Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604421F: Counterspace Systems

| 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 | 64.318 | 63.838 | 40.276 | 0.000 | 40.276 | 34.119 | 33.161 | 33.665 | 34.181 | Continuing | Continuing |
| 65A001: Counter Satellite Communications System | 28.062 | 30.699 | 21.035 | 0.000 | 21.035 | 21.321 | 20.331 | 20.641 | 20.957 | Continuing | Continuing |
| 65A003: Rapid Identification Detection and Reporting System (RAIDRS) | 27.284 | 25.816 | 11.875 | 0.000 | 11.875 | 5.339 | 5.257 | 5.336 | 5.419 | Continuing | Continuing |
| 65A005: Counterspace C2 | 8.972 | 7.323 | 7.366 | 0.000 | 7.366 | 7.459 | 7.573 | 7.688 | 7.805 | Continuing | Continuing |

A. Mission Description and Budget Item Justification

This program supports the conduct of critical planning, technology insertion, and system acquisition in support of Air Force space control systems and associated command and control development to meet current and future military space control needs. Development and acquisition of counterspace systems will be conducted, capitalizing on the technology development and risk reduction efforts of PE 0603438F, Space Control Technology. This funding supports all development phases of the acquisition process including concept development, risk reduction, design, and demonstration. Space control systems include both offensive counterspace (OCS) and defensive counterspace (DCS) systems. OCS systems include the means to disrupt, deny, degrade, or destroy an adversary's space systems, or the information they provide, which may be used for purposes hostile to U.S. national security interests. DCS systems include both active and passive measures to protect U.S. and friendly space related capabilities (satellites, communications links, and supporting ground systems) from enemy attack or interference. This includes development efforts to prevent adversarial ability to use U.S. space systems and services for purposes hostile to U.S. national security interests. Counterspace Command and Control (C2) supports the development of command and control and mission planning capabilities in support of the fielding and employment of counterspace systems.

This program is in Budget Activity 5, System Development and Demonstration, because it supports the demonstration, engineering and manufacturing development of counterspace and space control systems.

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

PE 0604421F: Counterspace Systems

BA 5: Development & Demonstration (SDD)

B. Program Change Summary (\$ in Millions)

| | FY 2009 | FY 2010 | FY 2011 Base | FY 2011 OCO | FY 2011 Total |
|---|---------|---------|---------------------|-------------|----------------------|
| Previous President's Budget | 76.147 | 64.248 | 0.000 | 0.000 | 0.000 |
| Current President's Budget | 64.318 | 63.838 | 40.276 | 0.000 | 40.276 |
| Total Adjustments | -11.829 | -0.410 | 40.276 | 0.000 | 40.276 |
| 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 Adjustments | -11.829 | -0.410 | 40.276 | 0.000 | 40.276 |

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 65A005: Counterspace C2

Congressional Add: Model, conduct "virtual testing," and analyze architectural options for the Rapid Attack Identification

Detection and Reporting System.

| | F 1 2009 | F1 2010 |
|---|----------|---------|
| | | |
| options for the Rapid Attack Identification | 1.499 | 0.000 |
| Congressional Add Subtotals for Project: 65A005 | 1.499 | 0.000 |
| Congressional Add Totals for all Projects | 1.499 | 0.000 |

EV 2040

EV 2000

Change Summary Explanation

FY 2009: - \$8.9M BTR to a higher priority Air Force program and - \$2.929M for SBIR transfer

FY 2010: - \$0.410M for FFRDC

FY 2011: The FY 2010 President's Budget submittal did not reflect FY 2011 through FY 2015 funding. Therefore, explanation of changes between the two budget positions cannot be made in a relevant manner.

| Exhibit R-2A, RDT&E Project Just | ification: Pl | 3 2011 Air F | orce | | | | | DATE: February 2010 | | | |
|--|-----------------------------|----------------------------|------------------------------|----------------------|---------------------|---|---------------------|----------------------------|---------------|------------|------------|
| APPROPRIATION/BUDGET ACTIV 3600: Research, Development, Test BA 5: Development & Demonstration | | | IOMENCLA 1F: Counters | TURE space Syster | ns | PROJECT 65A001: Counter Satellite Communications System | | | | | |
| COST (\$ in Millions) | 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 | | |
| 65A001: Counter Satellite Communications System | 28.062 | 30.699 | 21.035 | 0.000 | 21.035 | 21.321 | 20.331 | 20.641 | 20.957 | Continuing | Continuing |
| Quantity of RDT&E Articles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |

A. Mission Description and Budget Item Justification

This effort supports concept exploration and follow-on system development of mobile/transportable counter satellite communications capabilities derived from technologies prototyped in PE0603438F, Space Control Technology, in the area of Offensive Counterspace. Future advanced counter satellite communications systems will also be developed in this program. Included are: architecture engineering, system hardware design and development, software design and integration, testing and procurement of capabilities to provide disruption of satellite communications signals in response to USSTRATCOM requirements.

