

UNITED STATES DEPARTMENT OF DEFENSE FISCAL YEAR 2014 BUDGET REQUEST



PROGRAM ACQUISITION COST BY WEAPON SYSTEM

OFFICE OF THE UNDER SECRETARY OF DEFENSE (COMPTROLLER) / CHIEF FINANCIAL OFFICER

APRIL 2013

Major Weapon Systems OVERVIEW

The combined capabilities and performance of U.S. weapons systems are unmatched throughout the world, ensuring that U.S. military forces have the advantage over any adversary. The Fiscal Year (FY) 2014 acquisition funding request for the Department of Defense (DoD) totals \$167.6 billion*, of which \$99.3 billion is for Procurement-funded, and \$67.6 billion is for Research, Development, Test and Evaluation (RDT&E)-funded programs. Of this amount, \$69.4 billion is for programs that have been designated as Major Defense Acquisition Programs (MDAP). This book focuses on the key MDAP programs. To simplify the display of the various weapon systems, this book is organized by the following mission area categories:

*Acquisition total includes National Defense Sealift Fund.

Mission Area Categories

- Aircraft
- Command, Control, Communications, and Computer (C4) Systems
- Ground Programs
- Missile Defense

- Munitions and Missiles
- Shipbuilding and Maritime Systems
- Space Based and Related Systems
- Mission Support
- Science and Technology

FY 2014 Modernization – Base: \$167.6 Billion





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Major Weapon Systems (\$ in Millions)	s Summary	FY 2012	Base	осо	Total Request	FY 2014	Page
Aircraft – loint Service					<u> </u>	-	
MQ-IB/MQ-IC	Predator/Gray Eagle	1,039.1	869.6	-	869.6	662.8	1-2
MQ-9	Reaper	1,076.4	1,040.3	-	1,040.3	506.7	1-3
RQ-4 / MQ-4C	, Global Hawk/Triton/NATO AGS	1,456.7	1,250.9	-	1,250.9	893.8	1-4
RQ-7/RQ-11/ RQ-21	Shadow, Raven, and STUAS	318.7	270.4	7.6	278.0	254.5	1-5
C-130	Hercules	1,363.1	835.1	-	835.1	2,078.4	1-6
F-35	Joint Strike Fighter	9,162.3	9,171.2	-	9,171.2	8,444.7	1-7
JPATS T–6B	Texan II	236.6	286.3	-	286.3	251.7	1-8
V-22	Osprey	2,777.0	1,955.3	-	1,955.3	1,866.8	1-9
Aircraft – US Army (US	SA)					·	
AH-64E	Apache: Remanufacture/New Build	767.3	1,109.4	71.0	1,180.4	884.2	1-10
CH-47	Chinook	1,550.5	1,365.8	231.3	1,597.1	970.4	1-11
UH-72	Lakota Light Utility Helicopter	250.4	272.0	-	272.0	96.2	1-12
UH-60	Black Hawk	1,705.6	1,305.5	-	1,305.5	1,260.1	1-13
Aircraft – US Air Force	(USAF)						
CRH	Combat Rescue Helicopter	70.6	183.8	-	183.8	395.6	1-14
F-22	Raptor	859.6	808.4	-	808.4	745.5	1-15
KC-46A	Tanker	818.9	1,815.6	-	1,815.6	1,558.6	1-16
C-5	Galaxy	1,163.8	1,279.9	-	1,279.9	1,217.8	1-17
F-15	Eagle	447.7	363.7	-	363.7	622.0	1-18
Aircraft – US Navy (US	N)/US Marine Corps (USMC)						
E-2D	Advanced Hawkeye	1,205.9	1,159.1	-	1,159.1	1,416.2	1-19
EA–18G	Growler	1,039.8	1,074.6	-	1,074.6	2,012.9	1-20
H–I	Huey/Super Cobra	805.6	821.7	29.8	851.5	868.1	1-21
MH-60R	Multi-Mission Helicopter	973.6	849.6	-	849.6	848.6	1-22
MH-60S	Fleet Combat Support	492.4	483.8	-	483.8	454.9	1-23
	Helicopter						
P-8A	Poseidon	2,934.7	3,258.2	-	3,258.2	3,764.4	1-24
C4 Systems – Joint Serv	vice						
JTRS	Joint Tactical Radio System	1,139.5	1,624.7	-	1,624.7	717.7	2-2
C4 Systems – USA							
WIN-T	Warfighter Information Network – Tactical	1,016.0	1,225.5	-	1,225.5	1,278.2	2-3
Ground Programs - Ioi	nt Service						
ITLV	loint Light Tactical Vehicle	45.1	116.8	-	116.8	134.6	3-2
Ground Programs – US	5 A						
FHTV	Family Of Heavy Tactical Vehicles	650.2	56.0	2.1	58.1	36.0	3-3
FMTV	Family Of Medium Tactical Vehicles	437.8	349.1	28.3	377.4	226.0	3-4
M-I Upgrade	Abrams Tank	583.9	300.8	-	300.8	279.4	3-5

				2013	3		
Major Weapon System (\$ in Millions)	ns Summary	FY 2012	Base	осо	Total Request	FY 2014	Page
PIM	Paladin Integrated Management	116.3	373.9	-	373.9	340.8	3-6
GCV	Ground Combat Vehicle	435.0	639.9	-	639.9	592.2	3-7
Ground Programs – U	SMC						
ACV	Amphibious Combat Vehicle	37.0	95.1	-	95.1	137.0	3-8
Missile Defense – Joint	Service						
BMD	Ballistic Missile Defense	10,352.4	9,719.7	-	9,719.7	9,161.5	4-2
AEGIS	AEGIS Ballistic Missile Defense	1,517.4	1,382.0	-	1,382.0	1,517.9	4-3
THAAD	Terminal High Altitude Area Defense	985.7	777.7	-	777.7	850.0	4-4
Patriot/PAC-3	Patriot, Army	736.0	963.0	-	963.0	336.7	4-5
PAC-3/MSE Missile	PAC-3/MSE Missile	161.1	81.9	-	81.9	609.2	4-6
GMD	Ground-Based Midcourse Defense	1,143.3	903.2	-	903.2	1,033.9	4-7
Munitions and Missiles	– Joint Service						
AMRAAM	Advanced Medium Range Air- Air Missile	388.9	423.2	-	423.2	524.3	5-2
AIM-9X	Air Intercept Missile - 9X	162.3	204.5	-	204.5	300.4	5-3
Chem–Demil	Chemical Demilitarization	1,530.9	1,452.8	-	1,452.8	1,057.1	5-4
JASSM	Joint Air-to-Surface Standoff Missile	241.9	248.4	-	248.4	297.6	5-5
JDAM	Joint Direct Attack Munition	127.2	101.9	53.9	155.8	191.0	5-6
JSOW	Joint Standoff Weapon	139.2	133.3	-	133.3	137.5	5-7
SDB	Small Diameter Bomb	177.2	230.9	-	230.9	211.4	5-8
Munitions and Missiles	– USA						
Javelin	Javelin Advanced Tank Weapon	182.2	86.I	-	86. I	115.5	5-9
GMLRS	Guided Multiple Launch Rocket System (GMLRS)	397.8	361.7	20.5	382.2	347.8	5-10
Munitions and Missiles	– USN						
ESSM	Evolved Seasparrow Missile	48.5	58.2	-	58.2	76.8	5-11
RAM	Rolling Airframe Missile	66.2	66.8	-	66.8	67.6	5-12
Standard	Standard Family of Missiles	419.1	463.4	-	463.4	443.6	5-13
Tomahawk	Tactical Tomahawk Cruise Missile	306.2	320.3	-	320.3	324.9	5-14
Trident II	Trident II Ballistic Missile	1,563.0	1,511.6	-	1,511.6	1,463.4	5-15
Shipbuilding and Marit	ime Systems – USN						
CVN 21	Carrier Replacement	691.6	781.7	-	781.7	1,680.0	6-2

