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

**R-1 ITEM NOMENCLATURE** 

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

PE 0207253F: Compass Call

BA 7: Operational Systems Development

APPROPRIATION/BUDGET ACTIVITY

| COST (\$ in Millions)      | FY 2011 | FY 2012 | FY 2013<br>Base | FY 2013<br>OCO | FY 2013<br>Total | FY 2014 | FY 2015 | FY 2016 | FY 2017 | Cost To<br>Complete | Total Cost |
|----------------------------|---------|---------|-----------------|----------------|------------------|---------|---------|---------|---------|---------------------|------------|
| Total Program Element      | 19.949  | 18.509  | 12.094          | -              | 12.094           | 12.222  | 12.559  | 13.047  | 12.989  | Continuing          | Continuing |
| 674804: Compass Call       | 19.949  | 18.509  | 12.094          | -              | 12.094           | 12.222  | 12.559  | 13.047  | 12.989  | Continuing          | Continuing |
| Quantity of RDT&E Articles | 0       | 0       | 0               | 0              | 0                | 0       | 0       | 0       | 0       |                     |            |

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

The EC-130H COMPASS CALL is the USAF's wide-area, airborne Command and Control Warfare/Information Operations (C2W/IO) weapon system. The employment of this system interdicts our adversary's use of the electronic battlespace and is a key active component in the information battlespace and prosecution of overseas contingency operations. EC-130H COMPASS CALL's sophisticated electronic combat system is capable of surgical denial or disruption of adversary radio frequency (RF) communications systems and sensors. The system was fielded in 1983 and to date has evolved through the Block 35/Baseline 1 configuration. Due to the rapid advances in electronic attack technology, the EC-130H COMPASS CALL was designed to be easily modified and must continue to modernize and evolve to keep pace with adversary tactics and emerging technologies. Continuous system development is required to maintain battlespace superiority.

The EC-130H COMPASS CALL program employs an incremental development and fielding strategy IAW AFPD 63-1 that puts capability into the warfighters hands as soon as practical and ensures each iteration of the weapon system is effective against the highest priority threats. To sustain that process requires a steady stream of system development funds. Development funds are required to accomplish subsystem additions and improvements such as the digital signal analysis and exciter subsystem (AXE), the Special Purpose Emitter Array (SPEAR), Integrated Modern Communication Receiver, the Human-to-Machine Interface (HMI), network centric operations, phased array transmit and receive apertures and other classified hardware and software developments necessary to counter military and commercial communications evolutions, command and control operations enhancements, and new/emerging sensor developments. Funding in FY13 is required to support RDT&E efforts for Baseline 3 (BL3) upgrades to the EC-130H COMPASS CALL fleet. The BL2 and BL3 programmed requirements have advanced significantly over the two previously fielded baselines. BL2 and BL3 upgrades will help cover the electronic attack shortfall in the coming years. Obsolescence and diminishing manufacturing sources (DMS) are addressed with each baseline upgrade as well as annually as part of the sustainment responsibilities.

Activities also include studies and analysis to support both current and future program planning and execution.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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

R-1 ITEM NOMENCLATURE

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

PE 0207253F: Compass Call

BA 7: Operational Systems Development

APPROPRIATION/BUDGET ACTIVITY

| B. Program Change Summary (\$ in Millions)            | FY 2011 | FY 2012 | FY 2013 Base | FY 2013 OCO | FY 2013 Total |
|---|---------|---------|--------------|-------------|---------------|
| Previous President's Budget                           | 20.652  | 18.509  | 12.042       | -           | 12.042        |
| Current President's Budget                            | 19.949  | 18.509  | 12.094       | -           | 12.094        |
| Total Adjustments                                     | -0.703  | -       | 0.052        | -           | 0.052         |
| <ul> <li>Congressional General Reductions</li> </ul>  | -       | -       |              |             |               |
| <ul> <li>Congressional Directed Reductions</li> </ul> | _       | -       |              |             |               |
| <ul> <li>Congressional Rescissions</li> </ul>         | _       | -       |              |             |               |
| Congressional Adds                                    | _       | -       |              |             |               |
| <ul> <li>Congressional Directed Transfers</li> </ul>  | _       | -       |              |             |               |
| <ul> <li>Reprogrammings</li> </ul>                    | _       | -       |              |             |               |
| SBIR/STTR Transfer                                    | -0.598  | -       |              |             |               |
| Other Adjustments                                     | -0.105  | -       | 0.052        | -           | 0.052         |

## **Change Summary Explanation**

FY11: adjustment (CGR -0.105) shown in Other Adjustments Row.

