Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force											Date: March 2014	
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0605433F / *WIDEBAND GLOBAL SATCOM (SPACE)*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	-	12.489	31.425	-	31.425	41.615	37.727	18.275	18.624	Continuing	Continuing
657102: *Command and Control Sys-Consolidated (CCS-C)*	-	-	12.489	16.425	-	16.425	16.615	17.727	18.275	18.624	Continuing	Continuing
657107: *WGS Space Systems Resiliency Upgrade*	-	-	-	15.000	-	15.000	25.000	20.000	-	-	-	60.000

The FY 2015 OCO Request will be submitted at a later date.

Note

Project 657107, WGS Space Systems Resiliency Upgrade, is a FY15 New Start.

In FY2014, Project 657102, Command and Control System - Consolidated (CCS-C), efforts were transferred from 0603854F, Wideband Global SATCOM (Space), Project 644870, CCS-C, in order to transition to Budget Activity 5.

A. Mission Description and Budget Item Justification

The Wideband Global SATCOM (WGS) System provides DoD users with high data rate military satellite communications (MILSATCOM) services in accordance with the Joint Space Management-approved MILSATCOM architecture (Aug 96), the Joint Requirements Oversight Council (JROC)-approved MILSATCOM Capstone Requirements Document (Oct 97), and the JROC-approved WGS Operational Requirements Document (May 00). Dual-frequency WGS satellites augment, then replace the DoD's Defense Satellite Communications System (DSCS) X-band service and augment one-way Global Broadcast Service Ka-band capabilities. In addition, WGS provides a new high capacity two-way Ka-band service.

All WGS Block I (Satellites 1-3) and Block II (Satellites 4-6) have been launched and are operational. With the operation of WGS-5, the constellation has global coverage and Full Operational Capability (FOC) in March 2014. The FY15 Project 657107, WGS Space Systems Resiliency Upgrade, is a new start and will be an Acquisition Category III (ACAT III) effort. The WGS resiliency upgrade will enable the WGS system to both locate and neutralize ground-based jamming threats.

The MILSATCOM Command and Control System-Consolidated (CCS-C) system provides integrated launch and on-orbit command and control (C2) functionality, and backup operations at Schriever AFB and Vandenberg AFB, for MILSATCOM satellites as the legacy capability provided by the Air Force Satellite Control Network (PE 0305110F) has phased out according to plan. CCS-C uses modified commercial off the shelf hardware/software to control emerging and legacy MILSATCOM systems including Milstar, DSCS, WGS and Advanced Extremely High Frequency (AEHF) satellites.

The CCS-C project 657102 funds system architecture evolution to provide increased performance for additional satellites and to comply with DoD, Air Force, and AFSPC-directed standards for Information Assurance, Satellite Control Standardization, and Net-Readiness. This continuing effort was previously funded in the FY14PB

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force	Date: March 2014
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0605433F / *WIDEBAND GLOBAL SATCOM (SPACE)*

and prior as an ACAT II program. With the 10 October 2013 FOC declaration, the program has transitioned to an ACAT III beginning FY2014. The WGS and AEHF procurement program elements fund the mission unique software and databases for the WGS Block II Follow-On satellites and the AEHF 4-6 satellites, respectively.

BA-5 - This program is in Budget Activity 5, System Development and Demonstration (SDD) because it is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	-	13.948	16.817	-	16.817
Current President's Budget	-	12.489	31.425	-	31.425
Total Adjustments	-	-1.459	14.608	-	14.608
• Congressional General Reductions	-	-0.064			
• Congressional Directed Reductions	-	-1.395			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	14.608	-	14.608

Change Summary Explanation

FY14: -$1.395M Congressional Directed Reduction, program decrease

FY15: +$15.0M for the WGS space systems resiliency upgrade, -$0.4M inflation adjustment

Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force			Date: March 2014
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0605433F / *WIDEBAND GLOBAL SATCOM (SPACE)*	Project (Number/Name) 657102 / *Command and Control Sys-Consolidated (CCS-C)*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
657102: *Command and Control Sys-Consolidated (CCS-C)*	-	-	12.489	16.425	-	16.425	16.615	17.727	18.275	18.624	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Military Satellite Communications (MILSATCOM) Command and Control System-Consolidated (CCS-C) system provides integrated launch and on-orbit command and control (C2) functionality, and backup operations at Schriever AFB and Vandenberg AFB, for MILSATCOM satellites as the legacy capability provided by the Air Force Satellite Control Network (PE 0305110F) has phased out according to plan. CCS-C uses modified commercial off the shelf hardware/software to control emerging and legacy MILSATCOM systems including Milstar, Defense Satellite Communications System (DSCS), Wideband Global SATCOM (WGS) and Advanced Extremely High Frequency (AEHF) satellites.