This program is in Budget Activity 5, System Development and Demonstration, because it supports the demonstration, engineering and manufacturing development of counterspace and space control systems.

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

| | FY 2009 | FY 2010 | FY 2011 Base | FY 2011 OCO | FY 2011 Total |
|--|---------|---------|-----------------|----------------|------------------|
| MAJOR THRUST: Complete capability upgrades to the Block 10 Counter Communications System (CCS). Includes architecture development and program office support. | 15.331 | 13.287 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: In FY 2009: Continued development and integration of advanced capabilities for integration as a plugin capability to the baseline Block 10 CCS. | | | | | |
| FY 2010 Plans: In FY 2010: Continuing the development, integration and delivery of the CCS plug-in upgrades. | | | | | |

| Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force | | | | DATE: Febr | uary 2010 | |
|---|---|--------|---------------------------------|-----------------|----------------|------------------|
| APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD) | R-1 ITEM NOMENCLATURE PE 0604421F: Counterspace Systems | | PROJECT 65A001: Co System | ounter Satelli | te Communi | cations |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | F' | Y 2009 | FY 2010 | FY 2011 Base | FY 2011 OCO | FY 2011 Total |
| FY 2011 Base Plans: In FY 2011: Not applicable. | | | | | | |
| FY 2011 OCO Plans: In FY2011 OCO: Not applicable. | | | | | | |
| MAJOR THRUST: Study options and perform risk reduction prototypic counter communications capability. Includes test support funding. | ng for the next generation advanced | 12.731 | 1.710 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: In FY 2009: Performed evaluation of available COTS/GOTS tech began development of next generation prototype. | nologies and MAJCOM priorities and | | | | | |
| FY 2010 Plans: In FY 2010: Completing prototype integration and test of the next | generation CCS prototype. | | | | | |
| FY 2011 Base Plans: In FY 2011: Not applicable. | | | | | | |
| FY 2011 OCO Plans: In FY2011 OCO: Not applicable. | | | | | | |
| MAJOR THRUST: Develop, integrate, test and field the CCS Pre-plar program. Includes architecture development, studies & analysis, and | | 0.000 | 15.702 | 21.035 | 0.000 | 21.035 |
| FY 2009 Accomplishments: In FY 2009: Not applicable. | | | | | | |

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force

PE 0604421F: Counterspace Systems

65A001: Counter Satellite Communications

System

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

| FY 2 | 2009 | FY 2010 | FY 2011 Base | FY 2011 OCO | FY 2011 Total |
|--|--------|---------|-----------------|----------------|------------------|
| FY 2010 Plans: In FY 2010: Use prototype lessons-learned to develop and integrate the first increment of the CCS P3I. | | | | | |
| FY 2011 Base Plans: In FY 2011: Complete development and integration and test of Increment 1 of the CCS P3I. Confirm requirements for Increment 2. | | | | | |
| FY 2011 OCO Plans: In FY2011 OCO: Not applicable. | | | | | |
| Accomplishments/Planned Programs Subtotals 2 | 28.062 | 30.699 | 21.035 | 0.000 | 21.035 |

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

| | | | FY 2011 | FY 2011 | FY 2011 | | | | | Cost To | |
|-----------------------------|---------|---------|-------------|---------|--------------|---------|---------|---------|---------|----------|------------|
| <u>Line Item</u> | FY 2009 | FY 2010 | <u>Base</u> | OCO | <u>Total</u> | FY 2012 | FY 2013 | FY 2014 | FY 2015 | Complete | Total Cost |
| • PE 0604421F: Counterspace | 8.845 | 4.000 | 11.541 | 5.600 | 17.141 | 10.123 | 10.282 | 10.444 | 10.605 | 0.000 | 0.000 |
| Systems (OPAF) | | | | | | | | | | | |

D. Acquisition Strategy

All contracts funded in this program element will be awarded using competitive procedures to the maximum extent possible, to upgrade existing capabilities as well as to acquire next generation capabilities through incremental acquisitions.