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Major Weapon Syst (\$ in Millions)	ems Summary	FY 2012	Base	осо	Total Request	FY 2014	Page
DDG 51	AEGIS Destroyer	2,081.4	3,514.9	-	3,514.9	2,004.0	6-3
LCS	Littoral Combat Ship	2,118.0	2,336.8	-	2,336.8	2,389.5	6-4
SSN 774	VIRGINIA Class Submarine	4,794.9	4,257.7	-	4,257.7	5,417.8	6-5
CVN RCOH	CVN Refueling Complex	693.8	1,613.3	-	1,613.3	1,951.2	6-6
ORP	Ohio Replacement program	1,046.6	564.9	-	564.9	1,083.7	6-7
AFSB	Afloat Forward Staging Base	0.0	0.0	-	0.0	524.0	6-8
Space Based and Re	elated Systems – USN						
MUOS	Mobile User Objective System	475.4	167.4	-	167.4	59.0	7-2
Space Based and Re	elated Systems – USAF						
AEHF	Advanced Extremely High Frequency	936.5	786.4	-	786.4	652.5	7-3
EELV	Evolved Expendable Launch Vehicle	1,695.8	1,687.8	-	I,687.8	I,880.9	7-4
GPS	Global Positioning System	1,524.5	١,368.١	-	1,368.1	1,275.6	7-5
SBIRS	Space Based Infrared System	946.5	902.8	-	902.8	935.7	7-6
WGS	Wideband Global SATCOM System	804.9	48.9	-	48.9	52.3	7-7



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Aircraft

Aviation forces — including fighter/attack, bomber, mobility (cargo/tanker), and specialized support aircraft, including unmanned aircraft systems (unmanned aerial vehicle) — provide a versatile strike force capable of rapid deployment worldwide. These forces can quickly gain and sustain air dominance over regional aggressors, permitting rapid attacks on enemy targets while providing security to exploit the air for logistics, command and control, intelligence, and other functions. Fighter/attack aircraft operate from both land bases and aircraft carriers to combat enemy fighters, and attack ground and ship targets. Bombers provide an intercontinental capability to rapidly strike surface targets. The specialized aircraft supporting conventional operations perform functions such as intelligence, surveillance and reconnaissance; airborne warning and control; air battle management; suppression of enemy air defenses; and combat search and rescue. In addition to these forces, the U.S. military operates a variety of air mobility forces including cargo, aerial-refueling aircraft, helicopters, and support aircraft.

Aircraft funding decreased from \$47.6 billion in the FY 2013 President's Budget to \$45.5 billion in the FY 2014 President's Budget, reflecting the President's new defense strategy.



FY 2014 Aircraft – Base: \$45.5 Billion

MQ-IB Predator / MQ-IC Gray Eagle

The U.S.Air Force (USAF) Predator and Army Gray Eagle Unmanned Aircraft Systems are comprised of aircraft configured with a multi-spectral targeting systems (electro-optical, infra-red, laser designator, and IR illuminator) providing real-time full motion video; weapons; data links; and ground control stations with communications equipment providing line-of-sight and beyond-line-of-sight control.



Missions: Both systems include single-engine, propeller-driven unmanned aircraft that operate over-the-horizon at medium altitude for long endurance and provide real-time intelligence, surveillance, reconnaissance, and target acquisition, and strike capability to aggressively prosecute time-sensitive targets. The Army MQ-IC Gray Eagle also adds Synthetic Aperture Radar (SAR) Ground Moving Target Indicator (GMTI), a communications relay capability, a heavy fuel engine, tactical common data link, and greater weapons capability.

FY 2014 Programs: For Predator, development and fielding of USAF and U.S. Special Operations Command (SOCOM) critical modifications to the airframe and ground station elements continues. For Gray Eagle, the Army continues development and integration of the Universal Ground Control Station, a Ground Based Sense-and-Avoid system, and a SIGINT capability; and procures 15 Gray Eagle aircraft and three modular platoon sets of equipment.

MQ-I Predator / Gray Eagle												
	EX 201	l) *			FY 201	3**			EX 20	14		
	1120	ΙΖ.	Base Budg	get	OCO Bu	dget	Total Req	uest	1120			
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty		
RDT&E												
Predator USAF	51.6	-	9.1	-	-	-	9.1	-	3.3	-		
Gray Eagle USA	121.8	-	74.6	-	-	-	74.6	-	10.9	-		
SOCOM	3.0	-	1.4	-	-	-	1.4	-	2.1	-		
Subtotal	176.4	-	85.1	-	-	-	85.I	-	16.3	-		
Procurement							-	-				
Predator USAF	161.2	-	30.9	-	-	-	30.9	-	9.7	-		
Gray Eagle USA	697.8	29	749.6	19	-	-	749.6	19	616.2	15		
SOCOM	3.7	-	4.0	-	-	-	4.0	-	20.6	-		
Subtotal	862.7	29	784.5	19	-	-	784.5	19	646.5	15		
Total	1,039.1	29	869.6	19	-	-	869.6	19	662.8	15		

Prime Contractor: General Atomics-Aeronautical Systems Inc., San Diego, CA

 \ast FY 2012 include Base and OCO funding

** Reflects the FY 2013 President's Budget Request

MQ-9 Reaper

The MQ-9 Reaper Unmanned Aircraft System (UAS) Program is comprised of an aircraft segment consisting of aircraft configured with an array of sensors to include day/night Full Motion Video (FMV), Signals Intelligence (SIGINT), and Synthetic Aperture Radar (SAR) sensor payloads, avionics, data links and weapons; a Ground control segment consisting of a Launch and Recovery Element, and a Mission Control Element with embedded Line-of-Sight (LOS) and Beyond-Line-of-Sight (BLOS)



communications equipment; a support element; and trained personnel.

Mission: A single-engine, turbo-prop, remotely piloted armed reconnaissance aircraft designed to operate over-the-horizon at medium altitude for long endurance. The primary mission is reconnaissance with an embedded strike capability against time-critical targets.

FY 2014 Program: Continues development, transformation and fielding of Reaper aircraft and ground stations to support the enduring requirement to field and sustain 65 Combat Air Patrols (CAP)/orbits. The FY 2014 request supports the procurement of 12 aircraft and 12 fixed ground control stations.

