Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force										DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*				R-1 ITEM NOMENCLATURE PE 0305208F: *Distributed Common Ground Systems*							
COST ($ in Millions)	**FY 2010**	**FY 2011**	**FY 2012 Base**	**FY 2012 OCO**	**FY 2012 Total**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**Cost To Complete**	**Total Cost**
Total Program Element	82.059	93.398	90.724	-	90.724	88.457	61.748	56.051	55.892	Continuing	Continuing
674826: *Common Imagery Ground / Surface Systems*	69.912	82.509	57.215	-	57.215	47.786	41.399	42.010	43.190	Continuing	Continuing
675265: *Common Imagery Processor (CIP)*	12.147	10.889	10.709	-	10.709	10.427	10.664	10.851	11.252	Continuing	Continuing
676025: *Data Compression*	-	-	22.800	-	22.800	30.244	9.685	3.190	1.450	Continuing	Continuing

Note

The program funding includes reductions for Overhead Reduction efficiencies that are not intended to impact program content. The efficiencies reductions total $.513M in FY12.

In FY 2012, Project Number 676025, Data Compression, includes new start efforts.

A. Mission Description and Budget Item Justification

The DoD Distributed Common Ground/Surface System (DCGS) Program is a cooperative effort between the Services and National Agencies to provide world-wide ground/surface systems capable of receiving, processing, exploiting, and disseminating data from airborne and national reconnaissance sensors/platforms and commercial sources. The DCGS program is developing a family of systems capable of supporting all levels of conflict, interoperable with reconnaissance platforms and sensors, and integrated into the Joint Command, Control, Communication, Computer, and Intelligence (C4I) environment. The program integrates architectures and standards from DCGS Imagery architecture for Imagery Intelligence (IMINT), Joint Airborne SIGINT Architecture (JASA) for Signals Intelligence (SIGINT), and Joint Airborne Measurement and Signature Intelligence (MASINT) Architecture (JAMA) for MASINT, and all-source analyses to Combat Air Forces and Combatant Commanders. The Air Force has been charged by DoD with developing, upgrading and managing the DCGS Integration Backbone (DIB) for all the Services to provide common DCGS enterprise services and interoperability at the data level. DCGS provides the Air Force ground systems capable of tasking intelligence sensors, and receiving, processing, exploiting, and disseminating data from airborne and national reconnaissance platforms and commercial sources. AF DCGS is a 'system of systems' interconnected by a robust communications structure to provide data sharing capabilities between intelligence collectors, exploiters, producers, disseminators, and users. AF DCGS has multiple core locations, CONUS and OCONUS based. Several other AF DCGS systems are distributed among Air Force operational units at Numbered Air Force and Air National Guard locations, to support Joint Task Force commanders and Air Operations Centers (AOC). The CONUS based systems are capable of reach back operations via data link relay and satellite relay connectivity to forward operating sensors. AF DCGS provides critical data and significant support for Time Sensitive Targeting (TST) operations. This support will be enhanced with the integration of software tools and data interfaces to process and exploit data from new/upgraded sensors, by the demonstration and integration of enhanced fusion/exploitation aid technologies and by the transformation of AF DCGS to a net centric, service oriented architecture construct. By converting from a stovepipe system of systems to a web based integrated net centric Intelligence, Surveillance, and Reconnaissance (ISR) management capability, AF DCGS will provide the Joint Forces Air Component Commander (JFACC) the capability to: 1) dynamically visualize and command ISR assets and the information in the AOC 2) quickly and effectively synchronize AF DCGS ISR operations, collection capabilities, and

Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force	DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0305208F: *Distributed Common Ground Systems*

