

**UNCLASSIFIED**

PE NUMBER: 0305148F  
 PE TITLE: AF Tac Measurement & Sign

<b>Exhibit R-2, RDT&amp;E Budget Item Justification</b>	DATE <b>February 2004</b>
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<b>BUDGET ACTIVITY</b> <b>07 Operational System Development</b>	<b>PE NUMBER AND TITLE</b> <b>0305148F AF Tac Measurement &amp; Sign</b>
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Cost (\$ in Millions)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	15.259	7.436	7.905	13.151	2.809	3.026	3.072	0.000	0.000
5053 ARGUS	15.259	7.436	7.905	13.151	2.809	3.026	3.072	0.000	0.000

**(U) A. Mission Description and Budget Item Justification**

The Advanced Remote Ground Unattended Sensor (ARGUS) provides joint forces and other commanders with Intelligence, Surveillance & Reconnaissance (ISR) derived information for Intelligence Preparation of the Battlespace (IPB) on mobile Time Critical Targets (TCTs) autonomously in near real-time. In addition it will provide cueing for wide area sensors on other ISR platforms such as the Joint Surveillance Target Attack Radar System (JSTARS), Predator, U-2, Global Hawk, and next-generation ISR platforms. ARGUS is designed for 24/7 operations in support of worldwide geographic and climate conditions and can be air-delivered or hand-emplaced. Each sensor is self-contained with internal battery power, 2-way satellite communication transceiver, sensor suite, signal processing, and Global Positioning System. ARGUS program office is working cooperative development with the United States Marine Corps program office for the Advanced Air-Delivered Sensor (AADS). Spiral 1 of Block 1 provides acoustic/seismic sensing capability at least as good as in the Advanced Concept Technology Demonstration (ACTD) versions (STEEL EAGLE and STEEL RATTLER). Information dissemination for Block 1 will be from the ARGUS Operator Interface (AOI), which will require a man-in-the-loop for Spiral 1. By Spiral 2, sensing capability will be achieved through software enhancements and integration of the AOI into the theater Air Operation Centers will be via multi-intelligence workstations developed as part of the Distributed Common Ground Systems (DGCS) Block 10.2 program. After completion of Block 1, the program will continue research and development on Block 1 sensors, comms and battery; and explore opportunities for ARGUS/AADS mission expansion to other sensor capabilities.

This program is in budget activity 7, Operational Systems Development, because it addresses development and capabilities to support already operational weapon systems.

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

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Previous President's Budget	15.486	7.510	15.826
(U) Current PBR/President's Budget	15.259	7.436	7.905
(U) Total Adjustments	-0.227	-0.074	
(U) Congressional Program Reductions	-0.163	-0.064	
Congressional Rescissions		-0.010	
Congressional Increases			
Reprogrammings	-0.064		
SBIR/STTR Transfer			

**(U) Significant Program Changes:**

FY05: Program realigned to support higher priority AF requirements.

## Exhibit R-2a, RDT&amp;E Project Justification

DATE

February 2004

BUDGET ACTIVITY <b>07 Operational System Development</b>				PE NUMBER AND TITLE <b>0305148F AF Tac Measurement &amp; Sign</b>			PROJECT NUMBER AND TITLE <b>5053 ARGUS</b>		
Cost (\$ in Millions)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total
5053 ARGUS	15.259	7.436	7.905	13.151	2.809	3.026	3.072	0.000	0.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

**(U) A. Mission Description and Budget Item Justification**

The Advanced Remote Ground Unattended Sensor (ARGUS) provides joint forces and other commanders with Intelligence, Surveillance & Reconnaissance (ISR) derived information for Intelligence Preparation of the Battlespace (IPB) on mobile Time Critical Targets (TCTs) autonomously in near real-time. In addition it will provide cueing for wide area sensors on other ISR platforms such as the Joint Surveillance Target Attack Radar System (JSTARS), Predator, U-2, Global Hawk, and next-generation ISR platforms. ARGUS is designed for 24/7 operations in support of worldwide geographic and climate conditions and can be air-delivered or hand-emplaced. Each sensor is self-contained with internal battery power, 2-way satellite communication transceiver, sensor suite, signal processing, and Global Positioning System. ARGUS program office is working cooperative development with the United States Marine Corps program office for the Advanced Air-Delivered Sensor (AADS). Spiral 1 of Block 1 provides acoustic/seismic sensing capability at least as good as in the Advanced Concept Technology Demonstration (ACTD) versions (STEEL EAGLE and STEEL RATTLER). Information dissemination for Block 1 will be from the ARGUS Operator Interface (AOI), which will require a man-in-the-loop for Spiral 1. By Spiral 2, sensing capability will be achieved through software enhancements and integration of the AOI into the theater Air Operation Centers will be via multi-intelligence workstations developed as part of the Distributed Common Ground Systems (DGCS) Block 10.2 program. After completion of Block 1, the program will continue research and development on Block 1 sensors, comms and battery; and explore opportunities for ARGUS/AADS mission expansion to other sensor capabilities.