MQ-9 Reaper											
	EX 201) *			FY 201	3 **			FY 20	14	
	11201	-	Base Budg	get	OCO Bud	lget	Total Re	quest	1120		
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	
RDT&E											
USAF	126.7	-	148.0	-	-	-	148.0	-	128.3	-	
SOCOM	2.4	-	3.0	-	-	-	3.0	-	1.3	-	
Subtotal	29.	-	151.0	-	-	-	151.0	-	129.6	-	
Procurement							-	-			
USAF	944.2	48	885.4	24	-	-	885.4	24	375.2	12	
SOCOM	3.0	-	4.0	-	-	-	4.0	-	1.9	-	
Subtotal	947.2	48	889.4	24	-	-	889.4	24	377.1	12	
Total	1,076.4	48	1,040.3	24	-	-	1,040.3	24	506.7	12	

Prime Contractor: General Atomics-Aeronautical Systems Inc., San Diego, CA

* FY 2012 include Base and OCO funding

** Reflects the FY 2013 President's Budget Request

RQ-4 Global Hawk / MQ-4C Triton / NATO AGS DOD - JOINT

The U.S. Air Force (USAF) RQ-4, Navy MQ-4C, and NATO Alliance Ground Surveillance (AGS) Unmanned Aircraft System programs provide high altitude long endurance Intelligence,



Surveillance, and Reconnaissance (ISR)

capabilities. The RQ-4 Block 20 includes a communications relay payload; the Block 30 includes a multi-intelligence suite for imagery and signals intelligence collection; and the Block 40 includes multi-platform radar technology for synthetic aperture radar (SAR) imaging and moving target detection. All Block 20 aircraft are operational, the Block 30 operational capability will be sustained through December 31, 2014, and the final two Block 40 USAF RQ-4s will be delivered in FY 2014. The Navy MQ-4C Triton provides the Navy a persistent maritime ISR capability. Mission systems include inverse SAR, Electro-optical/Infra-red Full Motion Video, Electronic Support Measures (ESM), Automatic Identification System (AIS), a basic communications relay capability, and Link-16. The five NATO AGS aircraft are being procured and developed over the next several years and will complete deliveries by mid-FY 2017.

Missions: The USAF and NATO AGS RQ-4 systems perform high-altitude, near-real-time, high-resolution ISR collection, while the Navy MQ-4C provides tactical persistent maritime ISR. Both AF and Navy systems support Joint and Combatant Commander requirements, while the Navy MQ-4C also supports the numbered Fleet commanders from five worldwide sites.

FY 2014 Programs: Funds USAF development efforts for the Block 40, ground station, and Multi-Platform Radar Technology Insertion programs; the U.S. contribution to the NATO AGS; and the Navy MQ-4C Triton Engineering and Manufacturing Development effort and advance procurement for three planned Low Rate Initial Production systems.

RQ-4 Global Hawk											
	EX 201	1.0*			FY 201	3**			FY 2014		
	1120		Base Bud	get	OCO Buc	lget	Total Req	uest	1120	17	
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	
RDT&E											
RQ-4, USAF	340.6	-	236.3	-	-	-	236.3	-	134.4	-	
RQ-4, NATO	82.9	-	210.1	3	-	-	210.1	3	264.1	2	
MQ-4, USN	548.6	-	657.5	3	-	-	657.5	3	375.2	-	
Subtotal	972.1	-	1,103.9	6	-	-	1,103.9	6	773.7	2	
Procurement											
RQ-4, USAF	484.6	3	95.9	-	-	-	95.9	-	68.I	-	
MQ-4, USN	-	-	51.1	-	-	-	51.1	-	52.0	-	
Subtotal	484.6	3	147.0	-	-	-	147.0	-	120.1	-	
Total	1,456.7	3	1,250.9	6	-	-	1,250.9	6	893.8	2	

Prime Contractor: Northrop Grumman; Rancho Bernardo, CA and Bethpage, NY

* FY 2012 include Base and OCO funding

** Reflects the FY 2013 President's Budget Request

DOD - JOINT RQ-7 Shadow / RQ-11 Raven / RQ-21 STUAS The RQ-7, RQ-11, and RQ-21 unmanned aircraft systems (UAS) provide organic Reconnaissance, Surveillance, Target Raven USAF Photo Acquisition (RSTA) capabilities and are embedded in maneuver formations capable of providing crucial information to the ground commander. Mission: The Army/USMC RQ-7 and US Army Photo USMC/Navy RQ-21 Small Tactical UAS (STUAS) provide the tactical maneuver commander near real-time RSTA and force protection during day/night

and limited adverse weather conditions. The multi-sensor RQ-21 is runway independent,, requiring minimal space for takeoff and recovery from an unimproved expeditionary/urban environment, as well as from the decks of Navy ships. The multi-sensor RQ-11 provides an "over-the-hill" rucksack-portable, day/night, limited adverse weather, remotely-operated capability that supports combat battalions and below, and selected combat support units.

FY 2014 Program: Funds upgrades to system hardware and performance-based logistics support for the RQ-7. Procures upgrades and provides training and contractor logistics support for the RQ-11. Procures 25 air vehicles, conducts follow-on test and evaluation and provides contractor logistics support for the RQ-21.

Prime Contractors:

Shadow: AAI Corporation, Hunt Valley, MD Raven: AeroVironment, Monrovia, CA RQ-21: INSITU, Inc, Bingen, WA

	RQ-7 \$	Shadov	w / RQ	-111	Raver	ו / R	Q-21	STU	4S	
	FY 2012 *				FY 201	3 **			EX 2014	
		512	Base Bu	dget	OCO Bu	dget	Total R	equest		
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E ***	64.4	-	58.9	-	7.6	-	66.5	-	26.2	-
Procurement										
Shadow (Army)	165.1	-	104.3	-	-	-	104.3	-	121.9	-
Shadow (USMC)	-	-	49.3	-	-	-	49.3	-	26.4	-
Raven (Army)	86.I	1,131	25.8	234			25.8	234	10.8	-
Raven (USMC)	2.1	-	2.3	-		-	2.3	-	1.7	-
SOCOM	1.0	-	2.1	-	-	-	2.1	-	0.9	-
RQ-21 (USMC)	-	-	27.6	5	-	-	27.6	5	66.7	25
Subtotal	254.3	1,131	211.4	239	-	-	211.4	239	228.4	25
Total	318.7	1,131	270.4	239	7.6	-	278.0	239	254.5	25

* FY 2012 includes Base and OCO funding

Numbers may not add due to rounding

** Reflects the FY 2013 President's Budget Request

*** Reflects total RDT&E funding for all three versions across the Army, USMC and SOCOM

C-130J Hercules

The C-130 Hercules is a medium-sized tactical transport airlift aircraft that is modernizing the U.S. tactical airlift capability. It is capable of performing a variety of combat delivery (tactical airlift) operations across a broad range of mission environments including deployment and redeployment of troops and/or supplies within/between command areas in a theater of operation, aeromedical evacuation, air logistics support, and augmentation of strategic airlift forces. The C-130] aircraft, with its extended fuselage, provides additional cargo carrying capacity for the Air Force combat delivery mission compared to the legacy C-130E/H and the C-130J (short) aircraft. Special mission variants of the C-130 conduct airborne psychological operations (EC-130]), weather reconnaissance (WC-130]), search and rescue (HC-130]), and special operations (MC-130] and AC-130]). The KC-130] provides the Marine Corps with air-to-air refueling/tactical transport capability; airborne radio relay; intelligence, surveillance, and reconnaissance; and close air support to replace the KC-130 F/R/T aircraft.