information with the AOC's combat objectives to improve the TST process and reduce timelines. Using the DIB, AF DCGS modernization will transform AF DCGS from its existing proprietary system to a net centric service oriented architecture. This modernization effort, implemented on the fielded baseline, will deliver a net centric DCGS capability for the Air Force. AF DCGS will modernize through sustainment by integrating the necessary technologies and tools to provide increased capabilities and meet emerging and urgent user operational needs. These efforts will also integrate commercial and government fact-of-life version upgrades to provide current technologies and achieve necessary application and services. The next series of upgrades will meet the operational need to integrate new and/or improved sensor capabilities and enhance interoperability by migrating to a service oriented architecture and improving data sharing ability in compliance with DoD direction. AF DCGS will continue to modernize its network management and interface capabilities by upgrading and migrating its network to a standardized interface configuration which is easy to expand and adapt to new technologies while growing capacity requirements. Efforts will also focus on network management systems and the ability to manage critical bandwidths to meet operational surges and distributed ops requirements. The program will also provide a capability to efficiently compress and decompress airborne ISR sensor data and transmit real/near-real time over existing data/communications links to tactical users. The DCGS Imagery (DCGS-I) Testbed is an integration and test environment, which is used by the Services and Agency program offices to conduct integration of DCGS components and test interoperability interfaces with new sensors, applications, and net centric operations. This testbed also supports the integration and testing of DoD DCGS components prior to introduction into the operational environment. Upgrades to the DCGS-I Testbed will ensure it maintains current with DCGS standards and architecture. AF DCGS participates in the development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, allied, and coalition interoperability. This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	82.765	93.398	72.137	-	72.137
Current President's Budget	82.059	93.398	90.724	-	90.724
Total Adjustments	-0.706	-	18.587	-	18.587
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.706	-	18.587	-	18.587

Change Summary Explanation

In FY12, funding increased for further integration of sensors/platforms into AF DCGS.

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011
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COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
674826: *Common Imagery Ground / Surface Systems*	69.912	82.509	57.215	-	57.215	47.786	41.399	42.010	43.190	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The DoD Distributed Common Ground/Surface System (DCGS) Program is a cooperative effort between the Services and National Agencies to provide world-wide ground/surface systems capable of receiving, processing, exploiting, and disseminating data from airborne and national reconnaissance sensors/platforms and commercial sources. The DCGS program is developing a family of systems capable of supporting all levels of conflict, interoperable with reconnaissance platforms and sensors, and integrated into the Joint Command, Control, Communication, Computer, and Intelligence (C4I) environment. The program integrates architectures and standards from DCGS Imagery architecture for Imagery Intelligence (IMINT), Joint Airborne SIGINT Architecture (JASA) for Signals Intelligence (SIGINT), and Joint Airborne Measurement and Signature Intelligence (MASINT) Architecture (JAMA) for MASINT, and all-source analyses to Combat Air Forces and Combatant Commanders. The Air Force has been charged by DoD with developing, upgrading and managing the DCGS Integration Backbone (DIB) for all the Services to provide common DCGS enterprise services and interoperability at the data level. DCGS provides the Air Force ground systems capable of tasking intelligence sensors, and receiving, processing, exploiting, and disseminating data from airborne and national reconnaissance platforms and commercial sources. AF DCGS is a 'system of systems' interconnected by a robust communications structure to provide data sharing capabilities between intelligence collectors, exploiters, producers, disseminators, and users. AF DCGS has multiple core locations: CONUS and OCONUS based. Several other AF DCGS systems are distributed among Air Force operational units at Numbered Air Force and Air National Guard locations, to support Joint Task Force commanders and Air Operations Centers (AOC). The CONUS based systems are capable of reach back operations via data link relay and satellite relay connectivity to forward operating sensors. AF DCGS provides critical data and significant support for Time Sensitive Targeting (TST) operations. This support will be enhanced with the integration of software tools and data interfaces to process and exploit data from new/upgraded sensors, by the demonstration and integration of enhanced fusion/exploitation aid technologies, and by the transformation of AF DCGS to a net centric, service oriented architecture construct. By converting from a stovepipe system of systems to a web based integrated net centric Intelligence, Surveillance, and Reconnaissance (ISR) management capability, AF DCGS will provide the Joint Forces Air Component Commander (JFACC) the capability to: 1) Dynamically visualize and command ISR assets and the information in the AOC 2) Quickly and effectively synchronize AF DCGS ISR operations, collection capabilities, and information with the AOC's combat objectives to improve the TST process and reduce timelines. Using the DIB, AF DCGS modernization will transform AF DCGS from its existing proprietary system to a net centric service oriented architecture. This modernization effort, implemented on the fielded baseline, will deliver a net centric DCGS capability for the Air Force. AF DCGS will modernize through sustainment by integrating the necessary technologies and tools to provide increased capabilities and meet emerging and urgent user operational needs. These efforts will also integrate commercial and government fact-of-life version upgrades to provide current technologies and achieve necessary application and services. The next series of upgrades will meet the operational need to integrate new and/or improved sensor capabilities and enhance interoperability by migrating to a service oriented architecture and improving data sharing ability in compliance with DoD direction. AF DCGS will continue to modernize its network management and interface capabilities by upgrading and migrating its network to a standardized interface configuration which is easy to expand and adapt to new technologies while growing capacity requirements. Efforts will also focus on network management systems and the ability to manage critical bandwidths to meet operational surges and distributed ops requirements. The DCGS-I Testbed is an integration and test environment, which is used by the Services and Agency program offices to conduct integration of DCGS components and test interoperability interfaces with new sensors, applications, and net centric