E. 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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604421F: Counterspace Systems

PROJECT

65A001: Counter Satellite Communications

System

Product Development (\$ in Millions)

| | | | | FY 2 | 2010 | FY 2 Ba | 2011 se | FY 2011 OCO | FY 2011 Total | | | |
|--|------------------------------|---|---------------------------|--------|---------------|------------|---------------|-----------------|------------------|---------------------|------------|--------------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | Cost | Award Date | Cost | Award Date | Awa Cost Dat | | Cost To Complete | Total Cost | Target Value of Contract |
| Architectural Engineering Support | Various/ Various | Various Various | 27.738 | 3.370 | Jan 2010 | 3.454 | Jan 2011 | 0.000 | 3.454 | Continuing | Continuing | Continuing |
| Block 10 Capability Upgrades | SS/CPAF | Harris Corp Melbourne, FL | 9.407 | 0.500 | Jan 2010 | 0.000 | | 0.000 | 0.000 | 0.000 | 9.907 | 7.862 |
| Block 10 Capability Upgrades (1) | C/CPAF | General Dynamics Santa Clara, CA | 8.394 | 2.621 | Jan 2010 | 0.000 | | 0.000 | 0.000 | 0.000 | 11.015 | 11.015 |
| Block 20 Prototype Development & Future Capability Studies | Various/ Various | Various Various | 12.957 | 1.250 | Nov 2009 | 0.000 | | 0.000 | 0.000 | 0.000 | 14.207 | 13.371 |
| Block 20 Prototype Development & Future Capability Studies (2) | C/CPAF | SI International Colorado Springs, CO | 8.801 | 0.000 | | 0.000 | | 0.000 | 0.000 | 0.000 | 8.801 | 11.422 |
| Block 10 P3I Development | C/CPAF | Harris Corp Melbourne, FL | 0.000 | 16.162 | Feb 2010 | 11.651 | Nov 2010 | 0.000 | 11.651 | Continuing | Continuing | Continuing |
| | | Subtotal | 67.297 | 23.903 | | 15.105 | | 0.000 | 15.105 | | | |

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604421F: Counterspace Systems

PROJECT

65A001: Counter Satellite Communications

System

Support (\$ in Millions)

| | | | FY 2 | 2010 | FY 2 Ba | 2011 se | FY 2 | | FY 2011 Total | | | | |
|----------------------------------|------------------------------|--------------------------------------|---------------------------|-------|---------------|------------|---------------|-------|------------------|-------|---------------------|------------|--------------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| System Program Office Support | Various/ Various | SMC El Segundo, CA | 19.157 | 6.796 | Nov 2009 | 5.930 | Nov 2010 | 0.000 | | 5.930 | Continuing | Continuing | Continuing |
| | | Subtotal | 19.157 | 6.796 | | 5.930 | | 0.000 | | 5.930 | | | |

Remarks

Test and Evaluation (\$ in Millions)

| | | | FY 2 | 010 | FY 2 Ba | - | FY 2 | | FY 2011 Total | | | | |
|------------------------------|------------------------------|--------------------------------------|---------------------------|-------|---------------|-------|---------------|-------|------------------|-------|---------------------|------------|--------------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| CCS Block 10 Test Support | Various/ Various | SMC El Segundo, CA | 2.100 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 2.100 | 2.567 |
| | | Subtotal | 2.100 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 2.100 | 2.567 |

Remarks

| | Total Prior Years Cost | FY 2 | 2010 | | 2011 se | FY 2011 OCO | FY 2011 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---------------------|---------------------------|--------|------|--------|------------|----------------|------------------|---------------------|------------|--------------------------------|
| Project Cost Totals | 88.554 | 30.699 | | 21.035 | | 0.000 | 21.035 | | | |

Remarks

Total Prior Years Cost may include only FY 2009 data.

R-1 Line Item #69 Page 7 of 23

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604421F: Counterspace Systems