| C. Accomplishments/Planned Programs (\$ in Millions)   | FY 2011                       | FY 2012 | FY 2013<br>Base | FY 2013<br>OCO | FY 2013<br>Total |
|--|-------------------------------|---------|-----------------|----------------|------------------|
| Title: Baseline Upgrade Development  | 19.949                        |         | 12.094          | -              | 12.094           |
| <b>Description:</b> Support Baseline 2 development, integration and test, plus SPEAR Generation 3 for and Baseline 3 non-recurring engineering (NRE) leading into development.   | Baseline 2,                   |         |                 |                |                  |
| FY 2011 Accomplishments: Baseline 2: Continued the development, integration, test and delivery of SPEAR classified technic targets. CCOS 4.2/4.3: Continued development of Electronic Attack Waveforms against Advance and Military Communications and Radar targets. SPEAR Generation 3: Progressed design for Bathrough Critical Design Review (CDR).  | d Commercial                  |         |                 |                |                  |
| FY 2012 Plans: Support Baseline 2 development, integration, and test of SPEAR classified techniques and electro infrastructure, Network Centric Operations and Reachback Connectivity Capability, Digital Signal Analysis Subsystem and Digital Exciter Subsystem. Initiate Baseline 3 development of Modern Connectiver technologies, Human to Machine Interface, Commercial Band Phased Array New Target | acquisition and ommunications |         |                 |                |                  |

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

R-1 ITEM NOMENCLATURE

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force PE 0207253F: Compass Call

BA 7: Operational Systems Development

PE 0207253F: Compass

| C. Accomplishments/Planned Programs (\$ in Millions)   |         |         | FY 2013 | FY 2013 | FY 2013 |
|--|---------|---------|---------|---------|---------|
|  | FY 2011 | FY 2012 | Base    | осо     | Total   |
| Advanced Commercial and Military Communications, Counter Radar and Counter Satellite Navigation Techniques, and Target Development.  |         |         |         |         |         |
| FY 2013 Base Plans: Will continue Baseline 2 integration, and test of SPEAR classified techniques and electronic attack infrastructure, Network Centric Operations and Reachback Connectivity Capability, Digital Signal Acquisition and Analysis Subsystem and Digital Exciter Subsystem. Continue Baseline 3 development of Modern communications receiver technologies, Human Machine Interface, Commercial Band Phased Array New Target Development, Advanced Commercial and Military Communications, Counter Radar and Counter Satellite Navigation Techniques, and Target Development. |         |         |         |         |         |
| Accomplishments/Planned Programs Subtotals   | 19.949  | 18.509  | 12.094  | -       | 12.094  |

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

|   |         |         | FY 2013     | FY 2013 | FY 2013      |         |         |         |         | <b>Cost To</b> |                   |
|---|---------|---------|-------------|---------|--------------|---------|---------|---------|---------|----------------|-------------------|
| <u>Line Item</u>                                  | FY 2011 | FY 2012 | <b>Base</b> | OCO     | <b>Total</b> | FY 2014 | FY 2015 | FY 2016 | FY 2017 | Complete       | <b>Total Cost</b> |
| <ul> <li>APAF, PE 0207253F, COMPASS</li> </ul>    | 164.458 | 364.331 | 78.687      | 0.000   | 78.687       | 73.413  | 71.901  | 74.154  | 75.513  | Continuing     | Continuing        |
| CALL: CC Procurement                              |         |         |             |         |              |         |         |         |         |                |                   |
| <ul> <li>O&amp;M, PE 0207253F, COMPASS</li> </ul> | 185.596 | 165.923 | 117.100     | 31.146  | 148.246      | 124.487 | 133.049 | 132.578 | 137.493 | Continuing     | Continuing        |
| CALL: CC O&M                                      |         |         |             |         |              |         |         |         |         |                |                   |

## E. Acquisition Strategy

EC-130H COMPASS CALL capability is maintained with incremental upgrades per the baseline acquisition strategy plus any quick reaction capabilities (QRC) developments acquired through the 645th Aeronautical Systems Group (BIG SAFARI Program Office) in accordance with the BIG SAFARI Program Management Directive (PMD) and the BIG SAFARI Class Justification and Approval (J&A) document for acquisition of supplies and services using other than full and open competition criteria. The procured supplies and services are supported by the BIG SAFARI Life Cycle Management Plan (LCMP) across the full spectrum of system life cycle management from developmental engineering to system retirement ("cradle to grave" support). Due to the rapidly changing threat environment encountered during our prolonged commitment to Overseas Contingency Operations (OCO), the acquisition program manager has the authority to redirect funding as necessary to meet current stated and emerging Combatant Commander requirements.

#### 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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**DATE:** February 2012

| Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force    | DATE: February 2012       |                      |
|---|---------------------------|----------------------|
| APPROPRIATION/BUDGET ACTIVITY                             | R-1 ITEM NOMENCLATURE     | PROJECT              |
| 3600: Research, Development, Test & Evaluation, Air Force | PE 0207253F: Compass Call | 674804: Compass Call |
| BA 7: Operational Systems Development                     |                           |                      |
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| Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force |  | DATE: February 2012 |
|---|--|---------------------|
|   |  |                     |

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

3600: Research, Development, Test & Evaluation, Air Force PE 0207253F: Compass Call 674804: Compass Call BA 7: Operational Systems Development

## Schedule Details

|  | Sta     | art  | End     |      |  |
|--|---------|------|---------|------|--|
| Events                                       | Quarter | Year | Quarter | Year |  |
| Baseline 2 Development, Integration and Test | 1       | 2011 | 1       | 2014 |  |
| Baseline 3 Development, Integration and Test | 1       | 2013 | 1       | 2017 |  |

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