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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				PE 0305220F: <i>GLOBAL HAWK DEVELOPMENT/FIELDING</i>							
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	309.158	251.318	423.462	-	423.462	365.137	447.920	571.226	505.190	Continuing	Continuing
675144: <i>Global Hawk</i>	237.257	224.091	300.269	-	300.269	264.253	255.547	307.931	307.267	Continuing	Continuing
676001: <i>NATO AGS</i>	-	-	82.906	-	82.906	83.210	180.795	251.423	185.915	Continuing	Continuing
67RTIP: <i>MP-RTIP</i>	71.901	27.227	40.287	-	40.287	17.674	11.578	11.872	12.008	Continuing	Continuing

Note

NOTES:

1. This program element funds three related Air Force efforts sharing the Global Hawk platform in common: Global Hawk program, the Multi-Platform Radar Technology Insertion Program (MP-RTIP), and U.S participation and support of the North Atlantic Treaty Organization (NATO) Alliance Ground Surveillance (AGS) program.
2. The program has been funded to latest cost estimate, less efficiencies. The reduction for efficiencies are not intended to impact program content.
3. In FY 2012, P018, NATO AGS efforts transfer from PE 1001018D8Z, NATO AGS, to PE 0305220F, Project 676001, NATO AGS, in order to transfer control of this effort from OSD to the USAF.

A. Mission Description and Budget Item Justification

Totals include funding for PRCP Program Number (PNO) 252, Global Hawk.

Totals include funding for PRCP Program Number (PNO) 293, MP-RTIP.

The program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$3.651M in FY12.

GLOBAL HAWK

The Global Hawk Unmanned Aircraft System (UAS) provides high altitude, deep look, long endurance intelligence, surveillance, and reconnaissance (ISR) capability that compliments space and other airborne collectors during peacetime, crisis, and war-fighting scenarios.

This funding supports the development of Global Hawk aircraft, payloads and ground and support segments. The RQ-4B RPA is designed to employ 3000 pounds of payload and enable multi-intelligence (multi-INT) collecting. The RQ-4B has three configurations: Block 20, Block 30, and Block 40. The Block 20 employs upgraded SAR and EO/IR sensors known as the Enhanced ISS (EISS) in imagery intelligence (IMINT) - only configuration. The Block 30 employs the same EISS sensors as the

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Block 20. The Block 30 also integrates a wide spectrum signals intelligence (SIGINT) sensor - the Airborne Signals Intelligence Program (ASIP), used simultaneously to create a multi-INT platform. The Block 40 will only integrate the Multi-Platform Radar Technology Insertion Program (MP-RTIP) radar sensor. The ground segment includes the mission control element (MCE) and the launch and recovery element (LRE). The support segment includes aerospace ground equipment, tech orders, spares, support equipment, and training to enable operation of the Global Hawk System. When judged feasible and affordable, this program will participate in the development, testing, and implementation of international standards (to include NATO standardization agreements) to enhance joint, allied, and coalition interoperability. Likewise, when feasible and affordable, studies and activities may be initiated to explore the utility of incorporating the Common Mission Control Center UAS Command and Control Standards Initiative (UCI) into Global Hawk. MP-RTIP The MP-RTIP was established to develop a family of modular, scalable next generation sensors for multiple platforms to support network centric operations with integrated Command and Control Intelligence, Surveillance and Reconnaissance (C2ISR) capability. MP-RTIP provides the Global Hawk Block 40 aircraft advanced synthetic aperture radar (SAR) and ground moving target indicator (GMTI) sensor capabilities. Future MP-RTIP studies/development insertion includes concept exploration, program definition/risk reduction, and sensor technology insertion/development. FY2012 funding continues improvement and implementation of C2ISR capabilities, enabling the joint air and missile defense architecture, joint decisive operations, and the AEF Task Force CONOPS. It also conducts limited risk reduction activities on Battle Management Command and Control (BMC2) Mission Execution and BMC2 Kill Chain, and MP-RTIP Wide Area Surveillance (WAS) Radar Hardware Verification. NATO AGS In FY2012, OSD transfers the NATO AGS project to the USAF for management and execution. These funds represent the US share of the cost for NATO to develop an air-to-ground surveillance capability based on the Global Hawk Block 40 aircraft configuration. The NATO AGS project funds the U.S. support activity and the U.S. share of the cost for NATO to acquire a ground surveillance capability similar to what the NATO owned and operated Airborne Warning and Control System (AWACS) provides for air surveillance. U.S. participation was ratified by SECDEF signature of the NATO AGS Program Memorandum of Understanding (PMOU) in June 2009. The PMOU went into effect in Sept 2009. As the alliance implements this new core capability for critically short support to airborne surveillance, this program will mitigate requests for US forces to support these demands. The NATO AGS Program includes an air segment consisting of Global Hawk Block 40, its planning and control capability, and the MP-RTIP radar; a ground segment for data exploitation and distribution; establishment and operation of a management organization; development of operations and support concepts; and definition and establishment of an initial support capability. The program is composed of: design, development and demonstration, as well as production and initial in-service support		