Mission: The C-130J provides responsive air movement and delivery of combat troops/supplies directly into objective areas through air landing, extraction, and airdrop and the air logistic support of theater forces.

FY 2014 Program: Continues the procurement of C-130J aircraft, initiating a multiyear procurement (MYP) for 79 aircraft from FY 2014 to FY 2018 at an estimated total savings at least 9.5 percent for the Department over the life of the MYP.

			C-13	;0] ⊢	lercul	es				
	EX 20	12			FY 20	3*			EY 20	14
	1120	12	Base Bud	get	OCO Bud	lget	Total Req	uest	1120	
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E										
HC/MC-130	21.6		19.0				19.0	-	6.2	
C-130J	38.3		30.7				30.7	-	22.4	
Subtotal	59.9	-	49.7	-	-	-	49.7	-	28.7	-
Procurement										
C-130J	122.9	I	68.4				68.4	-	699.5	6
HC/MC/AC-130	1,093.1	10	691.0	7			691.0	7	1,183.6	10
Subtotal	1,215.9	11	759.4	7	-	-	759.4	7	1,883.1	16
Procurement										
KC-130J	87.3	1	26.0				26.0		166.6	2
Subtotal	87.3	I	26.0		-	-	26.0	-	166.6	2
Spares	-	-		-	-	-	-	-	-	-
Total	1,363.1	12	835.1	7	-	-	835.I	7	2,078.4	18
*Reflects the FY 2013 President's Budget Request Numbers may										ounding

Prime Contractor: Lockheed Martin Corporation, Marietta, GA

DOD - JOINT

F-35 Joint Strike Fighter

The F-35 Joint Strike Fighter (JSF) is the next-generation strike fighter for the Navy, Marine Corps, Air Force, and U.S. Allies. The F-35 consists of three variants: the F-35A Conventional Take-Off and Landing (CTOL), the F-35B Short Take-Off and Vertical Landing (STOVL), and the F-35C Carrier variant (CV).



Mission: The F-35 will provide all-weather, precision, stealthy, air-to-air, and ground strike capability, including direct attack on the most lethal surface-to-air missiles and air defenses. The F-35A (CTOL) replaces the Air Force F-16 and A-10, and complements the F-22; the F-35B (STOVL) replaces the Marine Corps AV-8B and F/A-18A/C/D; the F-35C (CV) complements the F/A-18E/F for the Navy, and will also be flown by the Marine Corps.

FY 2014 Program: Continues development of the air system, F-135 single engine propulsion system, and conducts systems engineering, development and operational testing, and supports Follow-on Development. Procures a total of 29 aircraft: 4 CV for the Navy, 6 STOVL for the Marine Corps, and 19 CTOL for the Air Force in FY 2014.

			E-35 Joint	- Sti	rika Ei	ahte	r			
			1-33 joint	. 50		2*	•			
	FY 201	2	Rase Rudget				Total Requ	ost	FY 201	4
	۶M	0tv	SM	Ωtv	SCO Dut	Ωtv	sotai nequ SM	Otv	SM .	0tv
RDT&F		रप	ψ ¹¹	V 1	μII	रप	μii	रप		~~~
IISN	1 249 7		48				48	-	1.046.8	
USAF	1.375.8		1,218.4				1,218.4	-	849.3	
Subtotal	2.625.6	-	2.699.5	-	-	-	2.699.5	-	1.896.2	_
Procurement	_,		_,				_,		-,	
USN	2.815.3	13	2.583.7	10			2.583.7	10	2,778,9	10
USAF	3.518.6	18	3,565.7	19			3.565.7	19	3.582.3	19
Subtotal	6,333.9	31	6,149.4	29	-	-	6,149.4	29	6,361.2	29
Spares	202.9	0	322.3	0	0	0	322.3	0	187.3	0
Total	9,162.3	31	9,171.2	29	-	-	9,171.2	29	8,444.7	29
*Reflects the FY 20	13 President's Bud	get Request	•				N	lumbers	may not add due to	rounding

Prime Contractors: Lockheed Martin Corporation, Fort Worth, TX Pratt & Whitney, Hartford, CT

/ 0

**Includes aircraft modification funding, FY 2012-2014

JPATS T-6B Texan II

The Joint Primary Aircraft Training System (JPATS) is a joint Navy/Air Force program that will use the T-6B Texan as a replacement for the Services' fleets of primary trainer aircraft (T-34 and T-37, respectively)



and associated Ground Based Training Systems. The T-6 Texan II is a tandem seat, turboprop aircraft derivative of the Pilatus PC-9 powered by a single Pratt & Whitney PT6A-68 engine.

Mission: The JPATS supports joint Navy and Air Force specialized undergraduate pilot training.

FY 2014 Program: Continues production of JPATS aircraft, supporting procurement of 29 aircraft and associated support for the Navy in FY 2014.

Prime Contractor: Hawker Beechcraft, Wichita, KS

JPATS T–6B Texan II												
	EX 201	ว			FY 20	3*			EX 201	4		
	11 201	2	Base Budg	get	OCO Bud	lget	Total Req	uest	11201	т		
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty		
RDT&E							-	-				
Procurement												
USN	234.9	36	278.9	33			278.9	33	249.1	29		
USAF	-	-	-	-	-	-	-	-	-	-		
Subtotal	234.9	36	278.9	33	-	-	278.9	33	249.1	29		
Spares	1.7	-	7.4	-	-	-	7.4	-	2.6	-		
Total	236.6	36	286.3	33	-	-	286.3	33	251.7	29		
*Reflects the FY 20) 13 President's Bud	lget Reaue	st				Nu	mbers n	nav not add due to	rounding		

AIRCRAFT

V-22 Osprey

The V-22 Osprey is a tilt-rotor, vertical takeoff and landing aircraft designed to meet the amphibious/vertical assault needs of the Marine Corps, the strike rescue needs of the Navy, and long range special operations forces (SOF) missions for U.S. Special Operations Command (SOCOM). The aircraft is designed to fly 2,100 miles with one in-flight refueling, giving the Services the advantage of a vertical and/or short takeoff and landing aircraft that could rapidly self-deploy to any location in the world.



Mission: The V-22 conducts airborne assault, vertical lift, combat search and rescue, and special operations missions.

FY 2014 Program: Supports procurement of 18 MV-22 aircraft for the Navy/Marine Corps and 3 CV-22 aircraft for Air Force-SOCOM. The request is based on the second year of a follow-on 5-year multiyear procurement contract, for FYs 2013 to 2017.

