

UNCLASSIFIED

PE NUMBER: 0305111F
 PE TITLE: WEATHER SERVICE

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2004
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BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305111F WEATHER SERVICE
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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	14.492	16.098	16.526	16.670	16.970	25.431	32.334	Continuing	TBD
2738 Weather Service	14.492	16.098	16.526	16.670	16.970	25.431	32.334	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This budget activity funds operational development necessary to acquire, modify, and sustain segments of the Air Force Weather Weapon System (AFWWS). The AFWWS supports worldwide operations of Air Force and Army warfighters, as well as Special Operation Forces (SOF) and other government agencies, by providing observations and forecasts of terrestrial and space weather. The AFWWS provides fixed and transportable equipment supporting the Expeditionary Aerospace Force (EAF) concept with weather observing and forecasting capabilities at in-garrison and deployed locations. Air Force Weather (AFW) programs are aligned under the five core competency areas of Weather Data Collection (WDC), Weather Data Analysis (WDA), Weather Forecasting, Product Tailoring/Warfighter Applications (PT/WA), and Weather Dissemination, described in the AFW Mission Area Plan. Through this alignment, AFW ensures an integrated and systems-oriented approach to program management decisions.

WDC provides for terrestrial and space environmental sensing using automated weather observing capabilities at fixed and deployed locations worldwide. WDA provides interoperability for the AFW infrastructure with users and data sources, and includes the assimilation of advanced models, radar, lightning, and satellite data into a single user interface for the timely analysis and production of tailored weather products. Weather Forecasting integrates advanced scientific numerical weather prediction capabilities into the AFW Strategic Center for automated, high resolution mission-tailored weather forecast products. Weather Forecasting includes the Space Weather Analysis and Forecast System (SWAFS) which provides space environmental support through modernization of software capabilities to meet warfighter requirements. Product Tailoring/Warfighter Applications (PT/WA) provides timely, fine-scale weather products and services to operational commanders for a given Area of Responsibility, and at tactical levels, provides front-line weather information to warfighters in support of combat operations. PT/WA also provides the capability to ingest multiple sources of weather information to provide timely and precisely tailored weather products for the warfighter and supports the 'train as you fight' concept by assuring fixed and deployable systems have a similar look and feel. Weather Dissemination provides for the timely and reliable transmission of weather data and products to intermediate and end users.

This effort is in Budget Activity 7, Operational System Development, because it supports operational software development and system tests associated with the upgrade and replacement of currently operational systems, systems already in production, and systems with approved production funds in the DoD budget.

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

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Previous President's Budget	14.095	16.317	16.526
(U) Current PBR/President's Budget	14.492	16.098	16.526
(U) Total Adjustments	0.397	-0.219	
(U) Congressional Program Reductions	0.000	-0.080	
Congressional Rescissions		-0.139	
Congressional Increases			
Reprogrammings	0.912		
SBIR/STTR Transfer	-0.515		
(U) <u>Significant Program Changes:</u>			
Not Applicable			

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BUDGET ACTIVITY 07 Operational System Development				PE NUMBER AND TITLE 0305111F WEATHER SERVICE			PROJECT NUMBER AND TITLE 2738 Weather Service		
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
2738 Weather Service	14.492	16.098	16.526	16.670	16.970	25.431	32.334	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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This effort is in Budget Activity 7, Operational System Development, because it supports operational software development and system tests associated with the upgrade and replacement of currently operational systems, systems already in production, and systems with approved production funds in the DoD budget.

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

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Accomplishments/Planned Program			
(U) SWAFS: Continue spiral development for incremental deliveries of space weather prediction capabilities (funding included in Forecasting FY04 and beyond)	2.614	0.000	0.000
(U) WDC: Includes AF participation with National Weather Service and Federal Aviation Administration in Product Improvement Plans for automated weather sensors and the Next Generation Weather Radar	0.000	1.225	1.365
(U) WDA: Continues incremental software development and integration of enhanced analysis capabilities	2.058	2.652	2.188

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(U) Forecasting: Continues integration of advanced weather forecast capabilities within AFW Strategic Center and continues (beginning in FY04) spiral development of SWAFS for incremental deliveries	2.380	6.004	4.391
(U) PT/WA: Continues software development and integration of regional and tactical weather systems and integration with warfighter C4I systems	7.440	6.217	8.582
(U) Total Cost	14.492	16.098	16.526

(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, Weather Service (PE 0305111F WSC 833070, 838010, and 86190A)	38.632	42.928	45.057	45.142	46.212	57.384	62.220	Continuing	TBD

(U) **D. Acquisition Strategy**

All major contracts within this program used precompeted DoD contract vehicles or were awarded after full and open competition. Programs support DoD's Common Operating Environment (COE) compliance and use an evolutionary acquisition strategy with a series of incremental IOCs and software releases. This approach accommodates refinement and prioritization of user requirements and improves adaptability to evolving commercial activities.

