

UNCLASSIFIED

PE NUMBER: 0102326F

PE TITLE: REGION/ SECTOR OPERATIONS CONTROL CENTER

Exhibit R-2, RDT&E Budget Item Justification

DATE

February 2006

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0102326F REGION/ SECTOR OPERATIONS CONTROL CENTER

Cost (\$ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	14.721	17.937	14.853	23.149	23.785	24.056	18.984	Continuing	TBD
4592 Region/Sector Operations Modernization Center (R/SAOC)	14.721	17.937	14.853	23.149	23.785	24.056	18.984	Continuing	TBD

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

Battle Control System (BCS) Family of Systems (FOS) is comprised of fixed sites for Homeland Defense [Region/Sector Air Operation Control Center, PE 0102326F (called the Battle Control System-Fixed {BCS-F})] and mobile Theater Battle Management (TBM) Command and Control (C2) nodes [Modular Control System, PE 0207412F (called the Battle Control System-Mobile {BCS-M})]. Battle Control System-Fixed (BCS-F) is the replacement for the fixed sites for the Region/Sector Air Operations Center (R/SAOC) [also known as Region Air Operations Center-Air Defense Sector (RAOC-ADS)] for the Atmospheric Early Warning System (AEWS). The BCS-F program, which supports NOBLE EAGLE, will provide a next-generation battle management command and control system with enhanced capability to integrate data from existing and future civil and military defense surveillance systems into a comprehensive recognized air picture. This multi-input integrated air control picture will enhance the North American Aerospace Defense/Combatant Commander's (NORAD/CC's) capability to conduct peacetime air sovereignty, transition and conventional warfare in the event of aggression toward the North American continent. BCS-F systems serve as the Air Force's Homeland Defense battle management, command, and control hubs and integrates data from radar sensors, data links and supporting communications architecture. They provide the tactical communications and data link capabilities with other military and civil systems responsible for conducting the planning, directing, coordinating, and controlling forces for air surveillance, air defense and control of sovereign US air space (including the National Capital Region). The BCS-F system is a bi-national cooperative program with Canada, ensuring air defense and surveillance capability for the entire North American continent.

The R/SAOC legacy system has reached saturation in its capability to receive, process, display, exchange, and employ air surveillance data from current sensor and communication systems, thus contributing to delays in the kill chain. The outdated technology has become increasingly difficult and costly to sustain and provides no opportunity for application enhancement. The BCS-F system is the replacement for this antiquated system.

This program is in Budget Activity 7 - Operational System Development because it provides funding for the replacement of a currently existing and operating system.

Exhibit R-2, RDT&E Budget Item Justification

DATE

February 2006

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0102326F REGION/ SECTOR OPERATIONS CONTROL CENTER(U) **B. Program Change Summary (\$ in Millions)**

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Previous President's Budget	19.047	18.237	14.540
(U) Current PBR/President's Budget	14.721	17.937	14.853
(U) Total Adjustments	-4.326	-0.300	
(U) Congressional Program Reductions		-0.040	
Congressional Rescissions	-0.295	-0.260	
Congressional Increases			
Reprogrammings	-4.031		
SBIR/STTR Transfer			

(U) **Significant Program Changes:**

FY05 - FY07 reductions to support higher Air Force needs, program rephased to align with current funding.

FY05 - Additional \$2M reprogramming reduction applied in early FY06 to support higher Air Force needs not reflected in FY05 current PBR/President's Budget top line number above.

UNCLASSIFIED

Exhibit R-2a, RDT&E Project Justification

DATE

February 2006

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0102326F REGION/ SECTOR
OPERATIONS CONTROL CENTER

PROJECT NUMBER AND TITLE

4592 Region/Sector Operations
Modernization Center (R/SAOC)

Cost (\$ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4592 Region/Sector Operations Modernization Center (R/SAOC)	14.721	17.937	14.853	23.149	23.785	24.056	18.984	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