The CCS-C project 657102 funds system architecture evolution to provide increased performance for additional satellites and to comply with DoD, Air Force, and AFSPC-directed standards for Information Assurance, Satellite Control Standardization, and Net-Readiness. This continuing effort was previously funded in the FY14PB and prior as an Acquisition Category II (ACAT II) program. With the 10 October 2013 Final Operational Capability (FOC) declaration, the program has transitioned to an ACAT III beginning FY2014. The WGS and AEHF procurement program elements fund the mission unique software and databases for the WGS Block II Follow-On satellites and the AEHF 4-6 satellites, respectively.

BA-5 - This program is in Budget Activity 5, System Development and Demonstration (SDD) because it is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: CCS-C development	-	12.489	16.425
Description: Develop system architecture to provide enhanced C2 of MILSATCOM satellites.			
FY 2013 Accomplishments: Not applicable.			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force		Date: March 2014
Appropriation/Budget Activity 3600 / 5	**R-1 Program Element (Number/Name)** PE 0605433F / *WIDEBAND GLOBAL SATCOM (SPACE)*	**Project (Number/Name)** 657102 / *Command and Control Sys-Consolidated (CCS-C)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Funds the architecture evolution prototype for risk reduction, addition of new cross-domain capability, enhancement of Information Assurance posture, integration and tests of upgraded ground based cryptologic equipment, and initiation of architecture changes to increase WGS capacity and reduce system downtime. ***FY 2015 Plans:*** Funds architecture evolution prototype for risk reduction, addition of new cross-domain capability, enhancement of Information Assurance posture, integration and tests of upgraded ground based cryptologic equipment, and continues architecture changes to increase WGS capacity and reduce system downtime.			
Accomplishments/Planned Programs Subtotals	-	12.489	16.425

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• OPAF: BA03: Line Item # 836780: *Milsatcom Space*	0.259	0.261	0.265	-	0.265	0.271	0.276	0.280	0.285	Continuing	Continuing
• MPAF: BA05: Line Item # ADV555: *Advanced EHF*	-	2.350	3.670	-	3.670	1.890	2.338	-	-	-	10.248
• MPAF: BA05: Line Item # GAP000: *Wideband Global System Procurement*	1.339	-	5.609	-	5.609	2.083	2.083	-	-	-	11.114
• RDT&E: BA04: PE 0603854F: *Wideband Global SATCOM RDT&E (Space)*	10.438	-	-	-	-	-	-	-	-	-	10.438

Remarks

D. Acquisition Strategy

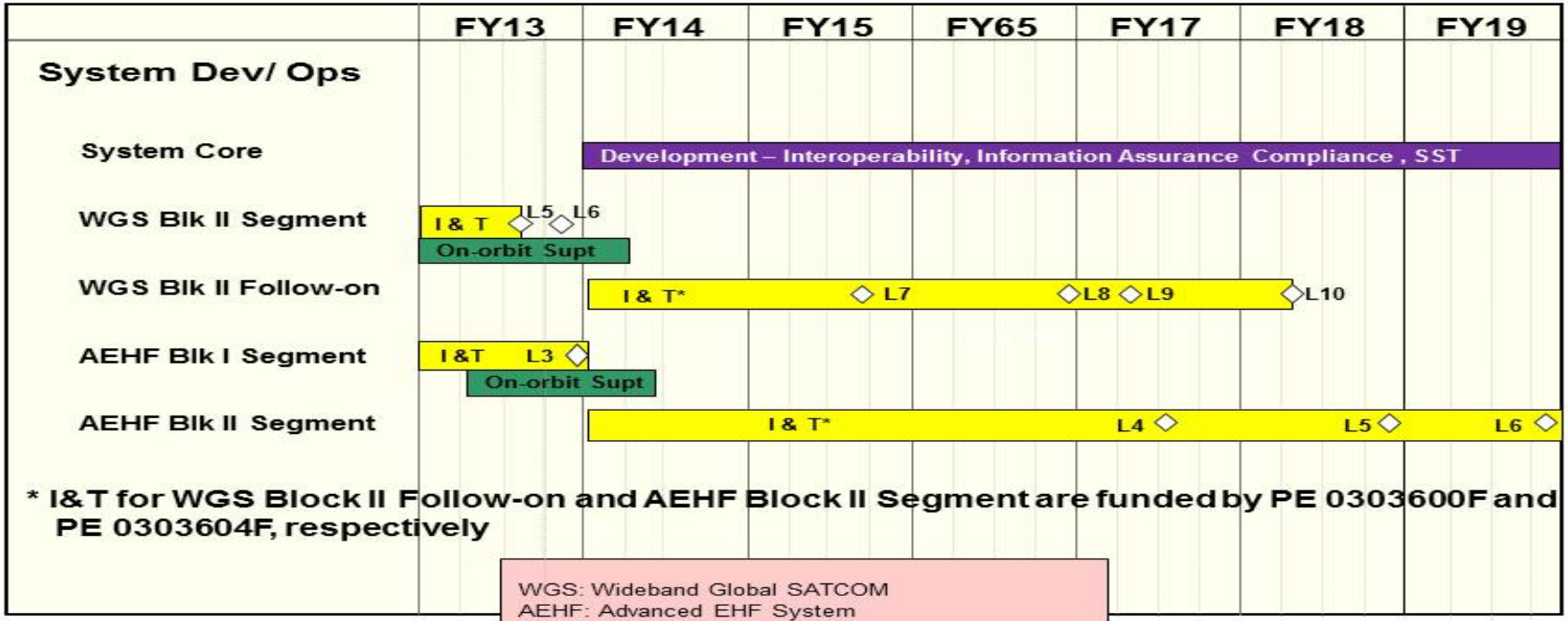
Competitive contract was awarded in November 2012 and began performance in January 2013. The CCS-C Production and Sustainment Contract (CPASC) includes effort to increase the capability of the CCS-C system to provide ongoing C2, launch readiness support, and anomaly resolution for MILSATCOM satellite families.