	IN	е вое	ing Compan	y, rnii	adeiphi	а, ГА				
			V -	22 C	Osprey	Y				
	EX 201	ว*			FY 20) 3 **	<		EV 20	14
	FT 201	Ζ.	Base Budge	et	OCO Bud	lget	Total Requ	Jest	FI ZU	14
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E										
USN	71.9	-	54.4	-			54.4	-	43.1	-
USAF	12.8	-	28.0	-			28.0	-	46.7	-
Subtotal	84.7	-	82.4	-	-	-	82.4	-	89.8	-
Procurement										
USN	2,265.8	30	1,457.3	17			1,457.3	17	1,488.3	8
USAF	359.9	5	309.2	4	-	-	309.2	4	230.8	3
Subtotal	2,625.7	35	1,766.5	21	-	-	1,766.5	21	1,719.1	21
USN Spares	9.8	-	16.0	-	-		16.0	-	10.8	-
USAF Spares	56.8	-	90.4	-	-		90.4	-	47.1	-
Subtotal	66.6	-	106.4	-	-	-	106.4	-	57.9	-
USN Subtotal	2,347.5	30	1,527.7	17	-	-	1,527.7	17	1,542.2	8
USAF Subtotal	429.5	5	427.6	4	-	-	427.6	4	324.6	3
Total	2,777.0	35	1,955.3	21	-	-	1,955.3	21	1,866.8	21
* FY 2012 includes	Base and OCO	funding					Numb	oers mav	not add due to i	rounding

Prime Contractor: Bell Helicopter, Fort Worth, TX The Desing Company Philadolphia PA

** Reflects the FY 2013 President's Budget Request

AH-64E Apache: Remanufacture / New Build

The AH-64E Apache program consists of a remanufacture (A) and a new build (B) effort, which integrates a mast-mounted fire control radar into an upgraded and enhanced AH–64 airframe. The remanufacture effort refurbishes aging Longbow Apaches to extend the service life and upgrades the aircraft with updated technologies and performance enhancements to keep the Apache viable throughout its lifecycle. The new build effort assembles all new components

resulting in a completely new aircraft to fill shortages in the fleet due to combat losses. This program also provides for the installation of the Target Acquisition Designation Sight and Pilot Night Vision Sensors, plus other safety and reliability enhancements.

Mission: The AH–64E Apache conducts armed reconnaissance, close combat, mobile strike, and vertical maneuver missions when required, in day, night, obscured battlefield and adverse weather conditions.

FY 2014 Program: Supports the remanufacture of 42 AH-64D aircraft to the AH-64E configuration.

Prime Contractors: Apache: The Boeing Company; Mesa, AZ

Integration: Northrop Grumman Corporation; Baltimore, MD Lockheed Martin Corporation; Oswego, NY

AH–64E Apache: Remanufacture / New Build												
	EX 201) *			FY 201	3 **			EX 201	4		
	11201	2	Base Budg	Base Budget		lget	Total Requ	Jest	11201	Т		
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty		
RDT&E	89.8	-	124.5	-			124.5	-	124.8	-		
Procurement												
(A) Remanufacture	593.3	27	684.8	40	-	-	684.8	40	759.4	42		
(B) New Build	84.3	-	300.1	8	71.0	2	371.1	10	-	-		
Subtotal	677.5	27	984.9	48	71.0	2	1,055.9	50	759.4	42		
Grand Total	767.3	27	1,109.4	48	71.0	2	1,180.4	50	884.2	42		

* FY 2012 include Base and OCO funding

Numbers may not add due to rounding

** Reflects the FY 2013 President's Budget Request

US:

CH–47 Chinook

The CH-47F Improved Cargo Helicopter program procures new and remanufactured Service Life Extension Program CH-47F helicopters. The aircraft includes an upgraded digital cockpit and modifications to the airframe to reduce vibration. The upgraded cockpit



includes a digital data bus that permits installation of enhanced communications and navigation equipment for improved situational awareness, mission performance, and survivability. The new aircraft uses more powerful T55-GA-714A engines that improve fuel efficiency and enhance lift performance. These aircraft are fielded to heavy helicopter companies and Special Operations Aviation. The CH-47F ReNew rebuilds and replaces CH-47Ds and 61 Special Operation MH-47s to the CH-47F/MH-47G configuration. The New Build program procures all CH-47F new build aircraft and 9 Special Operation MH-47G new build aircraft for the U.S. Special Operations Command (SOCOM). The CH-47F is expected to remain the Army's heavy lift helicopter until at least the 2038 timeframe.

Mission: The CH-47 transports ground forces, supplies, ammunition, and other battlecritical cargo in support of worldwide combat and contingency operations.

FY 2014 Program: Provides for the production of 28 aircraft, of which 6 will be new build aircraft and 22 will be remanufactured/Service Life Extension Program aircraft. FY 2014 is the second year of a new 5-year multiyear procurement (MYP) program.

Prime Contractor: The Boeing Company; Philadelphia, PA

			CH-	-47 (Chinoc	ok				
	EX 201	ን *			FY 201	3 **			EX 201	4
	11201	2	Base Budg	get	OCO Buc	lget	Total Req	uest	11201	
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E	47.4	-	71.6	-			71.6	-	50.6	-
Procurement										
USA	1,360.3	45	1,159.4	38	231.3	6	1,390.7	44	900.0	28
SOCOM	142.8	-	134.8	-	-	-	134.8	-	19.8	-
Subtotal	1,503.1	45	1,294.2	38	231.3	6	1,525.5	44	919.8	28
Total	1,550.5	45	1,365.8	38	231.3	6	1,597.1	44	970.4	28

* FY 2012 include Base and OCO funding

** Reflects the FY 2013 President's Budget Request

UH-72 Lakota Light Utility Helicopter (LUH) The Army's UH-72A Light Utility Helicopter (LUH) is a utility helicopter that is replacing the UH-I and the OH-58 Kiowa Warrior A and C models. US Army Image It provides reliable and sustainable

general and administrative support in

permissive environments at reduced acquisition and operating costs. There is no more RDT&E funding required for this program. The LUH acquisition strategy is based on a competitive procurement of a commercial-off-the-shelf, non-developmental aircraft.

The UH-72A Lakota is a U.S. Army light utility helicopter that entered service in 2006. The Lakota is a militarized version of the Eurocopter EC145 modified to an LUH configuration. In June 2006, the U.S. Army selected it as the winner of its LUH program with a 345 aircraft fleet planned.

Mission: The UH-72A provides aerial transport for logistical and administrative support. Additionally, the Lakota provides a flexible response to Homeland Security requirements such as search and rescue operations, reconnaissance and surveillance, and medical evacuation missions.

FY 2014 Program: Supports the final year of full rate production of 10 aircraft.

Prime Contractor: EADS North America - American Eurocopter; Columbus, MS.

	UH-72	LUH	l)							
	FY 201	ን*			FY 201	3 **			FY 20	14
	11201	2	Base Bud	get	OCO Bud	lget	Total Req	uest	1120	1 7
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E	-	-	-	-			-	-	-	-
Procurement	250.4	39	272.0	34			272.0	34	96.2	10
Total	250.4	39	272.0	34	-	-	272.0	34	96.2	10

* FY 2012 include Base and OCO funding

** Reflects the FY 2013 President's Budget Request

UH-60 Black Hawk

The UH-60 Black Hawk is a twin engine, single-rotor, four bladed utility helicopter

that is designed to carry a crew of four and a combat equipped squad of 11 or an external load up to 9,000 lbs.

The UH-60 comes in many variants, and many different modifications.

The Army variants can be fitted with the stub wings to carry additional fuel tanks or weapons. Variants may have different capabilities and equipment in order to fulfill different roles. The Black Hawk series of aircraft can perform a wide array of missions, including the tactical transport of troops, electronic warfare, and aeromedical evacuation.