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK DEVELOPMENT/FIELDING</i>
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(ISS). Operations and continuing ISS will be funded through a NATO Military Commanders' Capability Package funded within the NATO Security Investment Program (NSIP).

Resources include direct funding of US proportional shares to the NATO AGS Management Agency, which is the NATO acquisition authority, US development activity to support international acquisition of a US system, foreign military sales of US-unique materiel, cooperative program activities, and Advisory and Assistance Services.

Activities also include studies and analysis supporting current and future program planning and project execution.

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	317.268	251.318	238.447	-	238.447
Current President's Budget	309.158	251.318	423.462	-	423.462
Total Adjustments	-8.110	-	185.015	-	185.015
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-1.324	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-6.386	-			
• SBIR/STTR Transfer	-0.400	-			
• Other Adjustments	-	-	185.015	-	185.015

Change Summary Explanation

FY2012 increases in base are for ramp-up or initiation of Ground Station Rearchitecture (GSRA), Block 20/30 Recorder, Communications Rearchitecture, Communications Diminishing Manufacturing Sources, Sense and Avoid integration, RQ-4 Reliability and Maintainability(R&M) and Block 40 RTIP mode development.

Also, for FY2012, funds previously located in PE 1001018D8Z, NATO AGS, are now located in project code 676001 of PE 0305220F.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>				PROJECT 675144: <i>Global Hawk</i>			
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
675144: <i>Global Hawk</i>	237.257	224.091	300.269	-	300.269	264.253	255.547	307.931	307.267	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
Note The program has been funded to latest cost estimate, less efficiencies. The reduction for efficiencies are not intended to impact program content. A. Mission Description and Budget Item Justification Totals include funding for PRCP Program Number (PNO) 252, Global Hawk. The program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$3.199M in FY12. The Global Hawk Unmanned Aircraft System (UAS) provides high altitude, deep look, long endurance intelligence, surveillance, and reconnaissance (ISR) capability that compliments space and other airborne collectors during peacetime, crisis, and war-fighting scenarios. RDT&E funding in this BPAC supports design, development, integration, and testing of items needed to replace Diminishing Materiel Source (DMS) components. This funding is also used to revise Global Hawk capabilities, particularly ground station and communications capabilities, in order to meet required Key Performance Parameters (KPPs) for Blocks 30 and 40. Without this effort, Global Hawk would not meet required KPPs and would enter a condition of deteriorating capability and inability to meet mission needs beginning in FY15. When judged feasible and affordable, this program will participate in the development, testing, and implementation of international standards (to include NATO standardization agreements) to enhance joint, allied, and coalition interoperability. Activities will also include studies and analysis to support both current program planning and execution and future program planning which may also include wideband SATCOM studies and integration. Additionally, funds may be used when feasible and affordable, to initiate studies and activities to explore the utility of incorporating the Common Mission Control Center UAS Command and Control Standards Initiative (UCI) into the Global Hawk system. Activities also include studies and analysis supporting current and future program planning and project execution. 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.											