This program is in budget activity 7, Operational Systems Development, because it addresses development and capabilities to support already operational weapon systems.

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

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Accomplishments/Planned Program	0.000	0.000	0.000
(U) Concept and Technology Development activities (ACTD activities and support)	5.236	0.000	0.000
(U) Test Support to complete C&TD/ACTD activities in 2003 (Operation Iraqi Freedom)	3.685	0.000	0.000
(U) System Development and Demonstration (SDD)	6.138	4.936	7.670
(U) Test support to SDD	0.000	2.000	0.235
(U) Simulation Support	0.200	0.500	0.000
(U) Total Cost	15.259	7.436	7.905

**Exhibit R-2a, RDT&E Project Justification**

DATE  
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BUDGET ACTIVITY <b>07 Operational System Development</b>	PE NUMBER AND TITLE <b>0305148F AF Tac Measurement &amp; Sign</b>	PROJECT NUMBER AND TITLE <b>5053 ARGUS</b>
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**(U) C. Other Program Funding Summary (\$ in Millions)**

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) Other Procurement, AF (3080)	0.000	0.000	0.000	0.000	4.975	10.174	10.388	21.100	46.637
(U) O&M, AF (3400)	0.000	0.000	0.000	0.951	2.457	3.274	3.339	Continuing	TBD

**(U) D. Acquisition Strategy**

ARGUS/AADS follows directly from the STEEL EAGLE ACTD for air delivered and STEEL RATTLER ACTD for hand emplaced ground sensors. The ARGUS/AADS program SDD will build on successes and lessons learned from the ACTD, its operational demonstrations, and uses. Proposals were solicited for development and prototype design through open and competitive bid contract, type cost plus award fee with incentives. ARGUS/AADS will develop and procure using spiral development in order to achieve operational utility in the minimal timeframe. ARGUS/AADS will leverage existing advanced government work where feasible, and other non-developmental items (NDI) to the maximum extent possible. Procurement of production models is planned to use a Firm Fixed Price (FFP) contract structure.

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**Exhibit R-3, RDT&E Project Cost Analysis**

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<u>(U) Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; Location</u>	<u>Total</u> <u>Prior to FY</u> <u>2003</u> <u>Cost</u>	<u>FY</u> <u>2003</u> <u>Cost</u>	<u>FY</u> <u>2003</u> <u>Award</u> <u>Date</u>	<u>FY</u> <u>2004</u> <u>Cost</u>	<u>FY</u> <u>2004</u> <u>Award</u> <u>Date</u>	<u>FY</u> <u>2005</u> <u>Cost</u>	<u>FY</u> <u>2005</u> <u>Award</u> <u>Date</u>	<u>Cost to</u> <u>Complete</u>	<u>Total</u> <u>Cost</u>	<u>Target</u> <u>Value of</u> <u>Contract</u>
<u>(U) System Development &amp; Demonstration</u> Textron	C/CPAF	ESC, Hanscom AFB, MA	0.000	6.138	Jul-03	4.936	Oct-03	7.670	Oct-04	11.151	29.895	
Subtotal System Development & Demonstration			0.000	6.138		4.936		7.670		11.151	29.895	0.000
Remarks:												
<u>(U) Test &amp; Evaluation</u> 40th Test Wing, Sandia; Joint Munitions Test & Evaluation Program Office; Textron	MIPR, C/CPAF	Eglin AFB, FL; DOE-Washington, DC; Hanscom AFB, MA	0.000	3.685	Jul-03	2.000	Dec-03	0.235	Oct-04	4.809	10.729	
Subtotal Test & Evaluation			0.000	3.685		2.000		0.235		4.809	10.729	0.000
Remarks:												
<u>(U) Simulation Support</u> Lincoln Lab, SEEK Eagle	FFRDC, MIPR	Hanscom AFB, MA; Eglin AFB, FL	0.000	0.200	Aug-03	0.500	Mar-04	0.000		0.000	0.700	
Subtotal Simulation Support			0.000	0.200		0.500		0.000		0.000	0.700	0.000
Remarks:												
<u>(U) Concept &amp; Technology Development (ACTD Completion)</u> Sandia; Joint Munitions T&E Program Office	MIPR	DOE-Washington DC; Eglin AFB, FL	0.000	5.236	Feb-03	0.000		0.000		0.000	5.236	
Subtotal Concept & Technology Development (ACTD Completion)			0.000	5.236		0.000		0.000		0.000	5.236	0.000
Remarks:												
<u>(U) Total Cost</u>			0.000	15.259		7.436		7.905		15.960	46.560	0.000



Exhibit R-4, RDT&E Schedule Profile

DATE  
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BUDGET ACTIVITY  
07 Operational System Development