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

Battle Control System (BCS) Family of Systems (FOS) is comprised of fixed sites for Homeland Defense [Region/Sector Air Operation Control Center, PE 0102326F (called the Battle Control System-Fixed {BCS-F})] and mobile Theater Battle Management (TBM) Command and Control (C2) nodes [Modular Control System, PE 0207412F (called the Battle Control System-Mobile {BCS-M})]. Battle Control System-Fixed (BCS-F) is the replacement for the fixed sites for the Region/Sector Air Operations Center (R/SAOC) [also known as Region Air Operations Center-Air Defense Sector (RAOC-ADS)] for the Atmospheric Early Warning System (AEWS). The BCS-F program, which supports NOBLE EAGLE, will provide a next-generation battle management command and control system with enhanced capability to integrate data from existing and future civil and military defense surveillance systems into a comprehensive recognized air picture. This multi-input integrated air control picture will enhance the North American Aerospace Defense/Combatant Commander's (NORAD/CC's) capability to conduct peacetime air sovereignty, transition and conventional warfare in the event of aggression toward the North American continent. BCS-F systems serve as the Air Force's Homeland Defense battle management, command, and control hubs and integrates data from radar sensors, data links and supporting communications architecture. They provide the tactical communications and data link capabilities with other military and civil systems responsible for conducting the planning, directing, coordinating, and controlling forces for air surveillance, air defense and control of sovereign US air space (including the National Capital Region). The BCS-F system is a bi-national cooperative program with Canada, ensuring air defense and surveillance capability for the entire North American continent.

The R/SAOC legacy system has reached saturation in its capability to receive, process, display, exchange, and employ air surveillance data from current sensor and communication systems, thus contributing to delays in the kill chain. The outdated technology has become increasingly difficult and costly to sustain and provides no opportunity for application enhancement. The BCS-F system is the replacement for this antiquated system.

This program is in Budget Activity 7 - Operational System Development because it provides funding for the replacement of a currently existing and operating system.

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

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Accomplishments/Planned Program			
(U) Continue Acquisition Activities associated with System Development of the BCS-F, to include but not limited to Software Development, System Integration, Purchase of Government Furnished Equipment, Production Representative Hardware, Test and Certification Support.	9.026	14.104	11.742
(U) Continue Program Management/Systems Engineering	4.137	2.789	2.134
(U) Continue Program Support (i.e. travel, supplies, equipment, misc)	1.558	1.044	0.977
(U) Total Cost	14.721	17.937	14.853

UNCLASSIFIED

Exhibit R-2a, RDT&E Project Justification

DATE

February 2006

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0102326F REGION/ SECTOR
OPERATIONS CONTROL CENTER

PROJECT NUMBER AND TITLE

4592 Region/Sector Operations
Modernization Center (R/SAOC)(U) **C. Other Program Funding Summary (\$ in Millions)**

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</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 APPN									
(U) OPAF PE 0102326F (Other Procurement Air Force, WSC 833040, Theater Air Control System Improvement)	6.448	11.846	18.262	11.868	18.013	14.067	20.567	Continuing	TBD

(U) **D. Acquisition Strategy**

The BCS-Fixed program is utilizing a spiral development acquisition strategy that leverages hardware and software commonality with BCS-Mobile to further advance tactical Battle Management C2 capabilities while promoting increased interoperability between systems.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis

DATE

February 2006

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0102326F REGION/ SECTOR
OPERATIONS CONTROL CENTER

PROJECT NUMBER AND TITLE

4592 Region/Sector Operations
Modernization Center (R/SAOC)

(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract</u> <u>Method &</u> <u>Type</u>	<u>Performing</u> <u>Activity &</u> <u>Location</u>	<u>Total</u> <u>Prior to FY</u> <u>2005</u> <u>Cost</u>	<u>FY 2005</u> <u>Cost</u>	<u>FY 2005</u> <u>Award</u> <u>Date</u>	<u>FY 2006</u> <u>Cost</u>	<u>FY 2006</u> <u>Award</u> <u>Date</u>	<u>FY 2007</u> <u>Cost</u>	<u>FY 2007</u> <u>Award</u> <u>Date</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>	<u>Target Value</u> <u>of Contract</u>
(U) <u>Product Development</u>												
THALES RAYTHEON	FFP/C	Fullerton, CA	32.426	5.423	May-05	11.422	Oct-05	10.405	Oct-06	Continuing	TBD	TBD
Various	Various	Various	2.172	2.266	Dec-04	1.364	Jan-06	0.019	Jan-07	Continuing	TBD	TBD
Subtotal Product Development			34.598	7.689		12.786		10.424		Continuing	TBD	TBD
Remarks:												
(U) <u>Support</u>												
Program Management/Systems Engineering	T&M	Bedford, MA	20.425	4.137	Oct-04	2.789	Oct-05	2.134	Oct-06	Continuing	TBD	TBD
Program Office Support	Various	Various	5.077	1.558	Nov-04	1.044	Nov-05	0.977	Nov-06	Continuing	TBD	TBD
Subtotal Support			25.502	5.695		3.833		3.111		Continuing	TBD	TBD
Remarks:												
(U) <u>Test & Evaluation</u>												
46th Test Wing/Other Test Act	Various	Various	5.381	1.337	Oct-04	1.318	Nov-05	1.318	Nov-06	Continuing	TBD	TBD
Subtotal Test & Evaluation			5.381	1.337		1.318		1.318		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			65.481	14.721		17.937		14.853		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