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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 0305220F: GLOBAL HAWK DEVELOPMENT/FIELDING	PROJECT 675144: Global Hawk				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Global Hawk Development and Demonstration (SDD) Description: Global Hawk Development and Demonstration (SDD) FY 2010 Accomplishments: Continued Aircraft/Comm system modernization. Development and integration of sensors, payload integration, test and training capability, Auto-takeoff and Landing, encrypted data link and technical data. Completed Block 20/30 IOT&E. FY 2011 Plans: Continuing Aircraft/Comm system modernization, BAMS Synergies, and Anti-icing processes and proceeedures. Continuing testing of software blocks 3.0 and 3.1. Finishing/addressing deficiencies identified in IOT&E report. FY 2012 Base Plans: Will continue Aircraft/Comm system modernization. Will continue development of test and training capability, data compression, net ready program, and encrypted data link. Will continue BAMS Synergy development efforts. Begin Sense and Avoid integration. Further anti-icing development. Will definitize efforts in support of Block 40 IOT&E flight test and sensor integration. FY 2012 OCO Plans:		211.053	179.625	252.933	-	252.933
Title: Ground Segment Description: Ground Segment FY 2010 Accomplishments: Conducted a successful Ground Station Rearchitecture Systems Requirements Review (SRR). Conducted BAMS synergy studies. FY 2011 Plans: Continuing upgrade of current ground station with the beginning of Ground station Rearchitecture Phase 1. Developing an improved RPA C2 capability. Introducing BAMS Synergy study recommendations into Ground Station development, including consideration of UCI/UCS standards. FY 2012 Base Plans:		11.153	30.225	35.800	-	35.800

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APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0305220F: GLOBAL HAWK DEVELOPMENT/FIELDING	PROJECT 675144: Global Hawk				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Will continue Ground Station Rearchitecture Phase 1 efforts, including development of new mission and sensor collection planning capabilities. FY 2012 OCO Plans:						
Title: Support Segment Description: Support Segment FY 2010 Accomplishments: Developed and integrated logistics support, including conducting IOT&E of electronic technical orders. FY 2011 Plans: Continuing to develop and integrate logistics support. FY 2012 Base Plans: Will continue to develop and integrate logistics support, including development and delivery of technical data. FY 2012 OCO Plans:		2.387	2.831	2.086	-	2.086
Title: Other Government Costs Description: Other Government Costs FY 2010 Accomplishments: Mission Support FY 2011 Plans: Mission Support FY 2012 Base Plans: Mission Support FY 2012 OCO Plans:		12.664	11.410	9.450	-	9.450
Accomplishments/Planned Programs Subtotals		237.257	224.091	300.269	-	300.269

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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 0305220F: GLOBAL HAWK DEVELOPMENT/FIELDING				PROJECT 675144: Global Hawk			
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 0304260F: Airborne SIGINT Enterprise RDT&E	22.596	15.083	3.608	0.000	3.608	0.996	4.066	5.968	7.063	Continuing	Continuing
• PE 0305220F: Global Hawk MILCON	31.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PE 0305220F (2): Global Hawk O&M	86.109	178.479	244.798	0.000	244.798	317.963	359.668	343.003	314.241	Continuing	Continuing
• PE 0305220F (3): Global Hawk MILPERS	81.620	101.635	114.765	0.000	114.765	129.905	138.779	142.971	148.393	Continuing	Continuing
• PE 0305220F (4): Global Hawk APAF	800.746	859.244	689.943	0.000	689.943	603.846	551.881	456.596	351.681	Continuing	Continuing
D. Acquisition Strategy											
The Global Hawk program uses an evolutionary acquisition strategy to provide the warfighter with a near-term, combat capability with increased, time-phased capability improvements as technology and risk achieve satisfactory levels. Northrop Grumman Corporation is the prime contractor.											
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.											