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
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operations. This testbed also supports the integration and testing of DoD DCGS components prior to introduction into the operational environment. Upgrades to the DCGS-I Testbed will ensure it maintains current with DCGS standards and architecture. AF DCGS participates in the development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, allied, and coalition interoperability. This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Capabilities Upgrade ***Description:*** Integrate new/improved sensors and increase capacity and data availability. ***FY 2010 Accomplishments:*** Continue development efforts to meet operational need to integrate new and improved sensors, increase capacity and data availability, and comply with DoD direction to improve interoperability through migration to a service oriented architecture construct. ***FY 2011 Plans:*** Continue development efforts to meet operational need to integrate new and improved sensors, increase capacity and data availability, and comply with DoD direction to improve interoperability through migration to a service oriented architecture construct. ***FY 2012 Base Plans:*** Continue development efforts to meet operational need to integrate new and improved sensors, increase capacity and data availability, and comply with DoD direction to improve interoperability through migration to a service oriented architecture construct. ***FY 2012 OCO Plans:***	49.968	63.351	37.912	-	37.912
Title: DCGS Integration Backbone (DIB) ***Description:*** Upgrade, improve and manage the DCGS Integration Backbone (DIB). ***FY 2010 Accomplishments:*** Upgrade, improve and manage the DIB. ***FY 2011 Plans:*** Upgrade, improve and manage the DIB. ***FY 2012 Base Plans:***	7.800	7.100	7.170	-	7.170

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Upgrade, improve and manage the DIB. ***FY 2012 OCO Plans:***					
Title: Network Communications ***Description:*** Continue upgrade of AF DCGS communications network. ***FY 2010 Accomplishments:*** Continue upgrade of AF DCGS communications network. ***FY 2011 Plans:*** Continue upgrade of AF DCGS communications network. ***FY 2012 Base Plans:*** Continue upgrade of AF DCGS communications network. ***FY 2012 OCO Plans:***	2.400	2.500	2.500	-	2.500
Title: DCGS Enterprise ***Description:*** Continue to evolve DCGS architectures and standards and manage DCGS IPT effort for USD(I) ***FY 2010 Accomplishments:*** Continue evolving DCGS architectures and standards for commonality and interoperability across intelligence disciplines to include NATO interoperability and management of DCGS IPT effort for USD(I) ***FY 2011 Plans:*** Continue evolving DCGS architectures and standards for commonality and interoperability across intelligence disciplines to include NATO interoperability and management of DCGS IPT effort for USD(I) ***FY 2012 Base Plans:*** Continue evolving DCGS architectures and standards for commonality and interoperability across intelligence disciplines to include NATO interoperability and management of DCGS IPT effort for USD(I) ***FY 2012 OCO Plans:***	2.888	2.644	2.552	-	2.552
Title: DCGS-I Testbed ***Description:*** Continue DCGS-I Testbed development and upgrades.	3.956	4.014	4.111	-	4.111

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
FY 2010 Accomplishments: Continue DCGS-I Testbed development and upgrades. ***FY 2011 Plans:*** Continue DCGS-I Testbed development and upgrades. ***FY 2012 Base Plans:*** Continue DCGS-I Testbed development and upgrades. ***FY 2012 OCO Plans:***					
Title: Commecial Imagery ***Description:*** Continue to integrate commercial imagery capability into AF DCGS. ***FY 2010 Accomplishments:*** Continue commercial imagery integration. ***FY 2011 Plans:*** Continue commercial imagery integration. ***FY 2012 Base Plans:*** Continue commercial imagery integration. ***FY 2012 OCO Plans:***	2.900	2.900	2.970	-	2.970
Accomplishments/Planned Programs Subtotals	69.912	82.509	57.215	-	57.215