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Exhibit R-3, RDT&E Project Cost Analysis

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BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT NUMBER AND TITLE				
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(U) <u>Cost Categories</u>	<u>Contract Method</u>	<u>Performing Activity &</u>	<u>Total</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>Cost to</u>	<u>Total</u>	<u>Target</u>
(Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>& Type</u>	<u>Location</u>	<u>Prior to FY</u>	<u>2003</u>	<u>2003</u>	<u>2004</u>	<u>2004</u>	<u>2005</u>	<u>2005</u>	<u>Complete</u>	<u>Cost</u>	<u>Value of</u>
			<u>2003</u>	<u>Cost</u>	<u>Award</u>	<u>Cost</u>	<u>Award</u>	<u>Cost</u>	<u>Award</u>			<u>Contract</u>
			<u>Cost</u>		<u>Date</u>		<u>Date</u>		<u>Date</u>			
(U) <u>Product Development</u>												
Northrup Grumman	GSA schedule/LOE	Colorado Springs, CO	0.114	2.227	Dec-02	2.255	Nov-03	1.931	Nov-04	Continuing	TBD	
Raytheon	C/CPFF	Long Beach, CA	0.000	1.593	Mar-03					Continuing	TBD	
TBD [WDA]	C/CPFF		0.000			2.112	Mar-04	1.681	Dec-04	Continuing	TBD	
Multiple [PT/WA]	GSA schedule/LOE	various	8.980	4.388	Nov-02					Continuing	TBD	
TBD [PT/WA]	C/CPFF		0.000			4.166	May-04	6.208	Oct-04	Continuing	TBD	
National Weather Service	MIPR	Norman, OK	0.000			1.225	Apr-04			Continuing	TBD	
Various	various	various		4.359	Oct-02	3.866	Oct-03	3.905	Oct-04	Continuing	TBD	
Subtotal Product Development			9.094	12.567		13.624		13.725		Continuing	TBD	0.000
Remarks:												
(U) <u>Management</u>												
Electronic Systems Center		Hanscom AFB, MA		1.538	Oct-02	2.254	Oct-03	2.561	Oct-04		6.353	
Space & Missile Systems Center		Los Angeles AFB, CA		0.387	Oct-02	0.220	Oct-03	0.240	Oct-04		0.847	
Subtotal Management			0.000	1.925		2.474		2.801		0.000	7.200	0.000
Remarks:												
(U) Total Cost			9.094	14.492		16.098		16.526		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile

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Exhibit R-4a, RDT&E Schedule Detail	DATE February 2004
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	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Schedule Profile			
(U) WDC National Weather Service development begins (Note 1)		2Q	
(U) WDA contract award	2Q		
(U) WDA Increment 2 IOC		4Q	
(U) WDA Increment 3 IOC			4Q
(U) WDA Increment 4 contract award			2Q
(U) Forecasting FY03 PRDA tasks awarded (Note 2)	3Q		
(U) Forecasting FY03 PRDA complete		4Q	
(U) Forecasting FY04 PRDA tasks awarded		2Q	
(U) Forecasting FY04 PRDA complet			3Q
(U) Forecasting FY05 PRDA tasks awarded			2Q
(U) SWAFS Spiral 2 development began	1Q		
(U) SWAFS Spiral 2 Increment 1 IOC		1Q	
(U) SWAFS Spiral 2 Increment 2 IOC		4Q	
(U) SWAFS Spiral 2 Increment 3 IOC			4Q
(U) PT/WA follow-on RFP release		2Q	
(U) PT/WA down-select and fly-off		3-4Q	1Q
(U) PT/WA final down-select			2Q

Note 1: AF participation with National Weather Service and Federal Aviation Administration in Product Improvement Plans for automated weather sensors and the Next Generation Weather Radar (NEXRAD).

Note 2: Permission for Research and Development Announcement (PRDA) contracting vehicle for reaching multiple universities and laboratories. PRDA replaces the spiral development for Forecasting reported in FY04 PB.