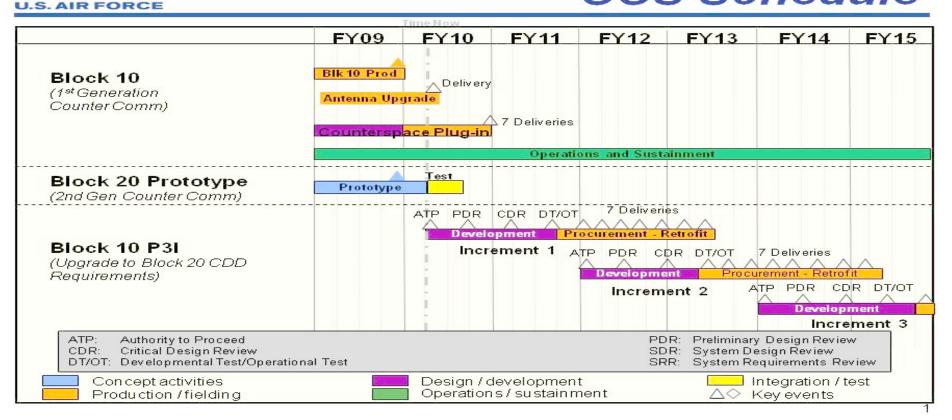
PROJECT

65A001: Counter Satellite Communications

System



Counterspace Systems CCS Schedule



R-1 Line Item #69 Page 8 of 23

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 5: Development & Demonstration (SDD)

ART: February 2010

R-1 ITEM NOMENCLATURE
PE 0604421F: Counterspace Systems
System

Schedule Details

| | St | tart | End | | |
|---|---------|------|---------|------|--|
| Event | Quarter | Year | Quarter | Year | |
| Block 10 Production | 1 | 2009 | 4 | 2009 | |
| Capability Upgrades | 1 | 2009 | 4 | 2010 | |
| Block 10 Upgrade Deliveries | 4 | 2009 | 4 | 2010 | |
| Block 20 Prototype Development and Test | 1 | 2009 | 2 | 2010 | |
| Block 10 P3I Contract Award | 2 | 2010 | 2 | 2010 | |
| Block 10 P3I Increment 1 Development | 2 | 2010 | 3 | 2011 | |
| Block 10 P3I Increment 1 DT/OT | 3 | 2011 | 3 | 2011 | |
| Block 10 P3I Increment 1 Procurement | 4 | 2011 | 4 | 2011 | |

DATE: February 2010

| APPROPRIATION/BUDGET ACTIV 3600: Research, Development, Tes BA 5: Development & Demonstration | t & Evaluatio | n, Air Force | | | IOMENCLA 1F: Counters | TURE space Syste | ms | | apid Identific System (RAII | | ion and |
|---|-------------------|---------------------|-----------------------------|----------------------------|------------------------------|---------------------|---------------------|---------------------|--------------------------------|---------------------|---------------|
| 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 |
| 65A003: Rapid Identification Detection and Reporting System (RAIDRS) | 27.284 | 25.816 | 11.875 | 0.000 | 11.875 | 5.339 | 5.257 | 5.336 | 5.419 | Continuing | Continuing |
| Quantity of RDT&E Articles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |

Note

RAIDRS Block 20 content and funding were transferred to PE 0305614F, Joint Space Operations Center (JSpOC) Mission Systems effective in FY 2010.

A. Mission Description and Budget Item Justification

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

The RAIDRS program performs attack detection, geolocation, reporting, characterization and mission impact assessment for US owned, operated or used space systems. RAIDRS capabilities, in support of the National Security Strategy of the United States, are procured and deployed in blocks. The first Block (RB-10) is focused on detecting, characterizing, geolocating and reporting satellite communications (SATCOM) radio frequency interference (RFI) using currently existing Commercial-Off-the-Shelf (COTS) and Government-Off-the-Shelf (GOTS) technology. The event information provided by RB-10 will allow operators to identify possible interference against space capabilities and enable rapid employment of protective responses.

This program is in Budget Activity 5, System Development and Demonstration, because it supports the engineering and manufacturing development of counterspace and space control systems.

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

| | FY 2009 | FY 2010 | FY 2011 Base | FY 2011 OCO | FY 2011 Total |
|---|---------|---------|-----------------|----------------|------------------|
| MAJOR THRUST: Develop, integrate, test and field the Rapid Attack Identification Detection and Reporting System (RAIDRS). | 21.138 | 25.816 | 11.875 | 0.000 | 11.875 |
| FY 2009 Accomplishments: In FY 2009: RAIDRS is a counterspace system designed to identify, characterize and locate interference to SATCOM communications capabilities. Includes architecture development, systems | | | | | |

