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**Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Army** **Date:** February 2016

| <b>Appropriation/Budget Activity</b>   |                    |                |                |                     | <b>R-1 Program Element (Number/Name)</b>                     |                      |                |                |                |                |                         |                   |
|--|--------------------|----------------|----------------|---------------------|--|----------------------|----------------|----------------|----------------|----------------|-------------------------|-------------------|
| 2040: <i>Research, Development, Test &amp; Evaluation, Army / BA 5: System Development &amp; Demonstration (SDD)</i> |                    |                |                |                     | PE 0605766A / <i>National Capabilities Integration (MIP)</i> |                      |                |                |                |                |                         |                   |
| <b>COST (\$ in Millions)</b>   | <b>Prior Years</b> | <b>FY 2015</b> | <b>FY 2016</b> | <b>FY 2017 Base</b> | <b>FY 2017 OCO</b>   | <b>FY 2017 Total</b> | <b>FY 2018</b> | <b>FY 2019</b> | <b>FY 2020</b> | <b>FY 2021</b> | <b>Cost To Complete</b> | <b>Total Cost</b> |
| Total Program Element  | -                  | 18.254         | 10.599         | 4.955               | -  | 4.955                | 7.201          | 8.360          | 7.349          | 7.537          | Continuing              | Continuing        |
| <i>DX9: National Integration To Tactical Systems(MIP)</i>  | -                  | 18.254         | 10.599         | 4.955               | -  | 4.955                | 7.201          | 8.360          | 7.349          | 7.537          | Continuing              | Continuing        |

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

National Integration to Tactical Systems provides centralized monitoring and synchronization by the Army's Tactical Exploitation of National Capabilities (TENCAP) office, for the transition and integration of proven advanced technologies, prototypes and standards developed by the National Intelligence Community (IC) into Army systems and Programs of Record. This Program Element includes Project funds for an Army ACAT III Program of Record (POR). It also enables efficient use and oversight of system development funds for final stage integration, development, and testing of successful technologies and prototypes to advance, or make compliant, Army systems and Programs of Record that have or use National capabilities.

| <b>B. Program Change Summary (\$ in Millions)</b> | <b>FY 2015</b> | <b>FY 2016</b> | <b>FY 2017 Base</b> | <b>FY 2017 OCO</b> | <b>FY 2017 Total</b> |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Previous President's Budget                       | 15.212         | 10.599         | 8.970               | -                  | 8.970                |
| Current President's Budget                        | 18.254         | 10.599         | 4.955               | -                  | 4.955                |
| Total Adjustments                                 | 3.042          | 0.000          | -4.015              | -                  | -4.015               |
| • Congressional General Reductions                | -              | -              |                     |                    |                      |
| • Congressional Directed Reductions               | -              | -              |                     |                    |                      |
| • Congressional Rescissions                       | -              | -              |                     |                    |                      |
| • Congressional Adds                              | -              | -              |                     |                    |                      |
| • Congressional Directed Transfers                | -              | -              |                     |                    |                      |
| • Reprogrammings                                  | 3.042          | -              |                     |                    |                      |
| • SBIR/STTR Transfer                              | -              | -              |                     |                    |                      |
| • Adjustments to Budget Years                     | -              | -              | -4.015              | -                  | -4.015               |