DATE

February 2006

BUDGET ACTIVITY

07 Operational System Development

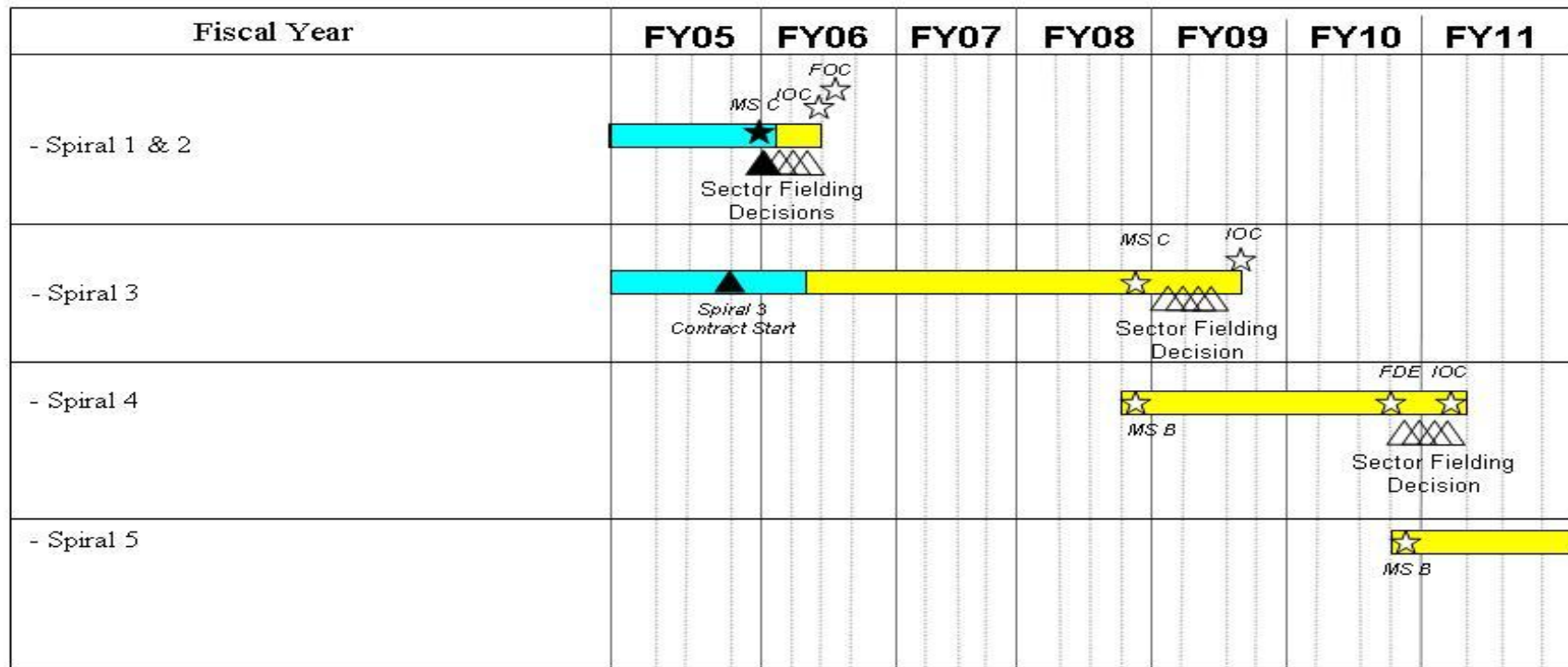
PE NUMBER AND TITLE

0102326F REGION/ SECTOR
OPERATIONS CONTROL CENTER

PROJECT NUMBER AND TITLE

4592 Region/Sector Operations
Modernization Center (R/SAOC)

Exhibit R-4 – PE 0102366F – REGIONAL/SECTOR OPERATIONS CONTROL CENTER



AS OF 13 JAN 06

UNCLASSIFIED

Exhibit R-4a, RDT&E Schedule Detail

DATE

February 2006

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0102326F REGION/ SECTOR
OPERATIONS CONTROL CENTER

PROJECT NUMBER AND TITLE

4592 Region/Sector Operations
Modernization Center (R/SAOC)(U) Schedule ProfileFY 2005FY 2006FY 2007

(U) BCS-F Spiral 1 & 2 MS C

4Q

(U) BCS-F Spiral 1 & 2 Fielding Decisions

1-2Q

(U) BCS-F Spiral 1 & 2 IOC

2Q

(U) BCS-F Spiral 1 & 2 FOC

3Q

(U) BCS-F Spiral 3 Start

4Q