UNCLASSIFIED

| Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force | | | | DATE: Feb | uary 2010 | |
|--|--|---------|---------|---------------------------------|----------------|------------------|
| APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD) | R-1 ITEM NOMENCLATURE PE 0604421F: Counterspace System | ıs | | apid Identifica System (RAIL | | on and |
| B. Accomplishments/Planned Program (\$ in Millions) | | | | | | |
| | | FY 2009 | FY 2010 | FY 2011 Base | FY 2011 OCO | FY 2011 Total |
| engineering, program office support and test support. Continued test of the RAIDRS system. | system development, integration and | | | | | |
| FY 2010 Plans: In FY 2010: Continue system development, integration and facto system. Complete verification of technical orders. | ry acceptance testing of the RAIDRS | | | | | |
| FY 2011 Base Plans: In FY 2011: Complete system development and integration. Dev Operational Test and Evaluation. | velop Type 1 training and prepare for | | | | | |
| FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable. | | | | | | |
| MAJOR THRUST: Continue concept definition, pre-acquisition archited development of Rapid Attack Identification Detection and Reporting S | • | 6.146 | 0.000 | 0.000 | 0.000 | 0.000 |
| FY 2009 Accomplishments: FY 2009: Continued concept definition and pre-acquisition archite indicated a closer relationship of RAIDRS Block 20 to the new wo Space Operations Center Mission Systems (JMS) program. Fund 0305614F, the JMS PE beginning in FY 2010. | ork being accomplished in the Joint | | | | | |
| FY 2010 Plans: FY 2010: Not applicable. | | | | | | |
| FY 2011 Base Plans: FY 2011: Not applicable. | | | | | | |
| | | | | | | |

| Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force | | DATE: February 2010 |
|--|--|----------------------------|
| | | |

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604421F: Counterspace Systems

PROJECT

65A003: Rapid Identification Detection and

Reporting System (RAIDRS)

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

| | | FY 2009 | FY 2010 | FY 2011 Base | FY 2011 OCO | FY 2011 Total |
|---|--|---------|---------|-----------------|----------------|------------------|
| FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable. | | | | | | |
| | Accomplishments/Planned Programs Subtotals | 27.284 | 25.816 | 11.875 | 0.000 | 11.875 |

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

| | | | FY 2011 | FY 2011 | FY 2011 | | | | | Cost To | |
|-----------------------------|---------|---------|-------------|---------|--------------|---------|---------|---------|---------|-----------------|------------|
| <u>Line Item</u> | FY 2009 | FY 2010 | <u>Base</u> | OCO | <u>Total</u> | FY 2012 | FY 2013 | FY 2014 | FY 2015 | Complete | Total Cost |
| • PE 0604421F: Counterspace | 18.889 | 24.303 | 14.060 | 2.600 | 16.660 | 11.164 | 11.647 | 8.451 | 8.598 | 0.000 | 0.000 |
| Systems (OPAF) | | | | | | | | | | | |

D. Acquisition Strategy

All contracts funded in this program element will be awarded using competitive procedures to the maximum extent possible. System will be designed and acquired in Block increments using a Block Acquisition strategy.

E. 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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)

PE 0604421F: Counterspace Systems

65A003: Rapid Identification Detection and

Reporting System (RAIDRS)

Product Development (\$ in Millions)

| | | | | FY 2 | 2010 | FY 2 Ba | | FY 2 | | FY 2011 Total | | | |
|--|------------------------------|---|---------------------------|--------|---------------|------------|---------------|-------|---------------|------------------|---------------------|------------|--------------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| Architecture Development & Systems Engineering | Various/ Various | Various Various | 9.943 | 3.132 | Nov 2009 | 1.448 | Oct 2010 | 0.000 | | 1.448 | Continuing | Continuing | Continuing |
| RAIDRS Block 10 System Development | C/CPAF | Integral Systems Inc Columbia, MD | 87.514 | 18.359 | Oct 2009 | 6.075 | Oct 2010 | 0.000 | | 6.075 | Continuing | Continuing | Continuing |
| RAIDRS Block 20 Requirements Development/Risk Reduction | Various/ Various | Various Various | 17.906 | 0.000 | | 0.000 | | 0.000 | | 0.000 | Continuing | Continuing | Continuing |
| | | Subtotal | 115.363 | 21.491 | | 7.523 | | 0.000 | | 7.523 | | | |

Remarks

Support (\$ in Millions)

| | | | | FY 2 | 010 | FY 2 Ba | - | FY 2 | | FY 2011 Total | | | |
|-----------------------------------|------------------------------|--------------------------------------|---------------------------|-------|---------------|------------|---------------|-------|---------------|------------------|---------------------|------------|--------------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| Program Office Support for RAIDRS | Various/ Various | SMC El Segundo | 17.220 | 4.250 | Oct 2009 | 4.272 | Oct 2010 | 0.000 | | 4.272 | Continuing | Continuing | Continuing |
| | | Subtotal | 17.220 | 4.250 | | 4.272 | | 0.000 | | 4.272 | | | |

