Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Army											Date: February 2015	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 3: *Advanced Technology Development (ATD)*					R-1 Program Element (Number/Name) PE 0603006A / *Space Application Advanced Technology*							
COST ($ in Millions)	**Prior Years**	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Cost To Complete**	**Total Cost**
Total Program Element	-	10.706	6.880	5.554	-	5.554	3.904	4.026	5.160	5.262	-	-
257: *DIGITAL BATTLEFLD COMM*	-	5.000	-	-	-	-	-	-	-	-	-	-
592: *Space Application Tech*	-	5.706	6.880	5.554	-	5.554	3.904	4.026	5.160	5.262	-	-

A. Mission Description and Budget Item Justification

This program element (PE) matures and demonstrates advanced space technologies that support the Army's ability to control and exploit space assets that contribute to current and future military operations as defined in the national, DoD, and Army space policies. This PE provides applications for enhanced intelligence, reconnaissance, surveillance, target acquisition, position/navigation, missile warning, ground-to-space surveillance, and command and control capabilities. Project 592 matures and demonstrates networked and integrated surveillance, communications, and command and control capabilities for high altitude and tactically responsive space payloads to enable information superiority, enhanced situational awareness, and support global assured access enabling distributed tactical operations.

Work in this PE complements the work in PE 0602120A (Sensors and Electronic Survivability), PE 0603008A (Electronic Warfare Advanced Technology), and PE 0603794A (Command, Control, and Communications Advanced Technology).

The cited work is consistent with the Assistant Secretary of Defense, Research and Engineering Science and Technology priority focus areas and the Army Modernization Strategy.

Work in this PE is performed by the US Army Space and Missile Defense Command/Army Forces Strategic Command (USASMDC/ARSTRAT) Technical Center in Huntsville, AL.

B. Program Change Summary ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	5.862	6.883	5.592	-	5.592
Current President's Budget	10.706	6.880	5.554	-	5.554
Total Adjustments	4.844	-0.003	-0.038	-	-0.038
• Congressional General Reductions	-	-0.003			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	5.000	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.156	-			
• Adjustments to Budget Years	-	-	-0.038	-	-0.038

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Army	Date: February 2015
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 0603006A *I Space Application Advanced Technology*

Congressional Add Details ($ in Millions, and Includes General Reductions)	**FY 2014**	**FY 2015**
Project: 257: *DIGITAL BATTLEFLD COMM*		
Congressional Add: *Space applications advanced technology program increase*	5.000	-
Congressional Add Subtotals for Project: 257	5.000	-
Congressional Add Totals for all Projects	5.000	-

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603006A / *Space Application Advanced Technology*	Project (Number/Name) 257 / *DIGITAL BATTLEFLD COMM*	

COST ($ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
257: *DIGITAL BATTLEFLD COMM*	-	5.000	-	-	-	-	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

Congressional Interest Item funding for digital battlefield advanced technology development.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015
Congressional Add: Space applications advanced technology program increase	5.000	-
FY 2014 Accomplishments: Space applications advanced technology program increase		
Congressional Adds Subtotals	5.000	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603006A / *Space Application Advanced Technology*	Project (Number/Name) 592 / *Space Application Tech*	

COST ($ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
592: *Space Application Tech*	-	5.706	6.880	5.554	-	5.554	3.904	4.026	5.160	5.262	-	-

A. Mission Description and Budget Item Justification

This project matures and demonstrates payloads, sensors, and data down link systems for tactically responsive space and high altitude platforms supporting Army ground forces. This project matures, demonstrates, and integrates light weight materials, hardware components with reduced power consumption, and advanced data collection, processing, and dissemination capabilities. This project also develops algorithms that process space and near space sensor data in real and near real time for integration into battlefield operating systems. These efforts support the Army's ability to control and exploit space assets that contribute to current and future military operations as defined in the national, DoD, and Army space policies.

The cited work is consistent with the Assistant Secretary of Defense, Research and Engineering Science and Technology priority focus areas and the Army Modernization Strategy.

Work in this PE is performed by the US Army Space and Missile Defense Command/Army Forces Strategic Command (USASMDC/ARSTRAT) Technical Center in Huntsville, AL. This program is designated as a DoD Space Program.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: Payload Technology Development	5.706	6.880	5.554
Description: This effort matures technologies for smaller, Warfighter-responsive sensor and communication small satellite constellations. Work related to standard Army networks is done in coordination with the Communications-Electronics Research Development and Engineering Center (CERDEC).			
FY 2014 Accomplishments: Matured low cost launch vehicle engine capable of lifting small satellite class payloads into low earth orbit; matured and demonstrated on-orbit deployment and positioning system for small satellites; evaluated and demonstrated algorithms and software to enable tactical dissemination of space-based digital sensor data.			
FY 2015 Plans: Conduct low cost launch vehicle engine and rocket stage performance validation; demonstrate suborbital launch, to include rocket and supporting range equipment; validate functionality of space-based mission command for imaging spacecraft architecture, affordable launch technical control, and affordable launch fire control.			
FY 2016 Plans: Will demonstrate proof-of-concept small satellite control using standard Army networks; integrate small satellite communications and imagery payload software onto standard Army network platforms and assess ability to control on-orbit small satellites and			

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 3	**R-1 Program Element (Number/Name)** PE 0603006A / *Space Application Advanced Technology*	**Project (Number/Name)** 592 / *Space Application Tech*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
onboard payloads; and mature Software Defined Radio (SDR) and imagery payloads based on lessons learned from earlier on-orbit demonstrations.			
Accomplishments/Planned Programs Subtotals	5.706	6.880	5.554

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A