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| <b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Army |                    |                |                |                     |  |                      |                |                |  | <b>Date:</b> February 2016 |                         |                   |
| <b>Appropriation/Budget Activity</b><br>2040 / 5                   |                    |                |                |                     | <b>R-1 Program Element (Number/Name)</b><br>PE 0605766A / <i>National Capabilities Integration (MIP)</i> |                      |                |                | <b>Project (Number/Name)</b><br>DX9 / <i>National Integration To Tactical Systems(MIP)</i> |                            |                         |                   |
| <b>COST (\$ in Millions)</b>                                       | <b>Prior Years</b> | <b>FY 2015</b> | <b>FY 2016</b> | <b>FY 2017 Base</b> | <b>FY 2017 OCO</b>   | <b>FY 2017 Total</b> | <b>FY 2018</b> | <b>FY 2019</b> | <b>FY 2020</b>   | <b>FY 2021</b>             | <b>Cost To Complete</b> | <b>Total Cost</b> |
| DX9: <i>National Integration To Tactical Systems(MIP)</i>          | -                  | 18.254         | 10.599         | 4.955               | -  | 4.955                | 7.201          | 8.360          | 7.349  | 7.537                      | Continuing              | Continuing        |
| Quantity of RDT&E Articles   | -                  | -              | -              | -                   | -  | -                    | -              | -              | -  | -                          |                         |                   |

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

National Integration to Tactical Systems provides for centralized monitoring and synchronization by the Army's Tactical Exploitation of National Capabilities (TENCAP) office for the transition and integration of new, updated, and emerging National Intelligence Community (IC) technologies, capabilities, and standards into Programs of Record across the Army to: (1) maintain operational relevance of Army programs and address changes in technology and the threat, (2) ensure Army programs maintain interoperability with and access to the National community architecture and systems, and (3) advance Army ability to conduct analysis and tasking, collection, processing, exploitation, dissemination and feedback (TCPEDF) of intelligence data.

FY2017 Base funding in the amount of \$4.955 million provides integration funds for 2 validated National Intel Community (IC) efforts: (1) Air Vigilance (AV) software development with \$2.352 Million for the integration of advanced sensor developments into the Army Air Vigilance (AV) Program of Record; (2) Army TNG Integration, \$2.603 million funds the continued efforts to ensure Army Programs of Record are in compliance to the National standard for Airborne Overhead Cooperative Operations/Theater Net-Centric Geolocation (AOCO/TNG), per the Joint Requirement (JROCM 101-10).

**B. Accomplishments/Planned Programs (\$ in Millions)**

|   | <b>FY 2015</b> | <b>FY 2016</b> | <b>FY 2017</b> |
|---|----------------|----------------|----------------|
| <b>Title:</b> Advanced Air Vigilance (AV) capabilities  | 7.362          | 7.179          | 2.352          |
| <b>Description:</b> Advanced development, modifications and changes to the Air Vigilance (AV) system software.  |                |                |                |
| <b>FY 2015 Accomplishments:</b><br>Advanced development, modifications, and changes to the Air Vigilance (AV) system's software. Provided updates to software baseline being used to provide timely intelligence to the warfighter across the world. Developed proof of concepts for the ability of the software to be placed on various aerial assets. |                |                |                |
| <b>FY 2016 Plans:</b><br>Provides updates to software baseline being used to provide timely intelligence to the warfighter across the world. Develops a future capability from the user to have the POR be used to collect data in an austere environment.  |                |                |                |
| <b>FY 2017 Plans:</b><br>Provided updates to software baseline being used to provide timely intelligence to the warfighter across the world. Develops the user capability to ensure theater net-centric geolocation   |                |                |                |