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force

PE 0604421F: Counterspace Systems

65A003: Rapid Identification Detection and

Reporting System (RAIDRS)

Test and Evaluation (\$ in Millions)

| | | | | FY 2 | 010 | FY 2 Ba | - | FY 2 | | FY 2011 Total | | | |
|---------------------------------|------------------------------|--------------------------------------|---------------------------|-------|---------------|------------|---------------|-------|---------------|------------------|---------------------|------------|--------------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| RAIDRS Block 10 Test Support | Various/ Various | Various Various | 0.400 | 0.075 | Oct 2009 | 0.080 | Oct 2010 | 0.000 | | 0.080 | Continuing | Continuing | Continuing |
| | | Subtotal | 0.400 | 0.075 | | 0.080 | | 0.000 | | 0.080 | | | |

Remarks

| | Total Prior Years Cost | FY 2010 | FY 2 Ba | 2011 ase | FY 2 | - | FY 2011 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---------------------|---------------------------|---------|------------|-------------|-------|---|------------------|---------------------|------------|--------------------------------|
| Project Cost Totals | 132.983 | 25.816 | 11.875 | | 0.000 | | 11.875 | | | |

Remarks

Total Prior Years Cost may include only FY 2009 data.

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604421F: Counterspace Systems

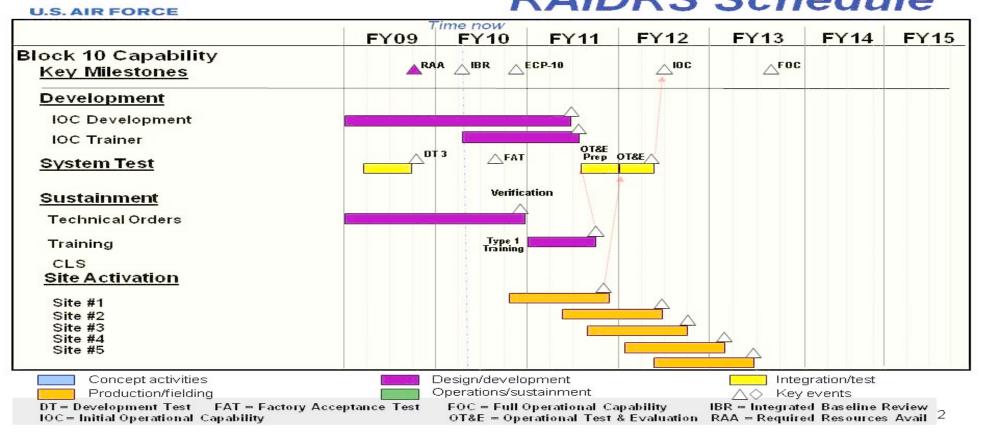
PROJECT

65A003: Rapid Identification Detection and

Reporting System (RAIDRS)



Counterspace Systems RAIDRS Schedule



UNCLASSIFIED

R-1 Line Item #69 Page 15 of 23

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY
3600: Research, Development, Test & Evaluation, Air Force
BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE
PE 0604421F: Counterspace Systems
65A003: Rapid Identification Detection and Reporting System (RAIDRS)

Schedule Details

| | St | art | Er | nd |
|---|---------|------|---------|------|
| Event | Quarter | Year | Quarter | Year |
| RAIDRS Block 10 Developmental Test 3 | 2 | 2009 | 3 | 2009 |
| RAIDRS Block 10 Initial Development | 1 | 2009 | 4 | 2011 |
| RAIDRS Block 10 Operational Test and Evaluation | 3 | 2011 | 3 | 2011 |
| RAIDRS Block 10 Operator Training | 3 | 2011 | 3 | 2011 |
| Site #1 Preparation | 4 | 2010 | 2 | 2011 |
| Site #1 Activation | 2 | 2011 | 4 | 2011 |
| Site #2 Preparation | 1 | 2011 | 3 | 2011 |
| Site #2 Activation | 3 | 2011 | 4 | 2011 |
| Site #3 Preparation | 3 | 2011 | 4 | 2011 |

DATE: February 2010

0

7.805 Continuing Continuing

| APPROPRIATION/BUDGET ACTIV 3600: Research, Development, Test BA 5: Development & Demonstratio | t & Evaluatio | n, Air Force | | | IOMENCLA 1F: Counters | | ms | PROJECT 65A005: <i>Co</i> | ounterspace | C2 | |
|---|-------------------|---------------------|-----------------------------|----------------------------|------------------------------|---------------------|---------------------|----------------------------------|---------------------|---------------------|---------------|
| 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 |