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• PE 0305208F: *Distributed Common Ground System OPAF*	376.862	271.015	212.146	0.000	212.146	167.265	161.562	206.480	162.937	Continuing	Continuing
	630.870	357.067	493.029	0.000	493.029	407.475	450.231	455.029	464.489	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305208F: *Distributed Common Ground Systems*	PROJECT 674826: *Common Imagery Ground / Surface Systems*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• PE 0305208F (1): *Distibuted Common Ground System O&M*											

D. Acquisition Strategy

The Air Force has changed the AF DCGS acquisition strategy from a single block upgrade to incremental modifications during sustainment integrating mature advanced technologies and multi-intelligence exploitation tools while meeting emerging operational requirements and integrating new/upgraded sensors.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force		DATE: February 2011
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Modernization/modification efforts and integration of new sensors and operational capabilities	C/Various	Various:Various,	49.968	63.351	Oct 2010	37.912	Oct 2011	-		37.912	Continuing	Continuing	TBD
Network Communications Upgrade	C/Various	Various:Various,	2.400	2.500	May 2011	2.500	May 2012	-		2.500	Continuing	Continuing	TBD
DCGS IPT for USD(I)	C/Various	Science Applications Int'l:Mclean, VA	2.888	2.644	Mar 2011	2.552	Mar 2012	-		2.552	Continuing	Continuing	TBD
Testbed Modernization and Licenses	C/Various	Various:Various,	3.956	4.014	Mar 2011	4.111	Mar 2012	-		4.111	Continuing	Continuing	TBD
DIB Management, Migration & Interoperability	C/Various	Various:Various,	7.800	7.100	Feb 2011	7.170	Feb 2012	-		7.170	Continuing	Continuing	TBD
Commercial Satellite Imagery	C/Various	AR Gov't Systems Group:Thousand Oaks, CA	2.900	2.900	Jan 2011	2.970	Jan 2012	-		2.970	0.000	8.770	0.000
		Subtotal	69.912	82.509		57.215		-		57.215			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-	0.000	0.000	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305208F: *Distributed Common Ground Systems*	PROJECT 674826: *Common Imagery Ground / Surface Systems*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-	0.000	0.000	0.000

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	69.912	82.509		57.215		-		57.215			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0305208F: *Distributed Common Ground Systems*	**PROJECT** 674826: *Common Imagery Ground / Surface Systems*

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0305208F: *Distributed Common Ground Systems*	**PROJECT** 674826: *Common Imagery Ground / Surface Systems*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
AF DCGS Modernization: Emerging sensor integration and Combat Support modifications	1	2010	4	2016
Network Communications upgrades	1	2010	4	2016
DIB Version Release (3.0)	4	2011	4	2011

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305208F: *Distributed Common Ground Systems*	PROJECT 675265: *Common Imagery Processor (CIP)*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675265: *Common Imagery Processor (CIP)*	12.147	10.889	10.709	-	10.709	10.427	10.664	10.851	11.252	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Common Imagery Processor (CIP) is a major interoperability initiative to develop a common sensor processing element within DCGS-Imagery architecture. The function of the CIP is to accept airborne imagery data, process it into an exploitable image, and output the image to other elements within DCGS-I. Efforts are underway to augment the CIP baseline to process data from upgraded/new sensors.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Common Imagery Processor	12.147	10.889	10.709	-	10.709
Description: Continue to develop the CIP to keep pace with growing sensor baseline. (Baseline includes Global Hawk, F/A-18, and U-2 sensors). ***FY 2010 Accomplishments:*** Continue to evolve the CIP and its associated architecture to keep pace with growing sensor baseline to include new and upgraded sensors. Continue to investigate and implement advanced processing tools. ***FY 2011 Plans:*** Continue to evolve the CIP and its associated architecture to keep pace with growing sensor baseline to include new and upgraded sensors. Continue to investigate and implement advanced processing tools. ***FY 2012 Base Plans:*** Continue to evolve the CIP and its associated architecture to keep pace with growing sensor baseline to include new and upgraded sensors. Continue to investigate and implement advanced processing tools. ***FY 2012 OCO Plans:***					
Accomplishments/Planned Programs Subtotals	12.147	10.889	10.709	-	10.709