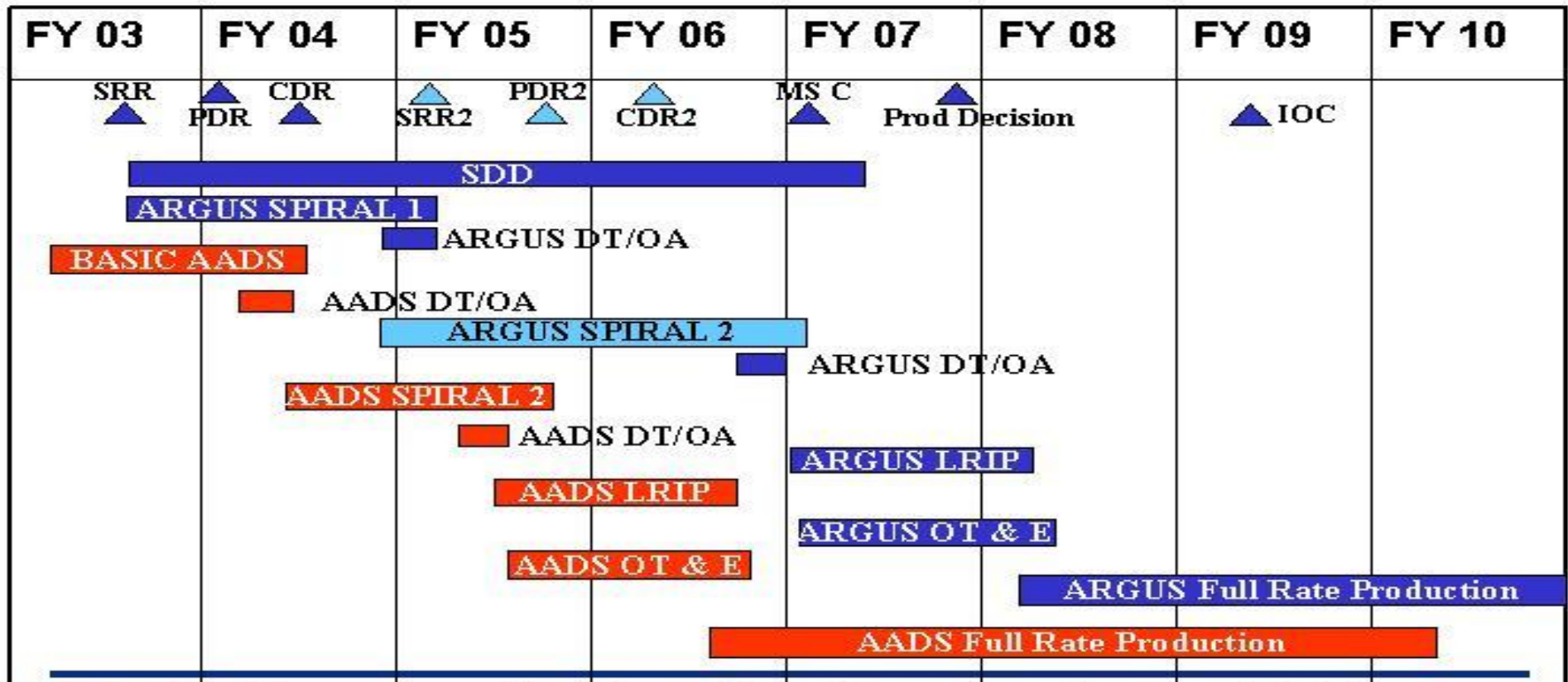
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PROJECT NUMBER AND TITLE  
5053 ARGUS



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# ARGUS/AADS Block 1 Schedule



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## Exhibit R-4, RDT&amp;E Schedule Profile

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07 Operational System Development

PE NUMBER AND TITLE

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Sign

PROJECT NUMBER AND TITLE

5053 ARGUS



# Schedule Acronyms & Legend

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- ARGUS – Advanced Remote Ground Unattended Sensor
- AADS – Advanced Air-Delivered Sensor
- SRR – Systems Readiness Review
- PDR – Preliminary Design Review
- CDR – Critical Design Review
- MS C – Milestone C Decision
- IOC – Initial Operational Capability
- FOC – Full Operational Capability
- LRIP – Low-Rate Initial Production
- DT/OA – Development Test/Operational Assessment
- OT&E – Operational Test & Evaluation
- ARGUS Spiral 1 Activities for Block 1
- ARGUS Spiral 2 Activities for Block 1
- USMC AADS Activities

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**Exhibit R-4a, RDT&E Schedule Detail**

DATE

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PROJECT NUMBER AND TITLE

**5053 ARGUS**

(U) <u>Schedule Profile</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Program Start	2Q		
(U) Milestone B	2Q		
(U) SDD Contract Award	4Q		
(U) Begin Spiral 1 Development of Block 1	4Q		
(U) Complete C&TD (ACTD residual activities)	4Q		
(U) Ballistic Testing		2Q	
(U) Begin Spiral 2 Development of Block 1		4Q	
(U) Complete Spiral 1 Development of Block 1			4Q