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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 0305220F: GLOBAL HAWK DEVELOPMENT/FIELDING				PROJECT 675144: Global Hawk						
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Engineering Manufacturing & Development	SS/CPAF	Northrop Grumman Integrated Systems:San Diego, CA	1,343.797	192.437	Oct 2010	258.448	Jan 2012	-		258.448	Continuing	Continuing	TBD	
Wide Band Comm Studies	Various	TBD:,	-	2.500	Jan 2011	7.500	Jan 2012	-		7.500	0.000	10.000	0.000	
Subtotal			1,343.797	194.937		265.948		-		265.948				
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Contractor Program Support	SS/CPFF	Northrop Grumman Integrated Systems:San Diego, CA	26.310	-	Jan 2011	6.871	Jan 2012	-		6.871	Continuing	Continuing	TBD	
Government Program Support	Various	Various:Various,	30.610	4.108	Dec 2010	3.950	Jan 2012	-		3.950	Continuing	Continuing	TBD	
Subtotal			56.920	4.108		10.821		-		10.821				
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Flight Test & Evaluation	PO	AFFTC:Edwards, AFB,	75.943	17.744	Nov 2010	18.000	Nov 2011	-		18.000	Continuing	Continuing	TBD	
Subtotal			75.943	17.744		18.000		-		18.000				
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
A&AS	Various	Various:Dayton, OH	50.655	7.302	Oct 2010	5.500	Oct 2011	-		5.500	Continuing	Continuing	TBD	
Subtotal			50.655	7.302		5.500		-		5.500				

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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 0305220F: GLOBAL HAWK DEVELOPMENT/FIELDING				PROJECT 675144: Global Hawk						
				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				1,527.315	224.091		300.269		-		300.269			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	PROJECT 675144: <i>Global Hawk</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	PROJECT 675144: <i>Global Hawk</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Block 20/30 DT	1	2010	1	2011
Block 20/30 IOT&E	1	2011	1	2011
Block 20/30 IOT&E Refinement	2	2011	1	2012
IOT&E Report	2	2011	2	2011
Block 30 First Operations	3	2011	3	2011
Block 40 Envelope Expansion Test	1	2010	4	2010
Block 40 Ground Integration and Test	4	2010	2	2011
Block 40 First Sensor Flight	3	2011	3	2011
Block 40 Radar Air Vehicle Integration and Flight Test	3	2011	1	2013
Block 40 System Performance Verification	1	2013	3	2013
Block 40 IOT&E Prep	3	2013	3	2013
Block 40 IOT&E	4	2013	4	2013
GFAFB 1st Ops	1	2014	1	2014
Integrated Functional Capability Deliveries	1	2010	4	2016
Ground Station Rearchitecture Phases 1 and 2	4	2010	4	2016
Communications Station Rearchitecture	1	2012	4	2016
Anti-ice	2	2012	3	2013
Block 20/30 Recorder	3	2012	3	2013
JPEG 2K (data Compression)	2	2013	1	2014
IFF Mode 5	1	2013	3	2014
Sense and Avoid	2	2012	3	2015

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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 0305220F: GLOBAL HAWK DEVELOPMENT/FIELDING				PROJECT 676001: NATO AGS			
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
676001: NATO AGS	-	-	82.906	-	82.906	83.210	180.795	251.423	185.915	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

b. In FY 2012, PR 0305220F, BPAC 676001, NATO AGS, efforts transferred from PE 1001018D8Z, NATO AGS, P018, in order to transfer control of this effort from OSD to the USAF. It is intended to transfer these efforts to a new PE in FY13.

A. Mission Description and Budget Item Justification

The Alliance Ground Surveillance (AGS) system will be a NATO-owned and operated airborne ground surveillance capability that provides continuous, wide area surveillance information in all weather conditions for use at the strategic, operational and tactical levels of command. Interoperable with other national assets, AGS will provide NATO decision makers with near real time, continuous information and situational awareness concerning friendly, neutral, and opposing ground forces to support mission planning and execution to include force protection and targeting. The NATO Staff Requirements (NSR), serving as the basis for the AGS acquisition was approved in 1997. After a series of studies, including options for a mixed fleet composed of manned and unmanned platforms, a decision was reached to pursue the acquisition of a UAV-only capability based on an off-the-shelf (OTS) Global Hawk (GH) Block 40 equipped with the U.S. Multi-Platform Radar Technology Insertion Program (MP-RTIP) sensor. The AGS system will include six (6) OTS GH, ground-based aircraft control equipment, and fixed and deployable data exploitation elements.