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0305208F: *Distributed Common Ground Systems*	**PROJECT** 675265: *Common Imagery Processor (CIP)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

For the CIP, the Air Force uses an evolutionary acquisition approach with blocks (increments) and spirals to develop, field, and upgrade the system and structure contracts for the improved capabilities through full and open competition to the maximum extent possible.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305208F: *Distributed Common Ground Systems*	PROJECT 675265: *Common Imagery Processor (CIP)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CIP Software Development	C/CPFF	Northrop Grumman:Baltimore, MD	11.647	10.389	Oct 2010	10.209	Oct 2011	-		10.209	Continuing	Continuing	TBD
		Subtotal	11.647	10.389		10.209		-		10.209			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ISR&SOF Directorate	C/Various	ASC/WI:Wright-Patterson AFB, OH	0.500	0.500	Dec 2010	0.500	Dec 2011	-		0.500	Continuing	Continuing	TBD
		Subtotal	0.500	0.500		0.500		-		0.500			

	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	12.147	10.889		10.709		-		10.709			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0305208F: *Distributed Common Ground Systems*	**PROJECT** 675265: *Common Imagery Processor (CIP)*

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0305208F: *Distributed Common Ground Systems*	**PROJECT** 675265: *Common Imagery Processor (CIP)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
CIP 8.0 Software Release	2	2010	2	2010
CIP 8.1 Software Release	4	2010	4	2010
CIP 9.0 Software Release	1	2011	1	2011
CIP 9.1 Software Release	3	2011	3	2011
CIP Software Release 1 FY12	1	2012	1	2012
CIP Software Release 2 FY12	3	2012	3	2012

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305208F: *Distributed Common Ground Systems*	PROJECT 676025: *Data Compression*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
676025: *Data Compression*	-	-	22.800	-	22.800	30.244	9.685	3.190	1.450	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This initiative will provide the warfighter a capability to efficiently compress and decompress airborne ISR sensor data and transmit real/near-real time over existing data/communications links to tactical users. The program will develop and test model-based compression algorithms and build sensor specific circuit boards for on-board compression of ISR sensor data. Correspondingly, the program develops compression/decompression capabilities for Remotely Piloted Aircraft (RPA) ground stations and DCGS.

Outputs will meet standard certification for use within the DoD Imagery Intelligence (IMINT)/Measurement and Signatures (MASINT) architecture.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Data Compression	-	-	22.800	-	22.800
Description: Develop data compression/decompression capabilities for Global Hawk Complex Synthetic Aperture Radar (SAR) data to facilitate real/near-real communications to a ground station. Investigate application of model-based compression to other DoD IMINT/MASINT sensor data (i.e., detected SAR, GMTI, Spectral, EO/IR, LIDAR, Video) and ground architecture.					
FY 2010 Accomplishments:					
FY 2011 Plans:					
FY 2012 Base Plans: Develop, test and implement new data compression techniques to enable new and emerging unencrypted/ uncompressed airborne ISR platforms/sensors to off-load airborne data through band-width limited commercial SATCOM or Wideband Global Satellite (WGS).					
FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	-	-	22.800	-	22.800

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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

The Data Compression acquisition approach will be to design and develop compression technology hardware and software components, interfaces and standards for various ISR platforms and ground stations utilizing existing contracts along with full and open competition where appropriate.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305208F: *Distributed Common Ground Systems*	PROJECT 676025: *Data Compression*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Not specified.	TBD	TBD:TBD,	-	-		21.300	Feb 2012	-		21.300	Continuing	Continuing	TBD
		Subtotal	-	-		21.300		-		21.300			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Not specified.	TBD	TBD:TBD,	-	-		1.500	Nov 2011	-		1.500	Continuing	Continuing	TBD
		Subtotal	-	-		1.500		-		1.500			

	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		22.800		-		22.800			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0305208F: *Distributed Common Ground Systems*	**PROJECT** 676025: *Data Compression*

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0305208F: *Distributed Common Ground Systems*	**PROJECT** 676025: *Data Compression*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Compression/Module Development	1	2012	4	2015
Test and Evaluation	1	2014	2	2016
Standard Compliance Implementation	1	2015	4	2016