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| <b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Army   |  | <b>Date:</b> February 2016   |                |                |
| <b>Appropriation/Budget Activity</b><br>2040 / 5   | <b>R-1 Program Element (Number/Name)</b><br>PE 0605766A / <i>National Capabilities Integration (MIP)</i> | <b>Project (Number/Name)</b><br>DX9 / <i>National Integration To Tactical Systems(MIP)</i> |                |                |
| <b>B. Accomplishments/Planned Programs (\$ in Millions)</b>  |  | <b>FY 2015</b>   | <b>FY 2016</b> | <b>FY 2017</b> |
| capability, and the ability for the POR to be operated in austere environments as required by the warfighter.  |  |  |                |                |
| <p><b>Title:</b> Army TNG Integration - Airborne Overhead Cooperative Operations (AOOCO) / Theater Net-Centric Geolocation (TNG)</p> <p><b>Description:</b> National Intelligence Community (IC) standard for interoperability and use of specific intelligence networked capabilities.</p> <p><b>FY 2015 Accomplishments:</b><br/>Provided funds to specified Army Programs of Record for software development and enhancements and for integration, ensuring compliance to the National requirement and standards and interoperability with this National Intelligence Community (IC) networked capability for tactical use and improved Army battlefield awareness.</p> <p><b>FY 2016 Plans:</b><br/>Provides funds to specified Army Programs of Record for software development and enhancements and for integration, ensuring compliance to the National requirement and standards and interoperability with this National Intelligence Community (IC) networked capability for tactical use and improved Army battlefield awareness.</p> <p><b>FY 2017 Plans:</b><br/>Provides funds to ensure SIGNIT Army assets can perform timely and accurate geolocation against high value targets through software development enhancements of the current JCID 4.1/4.2 TNG investment, ensuring compliance to the National requirement and standards and interoperability with National Intelligence Community (IC) networked capabilities for tactical use and improved Army battlefield awareness, to participate in the Theater Net-Centric Geolocation (TNG) standards for interoperability. (ref. CJCSI 32450.61, AOOCO 13Jan2012)</p> |  | 7.850  | 3.420          | 2.603          |
| <p><b>Title:</b> AMDAS ADV</p> <p><b>Description:</b> AMDAS ADV upgrade development efforts.</p> <p><b>FY 2015 Accomplishments:</b><br/>AMDAS ADV upgrade development efforts. Program specific details are classified. Details can be provided by separate correspondence.</p>  |  | 3.042  | -              | -              |
| <b>Accomplishments/Planned Programs Subtotals</b>  |  | 18.254   | 10.599         | 4.955          |

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| <b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Army | <b>Date:</b> February 2016 |
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| <b>Appropriation/Budget Activity</b><br>2040 / 5 | <b>R-1 Program Element (Number/Name)</b><br>PE 0605766A / <i>National Capabilities Integration (MIP)</i> | <b>Project (Number/Name)</b><br>DX9 / <i>National Integration To Tactical Systems(MIP)</i> |
|--|--|--|

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

| <u>Line Item</u>   | <u>FY 2015</u> | <u>FY 2016</u> | <u>FY 2017</u><br><u>Base</u> | <u>FY 2017</u><br><u>OCO</u> | <u>FY 2017</u><br><u>Total</u> | <u>FY 2018</u> | <u>FY 2019</u> | <u>FY 2020</u> | <u>FY 2021</u> | <u>Cost To</u><br><u>Complete</u> | <u>Total Cost</u> |
|--|----------------|----------------|-------------------------------|------------------------------|--------------------------------|----------------|----------------|----------------|----------------|-----------------------------------|-------------------|
| • 0603766A: <i>Tactical Support Development - Adv Dev (MIP), PE 643766</i> | 9.255          | 13.472         | 15.730                        | -                            | 15.730                         | 20.595         | 20.998         | 21.403         | 21.969         | Continuing                        | Continuing        |
| • W60001: <i>Air Vigilance (AV), OPA2 (W60001)</i>                         | 7.000          | 8.224          | 0.733                         | -                            | 0.733                          | 1.518          | 2.484          | 2.533          | 2.585          | Continuing                        | Continuing        |