US Army Phot

Mission: The UH-60 Black Hawk provides a highly maneuverable, air transportable, troop carrying helicopter for all intensities of conflict, without regard to geographical location or environmental conditions. It moves troops, equipment and supplies into combat and performs aeromedical evacuation and multiple functions in support of the Army's air mobility doctrine for employment of ground forces.

FY 2014 Program: Supports the continuation of a 5-year multiyear procurement (MYP) contract for FYs 2012-2016. The FY 2014 procurement request supports the production of 65 aircraft. The FY 2014 request also supports the continued development and testing of the improved turbine engine and digital upgrades to the UH-60L.

			UH-6	0 Bla	ack Ha	awk				
	FY 2017) *			FY 2013	3 **			FY 201	4
	11 2012	_	Base Budge	et	OCO Bud	get	Total Requ	uest	11201	
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E	8.0	-	83.3	-			83.3	-	97.1	-
Procurement	1,697.6	89	1,222.2	59	-	-	1,222.2	59	1,163.0	65
Total	1,705.6	89	1,305.5	59	-	-	1,305.5	59	1,260.1	65

Prime Contractor: Sikorsky Aircraft; Stratford, CT

* FY 2012 include Base and OCO funding

Numbers may not add due to rounding

** Reflects the FY 2013 President's Budget Request

USA

Combat Rescue Helicopter (CRH)

The Combat Rescue Helicopter (CRH) Program, formerly referred to as the HH-60 Recapitalization, will replace the aging HH-60G. The HH-60 Pave Hawk is the U.S. Air Force version of the U.S. Army's UH-60 Black Hawk, modified for Combat Search and Rescue (CSAR) in all weather situations. The CRH Program will leverage in-production air vehicles and training systems with an established production base, and integrate existing technologies to acquire this new system.

base, and integrate existing technologies to acquire this new system. Mission: The primary mission is to conduct CSAR in all-weather conditions. The replacement for the HH-60 will perform a wide array of missions, including casualty evacuation,

medical evacuation, non-combat evacuation operations, civil search and rescue, international aid, disaster humanitarian relief, and insertion/extraction of combat forces.

FY 2014 Program: Development funding supports the second year of significant effort and the second lot of test articles (two aircraft) for Engineering, Manufacturing and Development (EMD) activities. Specific platform configuration and fielding are dependent upon finalizing Air Force acquisition plans to acquire a long-term replacement CRH platform through a full and open competition. The procurement funding in FY 2012 and FY 2013 was in the HH-60 Operational Loss Replacement (OLR) helicopter program line, which replaced HH-60Gs lost through attrition.

Prime Contractor: CRH – TBD

		Com	ıbat Res	cue l	lelico	pter	(CRH)			
	FY 20	12 *		FY 20) 4					
	1120	1 2	Base E	Budget	0C0 E	Budget	Total Requ	Jest	1120	, , ,
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E	11.1	-	123.2	2			123.2	2	395.6	2
Procurement	59.5	3	60.6	-	-	-	60.6	-	-	-
Total	70.6	3	183.8	2	-	-	183.8	2	395.6	2

* FY 2012 include Base and OCO funding

** Reflects the FY 2013 President's Budget Request

Numbers may not add due to rounding

USAF

F-22 Raptor

The F-22 Raptor program is a fifth generation air superiority aircraft fighter. The F-22A will penetrate enemy airspace and achieve first-look, first-kill capability against multiple targets. It has unprecedented survivability and lethality, ensuring the Joint Forces have freedom from attack, freedom to maneuver, and freedom to attack.

Mission: The F-22 will provide enhanced U.S. air superiority capability against the projected threat and will provide the United States Air Force both offensive and defensive capabilities to defeat all existing threats.

USAF Photo

FY 2014 Program: Continues critical F-22 modernization through incremental capability upgrades and key reliability and maintainability efforts. The Reliability, Availability, and Maintainability Maturation Program (RAMMP), which provides for the development and integration of upgrades for F-22 aircraft to reach mature reliability, availability and maintainability, is the primary modification effort in FY 2014. In addition, the budget continues retrofit of Increment 3.1 into the combat-coded F-22 fleet. Increment 3.1 provides an initial ground attack kill chain capability via inclusion of emitter-based geolocation of threat systems, ground-looking synthetic aperture radar modes, electronic attack capability, and initial integration of the Small Diameter Bomb (SDB-I), which expands the F-22's ground attack arsenal from one Joint Direct Attack Munition to four SDB-1s per payload. Continues development of Increment 3.2, providing Advanced Medium Range Airto-Air Missile-120D and Air Intercept Missile-9X integration, radar electronic protection, enhanced speed and accuracy of target geo-location, intraflight data link improvements, Automatic Ground-Collision Avoidance System, and other enhancements to improve system safety and effectiveness.

Prime Contractors: Lockheed Martin, Marietta, GA; Fort Worth, TX; and Palmdale, CA; Boeing, Seattle, WA;

			F-2	2 Ra	ptor					
	EX 201	2			FY 201	3*			EY 20	114
	11201	2	Base Budg	get	OCO Bud	lget	Total Req	1120		
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E	531.8	-	511.8	-	-	-	511.8	-	459.6	-
Procurement	318.9	-	283.9	-	-	-	283.9	-	285.8	-
Spares	8.9	-	12.8	-	-	-	12.8	-	0.1	-
Total	859.6	-	808.4	-	-	-	808.4	-	745.5	-
*Reflects the FY 20	13 President's Bud	get Reques	t				Numbe	ers may	not add due to	rounding

Pratt & Whitney, Hartford, CT

USAF

KC-46A Tanker

The next generation KC-46 Aerial Refueling Tanker will replace the aging fleet of KC-135 Stratotankers which have been the primary refueling aircraft for more than fifty years. The KC-46 Program, the first phase of KC-135 recapitalization, will procure 179 aircraft to replace roughly one-third of the current KC-135 tanker fleet.

Mission: The KC-46 will meet the primary air refueling missions of Global Attack, Air Bridge,



Theater Support, Deployment, and Special Operations Support. Air refueling forces perform these missions at the strategic, operational, and tactical level across the entire spectrum of military operations. Other missions include emergency air refueling, aero medical evacuation, and combat search and rescue. With more refueling capacity and enhanced capabilities, improved efficiency and increased capabilities for cargo and aeromedical evacuation, the KC-46 will provide aerial refueling support to the Air Force, Navy and Marine Corps as well as allied nation coalition force aircraft.

FY 2014 Program: Continues the development efforts including the development of a militarized variant of the Boeing 767-2C aircraft, the building of 4 development aircraft, the integration of military capabilities into the 4 prototypes, and developmental and operational testing. The program also includes the development of technical manuals, Type I training, simulator and maintenance data, and the purchase of live fire assets and Government Furnished Equipment. The KC-46 aircraft will be assembled on the existing commercial 767 production line in Everett, Washington.

