

UNCLASSIFIED

PE NUMBER: 0102326F

PE TITLE: REGION/ SECTOR OPERATIONS CONTROL CENTER

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
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BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0102326F REGION/ SECTOR OPERATIONS CONTROL CENTER
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Cost (\$ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	14.642	23.262	23.858	26.171	25.492	18.212	18.581	Continuing	TBD
4592 Region/Sector Operations Modernization Center (R/SAOC)	14.642	23.262	23.858	26.171	25.492	18.212	18.581	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

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, is an FY07-fielded 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 and National Capital Region/Integrated Air Defense System (NCR/IADS). This multi-input single integrated air control picture enhances 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 integrate data from radar sensors, data links, and the 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 had 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 was costly to sustain and provided no opportunity for application enhancement. The BCS-F system replaced this antiquated system and achieved Initial Operational Capability in October 2006. With each successive increment, BCS-F provides a more effective Homeland Defense capability.

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

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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 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Previous President's Budget	14.744	23.495	29.358
(U) Current PBR/President's Budget	14.642	23.262	23.858
(U) Total Adjustments	-0.102	-0.233	
(U) Congressional Program Reductions		-0.085	
Congressional Rescissions		-0.148	
Congressional Increases			
Reprogrammings	-0.102		
SBIR/STTR Transfer			
(U) <u>Significant Program Changes:</u>			
- Funding increases from FY07 to FY08 and out because of parallel common software development activities.			
- Funding (\$5.50M) reduced in FY09 for higher priorities.			

Exhibit R-2a, RDT&E Project Justification

DATE

February 2008

BUDGET ACTIVITY				PE NUMBER AND TITLE			PROJECT NUMBER AND TITLE		
07 Operational System Development				0102326F REGION/ SECTOR OPERATIONS CONTROL CENTER			4592 Region/Sector Operations Modernization Center (R/SAOC)		
Cost (\$ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4592 Region/Sector Operations Modernization Center (R/SAOC)	14.642	23.262	23.858	26.171	25.492	18.212	18.581	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-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, is an FY07-fielded 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 and National Capital Region/Integrated Air Defense System (NCR/IADS). This multi-input single integrated air control picture enhances 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 integrate data from radar sensors, data links, and the 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 had 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 was costly to sustain and provided no opportunity for application enhancement. The BCS-F system replaced this antiquated system and achieved Initial Operational Capability in October 2006. With each successive increment, BCS-F provides a more effective Homeland Defense capability.

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 2007</u>	<u>FY 2008</u>	<u>FY 2009</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, NCR/IADS, Test and Certification Support.	11.416	20.020	20.422
(U) Continue Program Management/Systems Engineering	1.686	1.698	1.704
(U) Continue Program Support (i.e. travel, supplies, equipment, misc)	1.540	1.544	1.732
(U) Total Cost	14.642	23.262	23.858

Exhibit R-2a, RDT&E Project Justification

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

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</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)	25.841	11.156	12.318	11.328	13.294	20.232	20.633	Continuing	TBD

(U) **D. Acquisition Strategy**

The BCS-Fixed program is utilizing an incremental 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.

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Exhibit R-3, RDT&E Project Cost Analysis

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February 2008

BUDGET ACTIVITY				PE NUMBER AND TITLE					PROJECT NUMBER AND TITLE			
07 Operational System Development				0102326F REGION/ SECTOR OPERATIONS CONTROL CENTER					4592 Region/Sector Operations Modernization Center (R/SAOC)			
<u>(U) Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Prior to FY 2007 Cost</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
<u>(U) Product Development</u>												
THALES RAYTHEON	CPAF	Fullerton, CA		9.032	Oct-06	17.221	Oct-07	17.351	Oct-08	Continuing	TBD	TBD
Various	Various	Various		1.602	Jan-07	0.602	Jan-08	0.771	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	10.634		17.823		18.122		Continuing	TBD	TBD
Remarks:												
<u>(U) Support</u>												
Program Management Tech Spt	T&M	A&AS Various		1.283	Jan-07	0.927	Jan-08	0.955	Jan-09	Continuing	TBD	TBD
Information Assurance				0.000		0.250	Feb-08	0.250	Dec-08	Continuing	TBD	TBD
System Engineering	FFP	Mitre, Bedford, MA		1.686	Oct-06	1.698	Oct-07	1.704	Oct-08	Continuing	TBD	TBD
Program Office Support	Various	Various		0.258	Nov-06	0.617	Nov-07	0.777	Nov-08	Continuing	TBD	TBD
Subtotal Support			0.000	3.227		3.492		3.686		Continuing	TBD	TBD
Remarks:												
<u>(U) Test & Evaluation</u>												
46th Test Wing/Other Test Act	Various	Various		0.781	Nov-06	1.947	Nov-07	2.050	Nov-08	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.781		1.947		2.050		Continuing	TBD	TBD
Remarks:												
<u>(U) Total Cost</u>			0.000	14.642		23.262		23.858		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

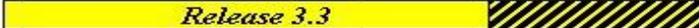
DATE

February 2008

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)

BCS-Fixed	FY07	FY08	FY09	FY10	FY11	FY12	FY13
<i>BCS-F Increments 1 & 2</i>	★ BCS-F System IOC						
<i>BCS Common Software¹</i>							
<i>Increment 3 Common S/W</i>	Release 3.1 		★ Inc 3 IOC				
<i>Increment 4/5 Common S/W</i>	Release 3.2 		Release 3.3 		★ Inc 3 FOC		
			★ Inc 4 MS B				
<i>Release 3.1 Fielding²</i>	Sector Fielding Decisions 						
<i>Release 3.2 Fielding²</i>			Sector Fielding Decisions 				
<i>Release 3.3 Fielding²</i>					Sector Fielding Decisions 		

¹ Software Increments 1 & 2 were delivered to BCS-F prior to FY07

² BCS-F incremental upgrades come from the BCS Common Software development

IOC: Initial Operational Capability
FOC: Full Operational Capability
MS: Milestone
Inc: Increment
S/W: Software

Major Event or Milestone ☆
Planned Task(s) △
Development Activity 
Integration/Test Activity 

As of Jan 2008

Exhibit R-4a, RDT&E Schedule Detail

DATE

February 2008

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 Profile

- (U) BCS-F System-Level IOC (Increments 1 & 2)
- (U) BCS-F Increment 3 Release 3.1 Fielding Decision
- (U) BCS-F Increment 3 IOC
- (U) BCS-F Common Software Increment 4 MS B

FY 2007

1Q

FY 2008

FY 2009

3Q

4Q

4Q