

UNCLASSIFIED

PE NUMBER: 0102326F

PE TITLE: REGION/ SECTOR OPERATIONS CONTROL CENTER

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2005
---	------------------------------

BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0102326F REGION/ SECTOR OPERATIONS CONTROL CENTER
--	--

Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	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	27.104	18.785	18.237	14.540	23.660	24.578	25.059	20.288	Continuing	TBD
4592 Region/Sector Operations Modernization Center (R/SAOC)	27.104	18.785	18.237	14.540	23.660	24.578	25.059	20.288	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 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 integrators for 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 of 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 2005

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 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Previous President's Budget	32.185	19.047	24.328	19.442
(U) Current PBR/President's Budget	27.104	18.785	18.237	14.540
(U) Total Adjustments	-5.081	-0.262		
(U) Congressional Program Reductions				
Congressional Rescissions		-0.262		
Congressional Increases				
Reprogrammings	-4.415			
SBIR/STTR Transfer	-0.666			
(U) <u>Significant Program Changes:</u>				
FY04 reprogramming and FY06/07 reductions support higher Air Force priorities				

Exhibit R-2a, RDT&E Project Justification

DATE
February 2005

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 2004 Actual	FY 2005 Estimate	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)	27.104	18.785	18.237	14.540	23.660	24.578	25.059	20.288	Continuing	TBD
Quantity of RDT&E Articles	0	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 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 integrators for 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 of 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 2004</u>	<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.	22.807	13.709	13.215	10.987
(U) Continue Program Management/Systems Engineering	2.935	3.528	3.222	2.576
(U) Continue Program Support (i.e. travel, supplies, equipment, misc)	1.362	1.548	1.800	0.977
(U) Total Cost	27.104	18.785	18.237	14.540

Exhibit R-2a, RDT&E Project Justification

DATE

February 2005

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 2004</u>	<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>Estimate</u>	<u>Complete</u>	
(U) Other APPN OPAF PE 0102326F (Other Procurement Air Force, WSC 833040, Theater Air Control System Improvement)	4.303	7.986	12.007	18.250	11.861	18.007	14.063	20.557	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 BMC2 capabilities while promoting increased interoperability between systems.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis

DATE

February 2005

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) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Prior to FY 2004 Cost</u>	<u>FY 2004 Cost</u>	<u>FY 2004 Award Date</u>	<u>FY 2005 Cost</u>	<u>FY 2005 Award Date</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>	
(U) <u>Product Development</u>															
LITTON	CPAF/C	Agoura Hills, CA	48.274										48.274	48.274	
PROLOGIC INC.	CPFF/SS	Fairmont, WV	2.591										2.591	2.591	
THALES RAYTHEON MIDS LVT-1 Terminals	FFP/C MIPR	Fullerton, CA SPAWAR, San Diego, CA	22.272	10.154	Jan-04	12.016	May-05	11.839	Oct-05	9.405	Oct-06	Continuing	TBD	TBD	
FAA	MIPR	Washington, DC	1.083										1.083	1.083	
Naval Systems Mgmt Activity	MIPR	Arlington, VA	0.000	8.965	Aug-04								8.965		
Various	Various		0.500	0.500	Feb-04								0.500		
Subtotal Product Development			1.423	0.749	Nov-03	0.356	Dec-04						2.528	TBD	
Remarks:			75.643	20.368		12.372		11.839		9.405		Continuing	TBD	TBD	
(U) <u>Support</u>															
MITRE	SS/T&M	Bedford, MA	7.899	0.945	Oct-03	1.420	Oct-04	1.491	Oct-05	1.216	Oct-06	Continuing	TBD	TBD	
Program Management/Technical Support	C/T&M	Bedford, MA	9.591	1.990	Feb-04	2.108	Nov-04	1.731	Feb-06	1.360	Feb-07	Continuing	TBD	TBD	
Program Office Support	Various	Various	3.715	1.362		1.548		1.800		0.977		Continuing	TBD	TBD	
Subtotal Support			21.205	4.297		5.076		5.022		3.553		Continuing	TBD	TBD	
Remarks:															
(U) <u>Test & Evaluation</u>															
46th Test Wing/Other Test Act	Various	Various	2.942	2.439	Nov-03	1.337	Nov-04	1.376	Nov-05	1.582	Nov-06	Continuing	TBD	TBD	
Subtotal Test & Evaluation			2.942	2.439		1.337		1.376		1.582		Continuing	TBD	TBD	
Remarks:															
(U) Total Cost			99.790	27.104		18.785		18.237		14.540		Continuing	TBD	TBD	

Exhibit R-4, RDT&E Schedule Profile

DATE

February 2005


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 0102326F – REGION/SECTOR OPERATIONS CONTROL CENTER

Fiscal Year	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
BCS-F Spiral 1 / 2	Ongoing Activity that is on-going		Completed Event	Planned Task(s)				
BCS-F Spiral 3		Contract Award	Ongoing Activity that is on-going	Completed Event	Planned Task(s)			
BCS-F Spiral 4				Contract Award	Ongoing Activity that is on-going	Completed Event	Planned Task(s)	

 Ongoing Activity that is on-going

 Completed Event

 Planned Task(s)

UNCLASSIFIED

Exhibit R-4a, RDT&E Schedule Detail	DATE February 2005
--	------------------------------

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>Schedule Profile</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) BCS-F Spiral 1/2 Fielding Decision			1Q	
(U) BCS-F Spiral 1/2 IOC				1Q
(U) BCS-F Spiral 3 Contract Award		3Q		
(U) BCS-F Spiral 3 Field Decision				1Q
(U) BCS-F Spiral 3 IOC				4Q
(U) BCS-F Spiral 4 Contract Award				1Q