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

**DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

2040: Research, Development, Test & Evaluation, Army

PE 0305232A: *RQ-11 Raven* 

BA 7: Operational Systems Development

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	0.000	0.000	1.599	0.000	1.599	1.943	1.935	2.895	2.956	Continuing	Continuing
RA7: RQ-11 RAVEN (MIP)	0.000	0.000	1.599	0.000	1.599	1.943	1.935	2.895	2.956	Continuing	Continuing

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

The Small Unmanned Aircraft System (SUAS) program provides the ground maneuver battalions and below with situational awareness and enhanced force protection. SUAS is a man portable unmanned aircraft system capable of handling a wide variety of Intelligence, Surveillance & Reconnaissance (ISR) tasks at Battalion and below. The SUAS aircraft has a wingspan of 4.5 feet and weighs 4.2 pounds. It is hand-launched, and provides aerial observation, day or night, at line-of-sight ranges up to 10 kilometers. The aircraft has an endurance rate of 90 minutes and can deliver color or infrared imagery in real time to the ground control and remote viewing stations. SUAS obtained Milestone C approval 6 Oct 05 and successfully completed IOT&E June 06. The program obtained Full Rate Production authority 5 Oct 06. A significant system upgrade completed in early FY 2010 incorporated a Digital Data Link (DDL) which improved operational capability by: incorporating encryption capability, enabling secure data links; increasing the number of channels, allowing for more air vehicles to be flown in a smaller area; improving the operational range through communications relay capability; and integration of advanced digital payloads. The first DDL systems were fielded in December 2009. FY 2011 efforts will focus on improved auto-land accuracy, software blocking integration, chemical payload integration, common controller, Radio Frequency Beacon Tracker, and ADS-B integration. Prior to FY 2011, the funding for this project was in PE 0305204A, Project D10. Due to an error in allocating the funds to the new PE in FY11, \$342 thousand is still in PE 0305204A and is reflected ONLY in the total funding line of that Project. This PE/Project includes the \$342 thousand amount ONLY on Accomplishments/Planned Program (R2a) and Cost Analysis (R3). This separate reporting mitigates any appearance of double funding.

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

**DATE:** February 2010

### APPROPRIATION/BUDGET ACTIVITY

2040: Research, Development, Test & Evaluation, Army

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE PE 0305232A: RQ-11 Raven

# **B. Program Change Summary (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	1.599	0.000	1.599
Total Adjustments	0.000	0.000	1.599	0.000	1.599
<ul> <li>Congressional General Reductions</li> </ul>		0.000			
<ul> <li>Congressional Directed Reductions</li> </ul>		0.000			
<ul> <li>Congressional Rescissions</li> </ul>	0.000	0.000			
<ul> <li>Congressional Adds</li> </ul>		0.000			
<ul> <li>Congressional Directed Transfers</li> </ul>		0.000			
<ul> <li>Reprogrammings</li> </ul>	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
<ul> <li>Adjustments to Budget Years</li> </ul>	0.000	0.000	1.599	0.000	1.599

# **Change Summary Explanation**

Change Summary Explanation: Funding - FY 11: Program was transferred to its own stand alone PE.

APPROPRIATION/BUDGET ACTIVITY

2040: Research, Development, Test & Evaluation, Army
BA 7: Operational Systems Development

**DATE:** February 2010

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
RA7: RQ-11 RAVEN (MIP)	0.000	0.000	1.599	0.000	1.599	1.943	1.935	2.895	2.956	Continuing	Continuing
Quantity of RDT&E Articles											

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

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

The Small Unmanned Aircraft System (SUAS) program provides the ground maneuver battalions and below with situational awareness and enhanced force protection. SUAS is a man portable unmanned aircraft system capable of handling a wide variety of Intelligence, Surveillance & Reconnaissance (ISR) tasks at Battalion and below. The SUAS aircraft has a wingspan of 4.5 feet and weighs 4.2 pounds. It is hand-launched, and provides aerial observation, day or night, at line-of-sight ranges up to 10 kilometers. The aircraft has an endurance rate of 90 minutes and can deliver color or infrared imagery in real time to the ground control and remote viewing stations. SUAS obtained Milestone C approval 6 Oct 05 and successfully completed IOT&E June 06. The program obtained Full Rate Production authority 5 Oct 06. A significant system upgrade completed in early FY 2010 incorporated a Digital Data Link (DDL) which improved operational capability by: incorporating encryption capability, enabling secure data links; increasing the number of channels, allowing for more air vehicles to be flown in a smaller area; improving the operational range through communications relay capability; and integration of advanced digital payloads. The first DDL systems were fielded in December 2009. FY 2011 efforts will focus on improved auto-land accuracy, software blocking integration, chemical payload integration, common controller, Radio Frequency Beacon Tracker, and ADS-B integration. Prior to FY 2011, the funding for this project was in PE 0305204A, Project D10. Due to an error in allocating the funds to the new PE in FY11, \$342 thousand is still in PE 0305204A and is reflected ONLY in the total funding line of that Project. This PE/Project includes the \$342 thousand amount ONLY on Accomplishments/Planned Program (R2a) and Cost Analysis (R3). This separate reporting mitigates any appearance of double funding.

