| Missile Defense Agency (MDA) Exhibit R-2 RDT&E Item Justification   |         |         |         |                             | ate<br><b>ebruary 20</b> | 07      |         |         |
|---|---------|---------|---------|-----------------------------|--------------------------|---------|---------|---------|
| PROPRIATION/BUDGET ACTIVITY  DT&E, DW/06 RDT&E Management Support  R-1 NOMENCLATURE 0605502C Small Business |         |         | _       | s Innovative Research - MDA |                          |         |         |         |
| COST (\$ in Thousands)  | FY 2006 | FY 2007 | FY 2008 | FY 2009                     | FY 2010                  | FY 2011 | FY 2012 | FY 2013 |
| Total Program Element (PE) Cost   | 133,105 | 0       | 0       | 0                           | 0                        | 0       | 0       | 0       |
| 0510 Statutory & Mandated Programs  | 133,105 | 0       | 0       | 0                           | 0                        | 0       | 0       | 0       |

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

This project explores innovative concepts pursuant to Public Law 106-554 (Small Business Reauthorization Act of 2000) and Public Law 107-50 (Small Business Technology Transfer Program Reauthorization Act of 2001), which mandates a two-phase competition for small businesses with innovative technologies that can also be commercialized. The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs will develop new dual-use technologies for possible future MDA BMDS needs. Dual-use means that the technologies will also be judged on their potential for future private sector investment both as a vehicle for reducing development time and cost, unit costs of new MDA BMDS technologies, and as a route to national economic growth through new commercial products. MDA will conduct the competition and will award and manage the contracts with assistance from our executing agents.

## **Accomplishments/Planned Program**

|             | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
|-------------|---------|---------|---------|---------|
| SBIR Awards | 118,843 | 0       | 0       | 0       |

## FY06 Accomplishments:

- Selected approximately 175 Phase I's (at about 100k each) and approximately 121 Phase II's (around 750k each) for award.
- These awards were in the following 21 research areas: insensitive munitions, electro-optics, laser technology, cryogenics, space target technology, manufacturing process, security/anti-tamper, batteries, composite materials, radiation hardening, radar systems technology, satellite components, discrimination, modeling and simulation, software development, sensor fusion/decision architecture, sustainment and logistics, investment planning, THAAD upgrades, communications and battle management, and propulsion.
- Implemented MDA Phase II Enhancement program (\$6M) to leverage matching, non-SBIR funds.
- Selections primarily based on assessment of transition plans offered by the applicants.

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|--|----------------------|---------|---|----------------------------|---------|
| APPROPRIATION/BUDGET ACTIVITY  RDT&E, DW/06 RDT&E Management Support  R-1 NOMENC 0605502C St |                      |         |   | nnovative Research - N     | ſDA     |
|  | FY 2006              | FY 2007 | 7 | FY 2008                    | FY 2009 |
| STTR Awards  | 14                   | 1,262   | 0 | 0                          | 0       |

# FY06 Accomplishments:

- Selected approximately 26 Phase I's and approximately 16 Phase II's for award.
- The Phase I awards were in the following 9 research areas: insensitive munitions, electro-optics, laser technology, security/anti-tamper, radar systems, discrimination, software development, sensor fusion/decision architecture, and propulsion.

| B. Program Change Summary Table            | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
|--|---------|---------|---------|---------|
| Previous President's Budget (FY 2007 PB)   | 0       | 0       | 0       | 0       |
| Current President's Budget (FY 2008 PB)    | 133,105 | 0       | 0       | 0       |
| Total Adjustments                          | 133,105 | 0       | 0       | 0       |
| Congressional Specific Program Adjustments | 0       | 0       | 0       | 0       |
| Congressional Undistributed Adjustments    | 0       | 0       | 0       | 0       |
| Reprogrammings                             | 0       | 0       | 0       | 0       |
| SBIR/STTR Transfer                         | 133,105 | 0       | 0       | 0       |
| Adjustments to Budget Years                | 0       | 0       | 0       | 0       |

FY06 amount of \$133.105 includes the mandatory SBIR/STTR transfer.