In September 2009, fifteen nations, including the United States, signed the Program Memorandum of Understanding (PMOU) financially committing each participant to the procurement and delivery to the war fighter of the NATO Commander’s number one priority. [note: subsequent to PMOU signature Denmark announced its intention to withdraw from program.]

The Request for Proposal (RFP) was issued to Northrop Grumman International Systems Sector Inc. (NGISSII), Melbourne, the prime contractor in the consortia composed of NG Systems Corp. (USA), EADS (DEU), GDC (CAN), and GAV Selex (ITA). Upon delivery the NATO AGS fleet will operate from its Main Operating Base (MOB) at Sigonella Italy.

This funding is the U.S. cost share for the acquisition of the NATO airborne ground surveillance capability as well as the cost share associated with the initial In-Service Support (ISS).

In-Service Support will be contracted under separate action. It is anticipated that ISS costs will be commonly funded, using the NATO Security Investment Program (NSIP)

Activities also include studies and analysis supporting current and future program planning and project execution.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force							DATE: February 2011					
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>			R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>			PROJECT 676001: <i>NATO AGS</i>						
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: Design/develop NATO AGS							-	-	74.985	-	74.985	
Description: To provide US Government NATO AGS development funding.												
FY 2010 Accomplishments:												
FY 2011 Plans:												
FY 2012 Base Plans: To provide US Government NATO AGS development funding.												
FY 2012 OCO Plans:												
Title: Support the NATO AGS Management Agency (NAGSMA)							-	-	7.921	-	7.921	
Description: Establish and support a program office within NATO for AGS development and initial fielding. Serve as interface and US program office to the prime contractor for NATO AGS capability.												
FY 2010 Accomplishments:												
FY 2011 Plans:												
FY 2012 Base Plans: United States contribution to NATO for AGS development acquisition and initial fielding.												
FY 2012 OCO Plans:												
Accomplishments/Planned Programs Subtotals							-	-	82.906	-	82.906	
C. Other Program Funding Summary (\$ in Millions)												
	<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
•	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 US signed a multi-national Program Memorandum of Understanding (PMOU) committing the US government to NATO-derived cost shares of the AGS prime contract for design, development, demonstration, and initial production of the NATO AGS system. The supporting contract will be fixed price.												

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
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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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force											DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT					
3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				PE 0305220F: GLOBAL HAWK DEVELOPMENT/FIELDING				676001: NATO AGS					
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
NATO AGS PMOU/Prime Contract	Various	Northrop Grumman Corp:Melbourne, FL	-	-		76.710		-		76.710	704.103	780.813	TBD
NATO AGS Mission Security	SS/FFP	Northrop Grumman Corp:Melbourne, FL	-	-		-		-		-	0.000	0.000	0.000
NATO AGS Interoperability	SS/CPAF	US Air Force:Hanscom AFB, MA	-	-		-		-		-	0.000	0.000	0.000
NATO AGS Maritime Modes	SS/CPAF	Northrop Grumman Corp:Melbourne, FL	-	-		-		-		-	0.000	0.000	0.000
Subtotal			-	-		76.710		-		76.710	704.103	780.813	
Remarks													
All data prior to FY12 is reported under PE 1001018D8Z, NATO AGS													
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
NATO AGS Management Support	C/CPFF	TBD:,	-	-		6.196		-		6.196	8.000	14.196	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>				PROJECT 676001: <i>NATO AGS</i>					

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Subtotal			-	-		6.196		-		6.196	8.000	14.196	0.000	

Remarks
All data prior to FY12 is reported under PE 1001018D8Z, NATO AGS

	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	-	-		82.906		-		82.906	712.103	795.009	

Remarks
In FY 2012, P018, NATO AGS, efforts were transferred from PE 1001018D8Z, NATO AGS, to PE 0305220F, project 676001, NATO AGS, in order to transfer control of this effort from OSD to the USAF.