7.366

0

7.459

0

7.573

0

7.688

0

0.000

0

A. Mission Description and Budget Item Justification

65A005: Counterspace C2

Quantity of RDT&E Articles

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

7.323

0

7.366

0

8.972

0

This effort supports the development of command and control and mission planning capabilities in support of the fielding and employment of Counterspace Systems. It provides for the integration and development of collaborative tools to link deployable counterspace systems with Joint Warfighting C2 systems and to enable integrated planning and execution of the counterspace mission. Developed capabilities will be integrated into current and future command and control systems. This program will also leverage the Joint Execution and Tasking System for Space (JETSS) efforts in support of space control and the counterspace mission areas.

This program is in Budget Activity 5, System Development and Demonstration, because it supports the engineering and manufacturing development of counterspace and space control systems.

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

| | FY 2009 | FY 2010 | FY 2011 Base | FY 2011 OCO | FY 2011 Total |
|---|---------|---------|-----------------|----------------|------------------|
| MAJOR THRUST: Continue development of Counterspace mission planning and command and control capability. Begin tech refresh, JETSS Spiral 2 planning & JETSS Spiral 3. | 7.473 | 7.323 | 7.366 | 0.000 | 7.366 |
| FY 2009 Accomplishments: In FY 2009: Continued development of the Joint Execution and Tasking System for Space (JETSS). | | | | | |
| FY 2010 Plans: In FY 2010: Completing JETSS Spiral 2 development, testing and delivery to the Joint Space Operations Center (JSpOC). Begin Spiral 3 Development. | | | | | |

| Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force | | DATE: February 2010 |
|---|---|------------------------------------|
| APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD) | R-1 ITEM NOMENCLATURE PE 0604421F: Counterspace Systems | PROJECT 65A005: Counterspace C2 |
| B. Accomplishments/Planned Program (\$ in Millions) | | |

| | FY 2009 | FY 2010 | FY 2011 Base | FY 2011 OCO | FY 2011 Total |
|---|---------|---------|-----------------|----------------|------------------|
| FY 2011 Base Plans: In FY 2011: Continue JETSS Spiral 3 development to include Federated Query, future systems planning and backup servers. | | | | | |
| FY 2011 OCO Plans: In FY2011 OCO: Not applicable. | | | | | |
| Accomplishments/Planned Programs Subtotals | 7.473 | 7.323 | 7.366 | 0.000 | 7.366 |

| | FY 2009 | FY 2010 |
|---|---------|---------|
| | 1.499 | 0.000 |
| Congressional Add: Model, conduct "virtual testing," and analyze architectural options for the Rapid Attack Identification Detection and Reporting System. | | |
| FY 2009 Accomplishments: In FY 2009: Model, conduct "virtual testing," and analyze architectural options for the Rapid Attack Identification Detection and Reporting System (RAIDRS) and for the Counter Satellite Communications System (CCS) Command and Control (C2) and operational data flows. | | |
| FY 2010 Plans: | | |
| In FY 2010: Not applicable. | | |
| Congressional Adds Subtotals | 1.499 | 0.000 |

UNCLASSIFIED

Exhibit R-2A, **RDT&E Project Justification:** PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE PROJECT

3600: Research, Development, Test & Evaluation, Air Force

PE 0604421F: Counterspace Systems 65A005: Counterspace C2

BA 5: Development & Demonstration (SDD)

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

| | | | <u>FY 2011</u> | <u>FY 2011</u> | <u>FY 2011</u> | | | | | Cost To | |
|---|---------|---------|----------------|----------------|----------------|---------|---------|---------|---------|-----------------|------------|
| <u>Line Item</u> | FY 2009 | FY 2010 | <u>Base</u> | OCO | <u>Total</u> | FY 2012 | FY 2013 | FY 2014 | FY 2015 | Complete | Total Cost |
| PE Not Provided (12331): None | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

D. Acquisition Strategy

All contracts will be awarded using competitive procedures to the maximum extent possible to acquire next generation capabilities through incremental acquisitions.