**Remarks**

**D. Acquisition Strategy**

The 'National Integration To Tactical Systems (Military Intelligence Program - MIP)' funds provide for transition and integration of National Intelligence Community (IC) advanced technologies and prototypes leveraged by the Army's Tactical Exploitation of National Capabilities (TENCAP) program office. The Army TENCAP acquisition strategy is driven by an annual TENCAP General Officer Steering Group (TGOSG), co-chaired by the Army G2; Army G8; and the Military Deputy to the Assistant Secretary of the Army for Acquisition, Logistics, and Technology [ASA(ALT)]; and includes representatives from the Army G3; Army G6; Army Training and Doctrine Command (TRADOC); and the Program Executive Office for Intelligence, Electronic Warfare and Sensors (PEO IEW&S). The TGOSG reviews, validates, prioritizes, and guides Army TENCAP efforts, according to Army and Defense strategy. Based on this TGOSG guidance, Army TENCAP invests BA 6.4 RDTE in Intelligence Community (IC) developments during the more cost-effective advanced development phase to ensure Army requirements are met with minimal redundancy. Army TENCAP then uses BA 6.5 RDTE to manage the transition of these advanced development efforts through system development and integration into Army Programs of Record (POR). This strategy ensures these leveraged investments remain viable through multiple budget cycles, significantly increasing successful transition to recipient Army POR. Army TENCAP facilitates the continued access to National Intel Community (IC) 'joint' efforts and compatibility with those National standards and software baseline for those Army PORs that benefit from these leveraged National IC technologies, resulting in cost-savings through cost-sharing, and Army participation in collaborative Intelligence. Funds will be utilized for the ACAT III POR Air Vigilance and Theater Net-Centric Geolocation (TNG).

**E. Performance Metrics**

N/A

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Army |                        |                                |             |   |            |         |            |   |            |             |            | Date: February 2016 |                  |            |                          |
|--|------------------------|--------------------------------|-------------|---|------------|---------|------------|---|------------|-------------|------------|---------------------|------------------|------------|--------------------------|
| Appropriation/Budget Activity                          |                        |                                |             | R-1 Program Element (Number/Name)                     |            |         |            | Project (Number/Name)                               |            |             |            |                     |                  |            |                          |
| 2040 / 5   |                        |                                |             | PE 0605766A / National Capabilities Integration (MIP) |            |         |            | DX9 / National Integration To Tactical Systems(MIP) |            |             |            |                     |                  |            |                          |
| Management Services (\$ in Millions)                   |                        |                                |             | FY 2015   |            | FY 2016 |            | FY 2017 Base  |            | FY 2017 OCO |            | FY 2017 Total       |                  |            |                          |
| Cost Category Item                                     | Contract Method & Type | Performing Activity & Location | Prior Years | Cost  | Award Date | Cost    | Award Date | Cost  | Award Date | Cost        | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| AV POR Matrix Gov Engineers                            | MIPR                   | AGC : Alexandria, VA           | 0.195       | 0.200   | Nov 2014   | 0.208   | Nov 2015   | 0.660   | Nov 2016   | -           |            | 0.660               | Continuing       | Continuing | 0                        |
| AV POR Intel Engineers, PM Support                     | C/FFP                  | TASC, Inc. : Chantilly, VA     | 0.675       | -   |            | -       |            | -   |            | -           |            | -                   | Continuing       | Continuing | 0                        |
| AV POR Intel Engineers, PM Support                     | C/CPFF                 | TBD : TBD                      | 0.000       | 0.695   | Dec 2014   | 0.770   | Dec 2015   | -   |            | -           |            | -                   | 0                | 1.465      | 0                        |
| <b>Subtotal</b>  |                        |                                | 0.870       | 0.895   |            | 0.978   |            | 0.660   |            | -           |            | 0.660               | -                | -          | 0.000                    |
| Product Development (\$ in Millions)                   |                        |                                |             | FY 2015   |            | FY 2016 |            | FY 2017 Base  |            | FY 2017 OCO |            | FY 2017 Total       |                  |            |                          |
| Cost Category Item                                     | Contract Method & Type | Performing Activity & Location | Prior Years | Cost  | Award Date | Cost    | Award Date | Cost  | Award Date | Cost        | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| Air Vigilance (AV) software updates and integration    | MIPR                   | Classified : MIPR              | 5.389       | 4.761   | Dec 2014   | 4.391   | Nov 2015   | 0.612   | Nov 2015   | -           |            | 0.612               | Continuing       | Continuing | 0                        |
| TNG for Multiple Army PORs                             | MIPR                   | Multiple : Multiple            | 13.100      | 7.850   | Feb 2015   | 3.420   | Mar 2016   | 2.603   | Mar 2017   | -           |            | 2.603               | Continuing       | Continuing | 0                        |
| AMDAS ADV upgrade development efforts                  | MIPR                   | MIPR : MIPR                    | 0.000       | 3.042   | Aug 2015   | -       |            | -   |            | -           |            | -                   | 0                | 3.042      | 0                        |
| <b>Subtotal</b>  |                        |                                | 18.489      | 15.653  |            | 7.811   |            | 3.215   |            | -           |            | 3.215               | -                | -          | 0.000                    |
| Support (\$ in Millions)                               |                        |                                |             | FY 2015   |            | FY 2016 |            | FY 2017 Base  |            | FY 2017 OCO |            | FY 2017 Total       |                  |            |                          |
| Cost Category Item                                     | Contract Method & Type | Performing Activity & Location | Prior Years | Cost  | Award Date | Cost    | Award Date | Cost  | Award Date | Cost        | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| Air Vigilance (AV) PM Dir costs - Gov, travel, etc.    | Allot                  | Army TENCAP : Alexandria, VA   | 1.273       | 1.206   | Oct 2014   | 1.230   | Oct 2015   | 0.830   | Oct 2016   | -           |            | 0.830               | Continuing       | Continuing | 0                        |
| <b>Subtotal</b>  |                        |                                | 1.273       | 1.206   |            | 1.230   |            | 0.830   |            | -           |            | 0.830               | -                | -          | 0.000                    |