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	PROJECT 676001: <i>NATO AGS</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	PROJECT 676001: <i>NATO AGS</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Contract Award	4	2011	4	2011
Design/Development	4	2011	3	2015
Flight Test	4	2014	1	2015
Aircraft Delivery	3	2015	4	2015

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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 0305220F: GLOBAL HAWK DEVELOPMENT/FIELDING				PROJECT 67RTIP: MP-RTIP			
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
67RTIP: MP-RTIP	71.901	27.227	40.287	-	40.287	17.674	11.578	11.872	12.008	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification											
Total include funding for PRCP Program Number (PNO) 293, MP-RTIP.											
The program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.452M in FY12.											
The Multi Platform-Radar Technology Insertion Program (MP-RTIP) sensor was designed as a family of modular, scalable sensors that provide next generation capabilities to support sustainable network centric operations with integrated Command and Control Intelligence, Surveillance and Reconnaissance (C2ISR) capability. MP-RTIP provides the Global Hawk Block 40 aircraft advanced systematic aperture radar and moving target indicator sensor capabilities.											
This project includes all MP-RTIP design, development, and integration efforts onto the Global Hawk Block 40. Integration activities include platform integration of the MP-RTIP sensor and sustainment support structures including logistics planning support. Future MP-RTIP studies and development insertion includes the implementation of maritime modes, airborne modes, electronic protection, technical refresh, product improvements and other advanced capabilities.											
The Global Hawk Block 40 development schedule was extended in Oct 09, moving IOT&E to FY13. The MP-RTIP program realigned workload under FY10 and 11 funding to accommodate the extension. The FY12 funding request reflects the movement of planned radar software releases and Radar System Level Performance Verification (RSLPV) support activities to FY12. FY2012 funding continues improvement and implementation of MP-RTIP capabilities, enabling the joint air and missile defense architecture, joint decisive operations, and the AEF Task Force CONOPS. It also conducts limited risk reduction activities on Battle Management Command and Control (BMC2) Mission Execution and BMC2 Kill Chain, and MP-RTIP Wide Area Surveillance (WAS) Radar Hardware Verification.											
Activities also include studies and analysis supporting current and future program planning and project execution.											
This program is in Budget Activity 7, Operational System Development. It supports integration and testing of a developed sensor onto an operational platform.											
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Development and integration							60.840	15.267	29.784	-	29.784
Description: MP-RTIP development and integration											

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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 0305220F: GLOBAL HAWK DEVELOPMENT/FIELDING	PROJECT 67RTIP: MP-RTIP				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
FY 2010 Accomplishments: Continue Contractor Development Test and Evaluation (CDT&E) Concurrent Modes and Dedicated Modes Flight Testing on Proteus platform. Continue Functional configuration Audit (FCA). FY 2011 Plans: Initiate MP-RTIP RADAR integration on Global Hawk platform, continue incremental Functional Configuration Audit (FCA). Perform Physical Configuration Audit (PCA). FY 2012 Base Plans: Continue Sensor platform integration of MP-RTIP on Global Hawk (GH) platform for Ground Moving Target Indicator(GMTI)/Synthetic Aperture Radar (SAR)/ Concurrent modes, plan software releases to GH, incremental FCA/PCA. FY 2012 OCO Plans:						
Title: Test & Evaluation Description: MP-RTIP Test & Evaluation FY 2010 Accomplishments: Continue MP-RTIP sensor Test and Evaluation effort on Proteus including but not limited to ground and flight integration of sensor and air vehicle, test force support, range support, interoperability compliance and third-party performance reviews. FY 2011 Plans: Complete Proteus testing. Initiate MP-RTIP sensor Test and Evaluation effort on Global Hawk including but not limited to ground and flight integration of sensor and air vehicle, test force support, range support, interoperability compliance and third-party performance reviews. FY 2012 Base Plans: Continue MP-RTIP sensor Test and Evaluation effort on Global Hawk including but not limited to ground and flight integration of sensor and air vehicle, Radar System Level Performance Verification (RSLPV), test force support, range support, interoperability compliance and third-party performance reviews. FY 2012 OCO Plans:		2.443	2.019	2.000	-	2.000
Title: IRT Study		0.105	0.015	0.005	-	0.005

