

UNCLASSIFIED

| ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit) | | | | | | | DATE February 2000 | | | | | |
|---|--|--|--|--|------------------|------------------|-----------------------|---------------------------|-----------------|-----------------|------------------|------------|
| BUDGET ACTIVITY 5 - Engineering and Manufacturing Development | | | | PE NUMBER AND TITLE 0604778A Positioning Systems Development | | | | PROJECT D168 | | | | |
| COST (In Thousands) | | | | FY1999 Actual | FY 2000 Estimate | FY 2001 Estimate | FY 2002 Estimate | FY 2003 Estimate | FY2004 Estimate | FY2005 Estimate | Cost to Complete | Total Cost |
| D168 NAVSTAR Global Positioning System (GPS) Equipment | | | | 365 | 439 | 2420 | 0 | 0 | 0 | 0 | 0 | 3224 |
| <p>A. Mission Description and Justification: NAVSTAR GPS is the Joint Program Office at LAAFB. The program is composed of three segments: Space, Control and User Equipment. PM GPS falls under the User Equipment segment and procures the majority of user equipment. Project D 168 provides for Army participation in the research and development phases of Army weapon systems requiring POS/NAV capabilities. It provides for the engineering development of several alternatives for integration of GPS receivers into selected systems. These alternatives include, but are not limited to, Embedded/Integrated GPS, Defense Advanced GPS Receivers (DAGR), Tactical GPS Anti-Jam Technology (TGAT) and Differential GPS.</p> <p>FY 1999 Accomplishments:</p> <ul style="list-style-type: none"> • 170 Development of DAGR GUI • 107 Development of GRAM and GPS/INS • 88 Conducted studies on interfacing of GPS with other systems <p>Total 365</p> <p>FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • 214 Continued development of GRAM and GPS/INS • 213 Studies associated with the NAVWAR and GPS modernization programs • 12 Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR) <p>Total 439</p> <p>FY 2001 Planned Program:</p> <ul style="list-style-type: none"> • 223 Exploration and development of Pseudolites • 2197 Development effort associated with the Defense Advanced GPS Receiver <p>Total 2420</p> | | | | | | | | | | | | |
| Project D168 | | | | Page 1 of 3 Pages | | | | Exhibit R-2 (PE 0604778A) | | | | |

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

| B. Program Change Summary | <u>FY 1999</u> | <u>FY 2000</u> | <u>FY 2001</u> |
|--|----------------|----------------|----------------|
| Previous President's Budget (FY 2000 /2001PB) | 377 | 443 | 435 |
| Appropriated Value | 379 | 443 | |
| Adjustments to Appropriated Value | | | |
| a. Congressional General Reductions | -2 | | |
| b. SBIR / STTR | -10 | | |
| c. Omnibus or Other Above Threshold Reduction | | -2 | |
| d. Below Threshold Reprogramming | | | |
| e. Rescissions | -2 | -2 | |
| Adjustments to Budget Years Since <u>FY 2000/2001 PB</u> | | | +1985 |
| Current Budget Submit (<u>FY 2001 PB</u>) | 365 | 439 | 2420 |

Summary Change Explanation: Funding – FY 2001 increase supports development and upgrade of programs that will ensure GPS can operate in a NAVWAR/EW environment. These funds will support OSD mandated NAVWAR exploration and development of GPS equipment; continue the development of GRAM and GPS/INS; and facilitate studies associated with NAVWAR and GPS modernization programs.

| C. Other Program Funding Summary | <u>FY 1999</u> | <u>FY 2000</u> | <u>FY 2001</u> | <u>FY2002</u> | <u>FY2003</u> | <u>FY 2004</u> | <u>FY 2005</u> | <u>To Complete</u> | <u>Total Cost</u> |
|---|----------------|----------------|----------------|---------------|---------------|----------------|----------------|--------------------|-------------------|
| K47800, Other Procurement, Army, NAVSTAR GPS | 7863 | 6557 | 21439 | 32645 | 49822 | 48128 | 44751 | 348000 | 559,205 |

D. Acquisition Strategy: Perform studies and analyses of host vehicles to support development of alternative GPS applications.

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| ARMY RDT&E COST ANALYSIS (R-3) | DATE February 2000 |
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| BUDGET ACTIVITY 5 - Engineering and Manufacturing Development | PE NUMBER AND TITLE 0604778A Positioning Systems Development | PROJECT D168 |
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| I. Product Development | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 1999 Cost | FY 1999 Award Date | FY 2000 Cost | FY 2000 Award Date | FY 2001 Cost | FY 2001 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
|-------------------------------|------------------------|--------------------------------|----------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|------------------|------------|--------------------------|
| a. DAGR Risk Reduction | MIPR | USAF LAAFB | 0 | | | | | 2197 | Jan 01 | 0 | 2197 | |
| b. GPS Pseudolites | MIPR | Fort Monmouth, NJ | 0 | | | | | 223 | Jan 01 | 0 | 223 | |
| c. GRAM Development | MIPR | USAF LAAFB | | | | 214 | Mar00 | | | | 214 | |
| d. NAVWAR | MIPR | USAF LAAFB | | | | 213 | Mar01 | | | | 213 | |
| e. SBIR/STTR | | | | | | 12 | | | | | 12 | |
| f. DAGR/GRAM | MIPR | Hanscom AFB, MA | | 365 | Apr99 | | | | | | | |
| Subtotal Product Development: | | | | 365 | | 439 | | 2420 | | | 3224 | |

II. Support Costs: Not applicable

III. Test and Evaluation: Not applicable

IV. Management Services: Not applicable

| | | | | | | | | | | | | |
|---------------------|--|--|---|-----|--|-----|--|------|--|--|------|--|
| Project Total Cost: | | | 0 | 365 | | 439 | | 2420 | | | 3224 | |
|---------------------|--|--|---|-----|--|-----|--|------|--|--|------|--|