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**Exhibit R-4, RDT&E Schedule Profile: PB 2017 Army** **Date:** February 2016

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| <b>Appropriation/Budget Activity</b><br>2040 / 5 | <b>R-1 Program Element (Number/Name)</b><br>PE 0605766A / <i>National Capabilities Integration (MIP)</i> | <b>Project (Number/Name)</b><br>DX9 / <i>National Integration To Tactical Systems(MIP)</i> |
|--|--|--|

| Event Name   | FY 2015   |   |   |   | FY 2016 |   |   |   | FY 2017 |   |   |   | FY 2018 |   |   |   | FY 2019 |   |   |   | FY 2020 |   |   |   | FY 2021 |   |   |   |
|--|---|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
|  | 1   | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 |
| (1) Air Vigilance (AV) Capability Drop 2                         | ▲<br>1  |   |   |   | ▲<br>2  |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| (2) Air Vigilance (AV) Capability Drop 3                         |   |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Air Vigilance Software Baseline integration of new developments  | Continued Software effectivity and interoperability |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Theater Net-centric Geolocation (TNG) interoperability standards | Enables Army assets to comply and participate       |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
|  |   |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
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| <b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2017 Army |  | <b>Date:</b> February 2016   |
| <b>Appropriation/Budget Activity</b><br>2040 / 5              | <b>R-1 Program Element (Number/Name)</b><br>PE 0605766A / <i>National Capabilities Integration (MIP)</i> | <b>Project (Number/Name)</b><br>DX9 / <i>National Integration To Tactical Systems(MIP)</i> |

Schedule Details

| Events   | Start   |      | End     |      |
|--|---------|------|---------|------|
|  | Quarter | Year | Quarter | Year |
| Air Vigilance (AV) Capability Drop 2                             | 4       | 2015 | 4       | 2015 |
| Air Vigilance (AV) Capability Drop 3                             | 4       | 2016 | 4       | 2016 |
| Air Vigilance Software Baseline integration of new developments  | 4       | 2013 | 4       | 2022 |
| Theater Net-centric Geolocation (TNG) interoperability standards | 2       | 2014 | 1       | 2022 |