Prime Contractor: The Boeing Company, Seattle, WA

			KC-4	6A ⁻	Fanke	r						
	EY 201	2			FY 201	3*			EY 20	14		
	11 201	2	Base Bud	get OCO Budget			Total Req	uest	1120	17		
	\$M	Qty	\$M	\$M Qty \$M Qty \$M Qty								
RDT&E	818.9	-	1,815.6	-	-	-	1,815.6	-	1,558.6	-		
Procurement	-	-	-	-	-	-	-	-	-	-		
Spares	-	-	-	-	-	-	-	-	-	-		
Total	818.9	-	1,815.6	-	-	-	1,815.6	-	1,558.6	-		
*Reflects the FY 20	13 President's Bud	lget Reque	st				Numbe	rs may n	ot add due to r	ounding		

C-5 Galaxy

The C-5 Galaxy is one of the U.S. military's largest aircraft. Using the front and rear cargo openings, the Galaxy can be loaded and off-loaded at the same time. Both nose and rear doors open the full width and height of the cargo compartment.

Mission: The C-5 aircraft is a heavy cargo transport designed to provide strategic inter-theater airlift for deployment and supply of combat and support forces. The aircraft can carry a fully equipped, combat-ready military unit to any point in the world on short notice and provide full field support necessary to maintain a fighting force.

US ANTONS

FY 2014 Program: Continues the modernization of the C-5 aircraft. The Reliability Enhancement and Re-engining Program (RERP) is the primary modernization program for the C-5 fleet. The C-5 RERP is a comprehensive modernization effort which centers on replacing the current TF-39 engine with a more reliable, Commercial Off-the-Shelf General Electric CF6-80C2 (F138-GE-100 military designation) turbofan engine with increased takeoff thrust, stage-3 noise compliance, and Federal Aviation Regulation pollution compliance. In addition to new engines/pylons, C-5 RERP will provide upgrades to wing attachment fittings, new thrust reversers and Auxiliary Power Units, upgrades to the electrical, hydraulic, fuel, fire suppression, landing gear, and pressurization/air conditioning systems, and airframe structural modifications. The C-5 RERP is the second phase of a two-phase modernization program for the C-5. The Avionics Modernization Program was Phase I and is the baseline for C-5 RERP. Following completion of Phase II, the aircraft will be designated a C-5M. These aircraft upgrades will increase payload capability and access to Communication, Navigation, Surveillance/Air Traffic Management airspace. The Air Force plans to modernize 52 of its C-5s (one C-5A, 49 C-5Bs, and two C-5Cs) to the new C-5M standard.

	C-5 Galaxy												
	FY 201) *			FY 2013	3**			FY 20	14			
	11201	-	Base Budget OCO Budget Total			Total Req	uest	1120	•••				
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty			
RDT&E	12.9	-	35.1	-	-	-	35.1	-	61.5	-			
Procurement	1,034.7	-	1,127.6	-	-	-	1,127.6	-	1,024.4	-			
Spares	116.2	-	117.2	-	-	-	117.2	-	131.9	-			
Total	1,163.8	-	1,279.9	-	-	-	1,279.9	-	1,217.8	-			

Prime Contractor: Lockheed Martin Corporation, Marietta, GA

* FY 2012 includes Base and OCO funding.

**Reflects the FY 2013 President's Budget Request

Numbers may not add due to rounding

USAF

USAF Photo

F-15 Eagle

The F-15C/D is a twin engine, single seat, supersonic, all-weather, day/night, air superiority fighter. The F-15E is a twin engine, two seat, supersonic dual-role, day/night, all-weather, deep interdiction fighter with multi-role air-to-air capabilities.



Mission: The F-15 Eagle is an all-weather, extremely maneuverable, tactical fighter designed to permit the Air Force to gain and maintain air supremacy over the battlefield.

FY 2014 Program: Continues F-15E Radar Modernization Program (RMP) and F-15C/D radar upgrade programs. RMP replaces the legacy radar using existing technology from other aviation platforms on 394 F-15s (219 F-15E and 175 F-15 C/D). It solves parts obsolescence problems and provides improved reliability and performance (increased synthetic aperture radar range and resolution), including air-to-air and air-to-ground modes. The radar upgrade program also replaces the mechanically-scanned antenna on F-15C/D aircraft with an active electronically scanned array (AESA), APG-82(V)1 system, and upgrades the environmental control system to provide improved reliability and performance. FY 2014 also continues the procurement of the Joint Helmet Mounted Cueing System, Passive Attack Sensor System, and Beyond Line of Sight capability, which provides combat identification and targeting in contested airspace. Development efforts continue the Eagle Passive/Active Warning Survivability System, which is intended to improve F-15 survivability by enhancing the ability to detect, deny, or defeat air and ground threats.

Prime Contractor: Raytheon, El Segundo, CA and Forest, MS

	EY 20	12			FY 201	3*			EY 20	14
	1120	12	Base Bud	get	1120	1 7				
	\$M	Qty	\$M	\$M	Qty					
RDT&E	184.7	-	192.7	-	-	-	192.7	-	244.3	-
Procurement	255.6	-	148.4	-	-	-	148.4	-	354.6	-
Spares	7.5	-	22.7	-	-	-	22.7	-	23.1	-
Total	447.7	-	363.7	-	-	-	363.7	-	622.0	-
*Reflects the FY 20	Reflects the FY 2013 President's Budget Request. Numbers m									

E-2D Advanced Hawkeye

The E-2D Advanced Hawkeye (AHE) is an airborne early warning, all weather, twin-engine, carrier-based aircraft designed to extend task force defense perimeters. The Advanced Hawkeye provides improved battle space target detection and situational awareness, especially in the



littorals; supports the Theater Air and Missile Defense operations; and improves Operational Availability for the radar system.

Mission: The E-2D AHE provides advance warning of approaching enemy surface units and aircraft to vector interceptors or strike aircraft to attack. It provides area surveillance, intercept, strike/air traffic control, radar surveillance, search and rescue assistance, communication relay and automatic tactical data exchange. The E-2D AHE provides a two-generational leap in radar technology, and will provide the long range air and surface picture; theater air and missile defense, and is a key component of Naval Integrated Fire Control-Counter Air.

FY 2014 Program: Funds five E-2D AHE aircraft, associated support, and funds advance procurement for five FY 2015 aircraft. Supports follow-on test and evaluation, trainers, non-recurring engineering for the Identification Friend or Foe (IFF) system and in-flight refueling capability.

Prime Contractors: Airframe: Northrop Grumman Corporation, Bethpage, NY

(Engineering) and St. Augustine, FL (Manufacturing) Engine: Rolls-Royce Corporation, Indianapolis, IN Radar: Lockheed Martin Corporation, Syracuse, NY

		E	-2D Adv	vanc	ed Ha	wke	ye			
	EX 201	2			FY 201	3*			EX 201	14
	11201	2	Base Bud	get	1120	17				
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E	131.0	-	9.	-	-	-	9.	-	152.0	-
Procurement	1,044.8	5	984.7	5	-	-	984.7	5	1,247.6	5
Spares	30.0	-	55.4	-	-	-	55.4	-	16.6	-
Total	1,205.9	5	1,159.1	5	-	-	1,159.1	5	1,416.2	5

*Reflects the FY 2013 President's Budget Request

EA-18G Growler

The EA-18G Growler is a is an airborne electronic attack aircraft and can operate from an aircraft carrier or from land bases and replaces the EA-6B Prowler. A derivative of the F/A-18F Super Hornet, this aircraft has multiple weapons stations for executing electronic missions and conventional weapons strikes. The EA-18G Growler can detect,

identify, and locate hostile emitters and suppress them through jamming and kinetic effects. By employing the AN/ALQ-218 wideband receiver and the AN/ALQ-99 high and low band tactical jamming pods, Growler has a full spectrum detection and jamming capability. This aircraft provides a flexible offensive Electronic Warfare (EW) capability to the Joint warfighter across the spectrum of conflict.