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

			FY 2011	FY 2011	FY 2011
	FY 2009	FY 2010	Base	OCO	Total
Program #1	0.000	0.000	1.108	0.000	1.108
Product Improvement Studies and Development					
FY 2009 Accomplishments: FY 2009					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			<b>DATE:</b> February 2010					
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development	<b>R-1 ITEM NOMENCLATURE</b> PE 0305232A: <i>RQ-11 Raven</i>		PROJECT RA7: RQ-11	RAVEN (MII	P)			
B. Accomplishments/Planned Program (\$ in Millions)	-							
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total		
FY 2010 Plans: FY 2010								
FY 2011 Base Plans: FY 2011 Base								
FY 2011 OCO Plans: FY 2011 OCO								
Program #2		0.000	0.000	0.334	0.000	0.334		
Program Management Support								
FY 2009 Accomplishments: FY 2009								
FY 2010 Plans: FY 2010								
FY 2011 Base Plans: FY 2011 Base								
FY 2011 OCO Plans: FY 2011 OCO								
Program #3		0.000	0.000	0.157	0.000	0.157		
Other Government Agencies								

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

**DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

2040: Research, Development, Test & Evaluation, Army

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0305232A: RQ-11 Raven

PROJECT

RA7: RQ-11 RAVEN (MIP)

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

			FY 2011	FY 2011	FY 2011
	FY 2009	FY 2010	Base	осо	Total
FY 2009 Accomplishments:					
FY 2009					
FY 2010 Plans:					
FY 2010					
FY 2011 Base Plans:					
FY 2011 Base					
FY 2011 OCO Plans:					
FY 2011 OCO					
Accomplishme	nts/Planned Programs Subtotals 0.000	0.000	1.599	0.000	1.599

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

			<b>FY 2011</b>	<b>FY 2011</b>	<b>FY 2011</b>					Cost To	
<u>Line Item</u>	<b>FY 2009</b>	<b>FY 2010</b>	<b>Base</b>	<u>oco</u>	<u>Total</u>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>Complete</b>	Total Cost
• Ord. #1: PE 0305204A Project D10	1.990	3.947	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	5.937
(MIP)(RDT&E,A)											
• Ord. #2: SUAS Procurement / OPA	57.481	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	57.481
(B00303)											
• Ord. #3: SUAS Procurement / APA	0.000	79.450	20.152	17.430	37.582	18.720	16.391	24.080	25.454	0	201.677
(A00010)											

### **D.** Acquisition Strategy

N/A

### **E. Performance Metrics**

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

### **UNCLASSIFIED**

R-1 Line Item #179 Page 5 of 8 842 of 897

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

**DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development

PE 0305232A: RQ-11 Raven

RA7: RQ-11 RAVEN (MIP)

**Product Development (\$ in Millions)** 

				FY :	2010	FY Ba	2011 ase	FY:	2011 CO	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
Product Improvement Studies and Development	C/CPFF	Aero Vironment Simi Valley, CA	0.000	0.000		1.108		0.000		1.108	Continuing	Continuing	0
		Subtotal	0.000	0.000		1.108		0.000		1.108			0.000

#### Remarks

Support (\$ in Millions)

\	,												
				FY 2	2010		2011 ase	FY 2	2011 CO	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
Other Government Agencies	С	Various Location could not be determined.	0.000	0.000		0.157		0.000		0.157	Continuing	Continuing	0
		Subtotal	0.000	0.000		0.157		0.000		0.157			0.000

#### Remarks

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

**DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development

PE 0305232A: RQ-11 Raven

RA7: RQ-11 RAVEN (MIP)

**Test and Evaluation (\$ in Millions)** 

				FY 2010		FY 2011 Base		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	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Reliability Availability and Manintainability (RAM) Test	С	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.000		0.000		0.000		0.000	0	0	0
		Subtotal	0.000	0.000		0.000		0.000		0.000	0.000	0.000	0.000

#### Remarks

**Management Services (\$ in Millions)** 

		,											
				FY 2010		FY 2011 Base		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	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Personnel	С	PM UAS Redstone Arsenal, AL	0.000	0.000		0.334		0.000		0.334	Continuing	Continuing	0
	_	Subtotal	0.000	0.000		0.334		0.000		0.334			0.000

#### Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army  DATE: February 2010										
		PROJECT RA7: RQ-11	RAVEN (MIP)							

	Total Prior Years Cost	FY 2010	FY 2	FY 2	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000	1.599	0.000	1.599			0.000

**Remarks**