E. 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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)

PE 0604421F: Counterspace Systems

65A005: Counterspace C2

Product Development (\$ in Millions)

| | | | | FY 2 | 2010 | FY 2 Ba | - | FY 2 | | FY 2011 Total | | | |
|---|------------------------------|---|---------------------------|-------|---------------|------------|---------------|-------|---------------|------------------|---------------------|------------|--------------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| C2 Modeling, "virtual test," and analysis | MIPR | Davidson Technology Huntsville, AL (Army Contract) | 18.367 | 0.000 | | 0.000 | | 0.000 | | 0.000 | Continuing | Continuing | Continuing |
| Develop Counterspace Planning and C2 System (JETSS) | C/CPAF | General Dynamics Santa Clara, CA | 14.189 | 4.913 | Jan 2010 | 5.007 | Jan 2011 | 0.000 | | 5.007 | Continuing | Continuing | Continuing |
| | | Subtotal | 32.556 | 4.913 | | 5.007 | | 0.000 | | 5.007 | | | |

Remarks

Support (\$ in Millions)

| | | | | FY 2 | 2010 | FY 2 Ba | - | FY 2 | | FY 2011 Total | | | |
|---|------------------------------|--|---------------------------|-------|---------------|------------|---------------|-------|---------------|------------------|---------------------|------------|--------------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| Counterspace Architecture Development | C/CPFF | Northrup Grumman Mission Systems Redondo Beach, CA | 3.247 | 0.946 | Dec 2009 | 0.959 | Dec 2010 | 0.000 | | 0.959 | Continuing | Continuing | Continuing |
| | | Subtotal | 3.247 | 0.946 | | 0.959 | | 0.000 | | 0.959 | | | |

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)

PE 0604421F: Counterspace Systems

65A005: Counterspace C2

Management Services (\$ in Millions)

| - | | | | FY 2 | 010 | FY 2 Ba | | FY 2 | | FY 2011 Total | | | |
|--|------------------------------|--------------------------------------|---------------------------|-------|---------------|------------|---------------|-------|---------------|------------------|---------------------|------------|--------------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| Program Office and Other Technical Support | Various/ Various | SMC El Segundo, CA | 3.340 | 1.464 | Oct 2009 | 1.400 | Oct 2010 | 0.000 | | 1.400 | Continuing | Continuing | Continuing |
| | | Subtotal | 3.340 | 1.464 | | 1.400 | | 0.000 | | 1.400 | | | |

Remarks

| | Total Prior Years Cost | FY 2010 | | 2011 se | FY 2 | 2011 CO | FY 2011 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---------------------|---------------------------|---------|-------|------------|-------|------------|------------------|---------------------|------------|--------------------------------|
| Project Cost Totals | 39.143 | 7.323 | 7.366 | | 0.000 | | 7.366 | | | |

Remarks

Total Prior Years Cost may include only FY 2009 data.

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

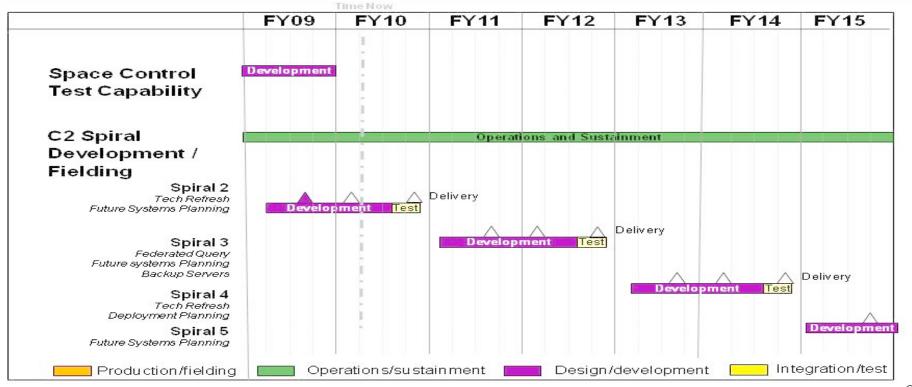
PE 0604421F: Counterspace Systems

PROJECT

65A005: Counterspace C2



Counterspace Systems Counterspace C2 Schedule



3

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force **DATE:** February 2010 **PROJECT R-1 ITEM NOMENCLATURE**

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

PE 0604421F: Counterspace Systems 65A005: Counterspace C2

BA 5: Development & Demonstration (SDD)

Schedule Details

| | St | art | E | nd |
|------------------------------------|---------|------|---------|------|
| Event | Quarter | Year | Quarter | Year |
| Modeling, "virtual test," analysis | 2 | 2009 | 4 | 2009 |
| Develop/test JETSS Spiral #2 | 2 | 2009 | 4 | 2010 |
| C2 Spiral #2 Delivery | 4 | 2010 | 4 | 2010 |
| C2 Spiral #3 Development | 1 | 2011 | 4 | 2011 |