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-4, RDT&E Schedule Profile: PB 2015 Air Force		Date: March 2014
Appropriation/Budget Activity 3600 / 5	**R-1 Program Element (Number/Name)** PE 0605433F / *WIDEBAND GLOBAL SATCOM (SPACE)*	**Project (Number/Name)** 657102 / *Command and Control Sys-Consolidated (CCS-C)*

These efforts are funded in PE 0605433F, Project 657102 beginning FY14. Prior to FY14 these efforts are funded in PE 0603854F, Project 644870.



Note: All CCS-C WGS-6 effort is funded by Australia

Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force			Date: March 2014
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0605433F / *WIDEBAND GLOBAL SATCOM (SPACE)*	Project (Number/Name) 657107 / *WGS Space Systems Resiliency Upgrade*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
657107: *WGS Space Systems Resiliency Upgrade*	-	-	-	15.000	-	15.000	25.000	20.000	-	-	-	60.000
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

This effort is a FY15 New Start

A. Mission Description and Budget Item Justification

The Wideband Global SATCOM (WGS) System provides the DoD with high data rate military satellite communications (MILSATCOM) services in accordance with the Joint Space Management Board-approved MILSATCOM architecture (August 1996), the Joint Requirements Oversight Council (JROC)-approved MILSATCOM Capstone Requirements Document (October 1997), and JROC-approved WGS Operational Requirements Document (May 2000). This program was originally conceived to augment the near-term "bandwidth gap" in warfighter communications needs. Dual-frequency WGS satellites augment, then replace the DoD's Defense Satellite Communications System X-band service and augment one-way Global Broadcast Service Ka-band capabilities. In addition, WGS provides a high capacity two-way Ka-band service.

All WGS Block I (Satellites 1-3) and Block II (Satellites 4-6) have been launched and are operational. With the operation of WGS-5, the constellation has global coverage and Full Operational Capability (FOC) in March 2014. The FY15 Project 657107, WGS Space Systems Resiliency Upgrade, is a new start and will be an Acquisition Category III (ACAT III) effort. The WGS resiliency upgrade will enable the WGS system to both locate and neutralize ground-based jamming threats.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: WGS Upgrade	-	-	15.000
Description: Upgrade WGS system to both locate and neutralize ground-based jamming threats.			
FY 2013 Accomplishments: Not Applicable.			
FY 2014 Plans: Not Applicable.			
FY 2015 Plans: Funds upgrades to Wideband Global SATCOM (WGS) space and ground			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force		Date: March 2014
Appropriation/Budget Activity 3600 / 5	**R-1 Program Element (Number/Name)** PE 0605433F / *WIDEBAND GLOBAL SATCOM (SPACE)*	**Project (Number/Name)** 657107 / *WGS Space Systems Resiliency Upgrade*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
software/hardware to implement constellation-wide changes that will enable the WGS system to both locate and neutralize ground-based jamming threats.			
Accomplishments/Planned Programs Subtotals	-	-	15.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• MPAF: BA05: Line Item # GAP000: *Wideband Global System Procurement*	36.786	33.998	38.971	-	38.971	53.864	70.973	48.526	11.318	-	3,258.596

Remarks

D. Acquisition Strategy

The Wideband Global SATCOM (WGS) Space Systems Resiliency Upgrade will be accomplished by modifying the WGS Block II Follow-On (B2FO) Firm Fixed Price (FFP) contract definitized in August 2010. The B2FO contract currently provides development, production, and deployment of WGS satellites 7 and beyond.

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-4, RDT&E Schedule Profile: PB 2015 Air Force		Date: March 2014
Appropriation/Budget Activity 3600 / 5	**R-1 Program Element (Number/Name)** PE 0605433F / *WIDEBAND GLOBAL SATCOM (SPACE)*	**Project (Number/Name)** 657107 / *WGS Space Systems Resiliency Upgrade*