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| Missile Defense Agency (MDA) Exhibit R-2 RDT&E Item Justifica | February 2007                                     |  |  |
| APPROPRIATION/BUDGET ACTIVITY                                 | R-1 NOMENCLATURE                                  |  |  |
| RDT&E, DW/06 RDT&E Management Support                         | 0605502C Small Business Innovative Research - MDA |  |  |

# C. Other Program Funding Summary

| 8 8   |         |         |         |         |         |         |         |          |           |
|---|---------|---------|---------|---------|---------|---------|---------|----------|-----------|
|   |         |         |         |         |         |         |         |          | Total     |
|   | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013  | Cost      |
| PE 0603175C Ballistic Missile Defense Technology          | 147270  | 193307  | 118569  | 109540  | 116014  | 121008  | 127917  | 131291   | 1064916   |
| PE 0603881C Ballistic Missile Defense Terminal Defense    |         |         |         |         |         |         |         |          |           |
| Segment   | 1120879 | 1092076 | 962585  | 1004282 | 924101  | 851213  | 678694  | 501147   | 7134977   |
| PE 0603882C Ballistic Missile Defense Midcourse Defense   |         |         |         |         |         |         |         |          |           |
| Segment   | 2391246 | 3043058 | 2520064 | 2359665 | 2179602 | 1699963 | 1153082 | 1183003  | 16529683  |
| PE 0603883C Ballistic Missile Defense Boost Defense       |         |         |         |         |         |         |         |          |           |
| Segment   | 455572  | 628958  | 548759  | 432432  | 448375  | 678913  | 829683  | 1026239  | 5048931   |
| PE 0603884C Ballistic Missile Defense Sensors             | 284297  | 514129  | 778163  | 984963  | 939417  | 791701  | 723843  | 603585   | 5620098   |
| PE 0603886C Ballistic Missile Defense System Interceptors | 200446  | 356004  | 227499  | 393317  | 522388  | 730236  | 836029  | 570206   | 3836125   |
| PE 0603888C Ballistic Missile Defense Test and Targets    | 610619  | 601782  | 586150  | 628364  | 662984  | 681511  | 696037  | 705210   | 5172657   |
| PE 0603889C Ballistic Missile Defense Products            | 387402  | 0       | 0       | 0       | 0       | 0       | 0       | 0        | 387402    |
| PE 0603890C Ballistic Missile Defense System Core         | 409993  | 429420  | 482016  | 511147  | 558746  | 579571  | 579316  | 588480.9 | 4138689.9 |
| PE 0603891C Special Programs - MDA                        | 271021  | 353031  | 323250  | 305409  | 369073  | 526966  | 789017  | 792271   | 3730038   |
| PE 0603892C Ballistic Missile Defense Aegis               | 893040  | 1122669 | 1059103 | 1129425 | 1221650 | 1067587 | 1054753 | 1089078  | 8637305   |
| PE 0603893C Space Tracking & Surveillance System          | 220048  | 322220  | 331525  | 347811  | 412623  | 501197  | 778067  | 981424   | 3894915   |
| PE 0603894C Multiple Kill Vehicle                         | 48370   | 144362  | 271151  | 352741  | 461179  | 618263  | 673477  | 842905   | 3412448   |
| PE 0603895C BMD System Space Program                      | 0       | 0       | 27666   | 35093   | 46849   | 56183   | 133617  | 157117   | 456525    |
| PE 0603896C BMD C2BMC                                     | 0       | 246852  | 258913  | 294627  | 300847  | 282615  | 267275  | 269420   | 1920549   |
| PE 0603897C BMD Hercules                                  | 0       | 49674   | 53658   | 54264   | 54405   | 55142   | 53355   | 54198    | 374696    |
| PE 0603898C BMD Joint Warfighter Support                  | 0       | 54935   | 48787   | 50428   | 54086   | 56603   | 58890   | 60206    | 383935    |
| PE 0603904C BMD Joint National Integration Center (JNIC)  | 0       | 110629  | 104012  | 106985  | 111542  | 111947  | 113592  | 115287   | 773994    |
| PE 0603905C BMD Concurrent Test and Operations            | 0       | 23159   | 0       | 0       | 0       | 0       | 0       | 0        | 23159     |
| PE 0603906C Regarding Trench                              | 0       | 0       | 2000    | 3000    | 5000    | 5000    | 9000    | 9000     | 33000     |
| PE 0901585C Pentagon Reservation                          | 14874   | 15527   | 6058    | 6376    | 4490    | 4725    | 4801    | 4877     | 61728     |
| PE 0901598C Management Headquarters - MDA                 | 98609   | 87059   | 85906   | 86453   | 70355   | 69855   | 69855   | 69855    | 637947    |
|   |         |         |         |         |         |         |         |          |           |

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|   | Date                    |                           |
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| Missile Defense Agency (MDA) Exhibit R-2 RDT&E Item Justifica | February 2007           |                           |
| APPROPRIATION/BUDGET ACTIVITY                                 |                         |                           |
| RDT&E, DW/06 RDT&E Management Support                         | 0605502C Small Business | Innovative Research - MDA |

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