY 2013 OCO | FY 2013 Total |
|---|----------------|----------------|-------------------------|------------------------|--------------------------|
| No OCONUS requirements. | | | | | |
| Accomplishments/Planned Programs Subtotals | 1.614 | 2.427 | 2.567 | - | 2.567 |

| D. Other Program Funding Summary (\$ in Millions) | | | | | | | | | | | |
|--|----------------|----------------|-------------------------|------------------------|--------------------------|----------------|----------------|----------------|----------------|-----------------------------|-------------------|
| <u>Line Item</u> | <u>FY 2011</u> | <u>FY 2012</u> | <u>FY 2013 Base</u> | <u>FY 2013 OCO</u> | <u>FY 2013 Total</u> | <u>FY 2014</u> | <u>FY 2015</u> | <u>FY 2016</u> | <u>FY 2017</u> | <u>Cost To Complete</u> | <u>Total Cost</u> |
| • None: <i>N/A</i> | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |

E. Acquisition Strategy
 Funds are executed organically in support of test and evaluation activities including studies, analyses, flight & ground tests, model building and simulation. Virtually all of the work is performed in-house by the 46th Test Wing.

F. Performance Metrics
 Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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| Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force | | DATE: February 2012 |
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| Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force | | DATE: February 2012 |
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Schedule Details

| Events | Start | | End | |
|---|---------|------|---------|------|
| | Quarter | Year | Quarter | Year |
| Target/warhead evaluation/analysis, signature test, captive carry flight tests. | 1 | 2011 | 4 | 2017 |