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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 0305220F: GLOBAL HAWK DEVELOPMENT/FIELDING	PROJECT 67RTIP: MP-RTIP				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Description: Independent Review of total MP-RTIP program FY 2010 Accomplishments: Initiate Independent Review of total MP-RTIP program FY 2011 Plans: Continue Independent Review of total MP-RTIP program FY 2012 Base Plans: Complete Independent Review of total MP-RTIP program FY 2012 OCO Plans:						
Title: Logistics Planning Description: Depot Logistics Planning FY 2010 Accomplishments: Initiate Depot Logistics Planning FY 2011 Plans: Continue Depot Logistics Planning FY 2012 Base Plans: Continue Depot Logistics Planning FY 2012 OCO Plans:		-	1.762	1.503	-	1.503
Title: MP-RTIP government support costs Description: Other Government Costs and Support FY 2010 Accomplishments: Continue MP-RTIP Government Support FY 2011 Plans: Continue MP-RTIP Government Support FY 2012 Base Plans:		8.513	8.164	6.995	-	6.995

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force				DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>		R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>		PROJECT 67RTIP: <i>MP-RTIP</i>	

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continue MP-RTIP Government Support					
<i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	71.901	27.227	40.287	-	40.287

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: <i>None</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy
Continue to fund sole source CPFF with performance incentive fee multi-year development contract to continue integration and testing on Global Hawk Block 40 platform.

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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	PROJECT 67RTIP: <i>MP-RTIP</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MP-RTIP	SS/CPFF	Northrop Grumman Integrated Systems:El Segundo, CA	91.920	15.267	Apr 2011	29.784	Nov 2011	-		29.784	Continuing	Continuing	TBD
Subtotal			91.920	15.267		29.784		-		29.784			

Remarks

FY11 Prime contract: planning to negotiate primarily CPFF with partial performance incentive clause.

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
IRT Study	Various	Various:,	0.105	0.015	Jul 2011	0.005	Jan 2012	-		0.005	0.000	0.125	0.000
Logistics Planning	SS/CPFF	Northrop Grumman Integrated Systems:El Segundo, CA	-	1.762	Jun 2011	1.503	Jun 2012	-		1.503	0.000	3.265	0.000
Subtotal			0.105	1.777		1.508		-		1.508	0.000	3.390	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Joint Test Force, Edward AFB, Joint Interoperability Test Center, Navy, & IV&V	MIPR	Various:Various,	5.808	2.019	Jan 2011	2.000	Dec 2011	-		2.000	Continuing	Continuing	TBD
Subtotal			5.808	2.019		2.000		-		2.000			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force											DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>				PROJECT 67RTIP: <i>MP-RTIP</i>						

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
A&AS	C/Various	Various:Various,	13.047	7.630	Oct 2010	6.510	Oct 2011	-		6.510	Continuing	Continuing	TBD
Other Gov't Support	Various	Various:Boston, MA	1.220	0.534	Nov 2010	0.485	Nov 2011	-		0.485	0.000	2.239	0.000
Subtotal			14.267	8.164		6.995		-		6.995			

	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	112.100	27.227		40.287		-		40.287			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	PROJECT 67RTIP: <i>MP-RTIP</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	PROJECT 67RTIP: <i>MP-RTIP</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
RTIP First Sensor Flight on Global Hawk	3	2011	3	2011
MP-RTIP Integration Flight Test on GH AF-18	1	2011	1	2013
Global Hawk Radar System Level Performance Verification	3	2011	1	2013
MP-RTIP Depot Planning	2	2010	1	2013
Global Hawk Block 40 Initial Operation Test Evaluation	4	2013	4	2013
Functional Configuration Audit	2	2013	4	2013
Global Hawk System Level Performance Verification	2	2013	2	2013
Global Hawk Sustained Ops	3	2013	3	2013
CDT&E Additional Modes	1	2014	4	2016