Mission: Primary missions are electronic attack and suppression of enemy air defenses. Additionally, Growler supports naval, joint, and coalition strike aircraft, providing radar and communications jamming and kinetic effects to increase the survivability and lethality of all strike aircraft.

FY 2014 Program: Funds 21 EA-18G Growler aircraft and continues development and testing of EA-18G Growler electronic systems and techniques.

Prime Contractors: Airframe: The Boeing Company, St. Louis, MO Engine: General Electric Aviation, Lynn, MA

			EA-	18G G	rowler	,						
	EY 20	12		FY 2013*								
	FT 20	12	Base Budg	FI 2014								
	\$M	Qty	\$M	\$M	Qty							
RDT&E	17.1	-	13.0	-	-	-	13.0	-	11.1	-		
Procurement	1,022.7	12	1,027.4	12	-	-	1,027.4	12	2,001.8	21		
Spares	-	-	34.2	-	-	-	34.2	-	-	-		
Total	1,039.8	12	1,074.6	12	-	-	1,074.6	12	2,012.9	21		

*Reflects the FY 2013 President's Budget Request

Numbers may not add due to rounding

US Navy Phot

H-I Huey/Super Cobra

The H–I Helicopter Upgrade program consists of new build aircraft and remanufacturing efforts that convert AH–IW Super Cobra and UH–IN Huey helicopters to the AH–IZ and UH–IY versions respectively. The upgraded helicopters will have increased maneuverability, speed, and payload capability. The upgrade scope includes a new four-bladed rotor system, new transmissions, a new four-bladed tail



rotor and drive system, and upgraded landing gear. Both aircraft will also incorporate common, modernized and fully integrated cockpits / avionics that will reduce operator work load and improve situational awareness and safety. Additionally, the AH-1Z will upgrade the current Night Targeting Forward Looking InfraRed (FLIR) system to a 3rd generation, staring, focal plane array FLIR that will significantly extend autonomous weapons engagement ranges. The revised UH-1Y/AH-1Z procurement strategy is to convert 37 AH-1W helicopters into AH-1Zs, build 152 new AH-1Zs, remanufacture ten H-1N helicopters into UH-1Ys, and build 150 new UH-1Y models.

Mission: The mission of the AH-1Z attack helicopter is to provide rotary wing close air support, anti-armor, armed escort, armed/visual reconnaissance, anti-helicopter and point air defense and fire support coordination during day/night conditions in support of naval expeditionary operations or joint and combined operations. The mission of the UH-1Y utility helicopter is to provide command and control and combat assault support during day/night and reduced weather conditions.

FY 2014 Program: Provides for the production of 25 aircraft (15 UH-1Y new build aircraft and 10 new build AH-1Z aircraft). Development funds provide for follow-on improvements to sensors and weapons integration, avionics and air vehicle components that will address deficiencies, systems safety, obsolescence, reliability, supportability and cost growth issues.

	EX 201) *			FY 201	3 **			EY 20	14
	11201	2	Base Budg	get	OCO Bud	get	Total Re	quest	1120	17
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E	65.6	-	31.1				31.1	-	47.1	-
Procurement	740.0	25	790.6	27	29.8	Ι	820.4	28	821.0	25
Total	805.6	25	821.7	27	29.8	Ι	851.5	28	868.1	25

Prime Contractor: Bell Helicopter, Fort Worth, TX

* FY 2012 include Base and OCO funding

**Reflects the FY 2013 President's Budget Request

MH-60R Multi-Mission Helicopter

The MH–60R Multi-Mission Helicopter program provides battle group protection, and adds significant capability in coastal littorals and regional conflicts. The MH-60R Multi-Mission Helicopter represents a significant avionics improvement to the H-60 series helicopters. Airborne low frequency sonar is added to enhance the existing acoustics suite. An added multi-mode radar includes



an inverse synthetic aperture radar mode, which permits stand-off classification and targeting. Additionally, an improved electronics surveillance system will enable passive detection and targeting of radar sources not currently detectable.

Mission: The MH-60R will be the forward deployed fleet's primary Anti-Submarine and Anti- Surface Warfare platform. Secondary mission areas include search and rescue, vertical replenishment, naval surface fire support, logistics support, personnel transport, medical evacuation, and communications relay.

FY 2014 Program: Supports 19 helicopters as part of a continuing 5-year multiyear procurement (MYP) for MH-60 airframes, from FYs 2012 to 2016. In addition, the request includes funds for a MYP of MH-60 cockpits and sensors for the same period. The Army serves as the executive agent for the UH-60 and MH-60 airframe MYP efforts. The Navy serves as the executive agent for the MH-60 cockpits and sensor MYP efforts.

Prime Contractors: Airframe: Sikorsky Aircraft, Stratford, CT Avionics: Lockheed Martin Corporation, Owego, NY

	EX 201) *			FY 201	3**			EX 201	14
	11 201	Ζ'	Base Bud	get	OCO Bud	lget	Total Req	uest	1120	
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E	16.9	-	6.9	-			6.9	-	17.6	-
Procurement	956.7	24	842.8	19			842.8	19	831.1	19
Total	973.6	24	849.6	19	-	-	849.6	19	848.6	19

* FY 2012 include Base and OCO funding

** Reflects the FY 2013 President's Budget Request

MH-60S Fleet Combat Support Helicopter

The MH-60S is a versatile twin-engine helicopter used to maintain forward deployed fleet sustainability

through rapid airborne delivery of materials and personnel, to support amphibious operations through search and rescue

coverage and to provide an organic airborne mine countermeasures capability.

Mission: The MH-60S will conduct vertical replenishment, day/night ship-to-ship, ship-toshore, and shore-to-ship external transfer of cargo; internal transport of passengers, mail and cargo, vertical onboard delivery; air operations; day/night search and rescue, medical evacuation, and humanitarian assistance and disaster relief. Armed Helo and Organic Airborne Mine Countermeasures (OAMCM) have been added as primary mission areas for the MH-60S, being completed as block upgrades to the platform.

FY 2014 Program: Supports 18 helicopters as part of a follow-on 5-year multiyear procurement (MYP) for MH-60 airframes, from FYs 2012 to 2016. In addition, the request includes funds for a MYP of MH-60 cockpits and sensors for the same period. The Army serves as the executive agent for the UH-60 and MH-60 airframe MYP efforts.

Prime Contractor: Sikorsky Aircraft, Stratford, CT

MH–60S Fleet Combat Support Helicopter										
	EX 2013*	า*		EY 2014						
			Base Budget		OCO Budget		Total Request			
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E	29.5	-	29.7	-			29.7	-	33.8	-
Procurement	462.9	18	454.I	18			454.I	18	421.1	8
Total	492.4	18	483.8	8	-	-	483.8	8	454.9	18

* FY 2012 include Base and OCO funding

** Reflects the FY 2013 President's Budget Request

P-8A Poseidon

The P–8A Poseidon is an multi-mission platform designed to replace the P-3C Orion propeller driven planes. This derivative of the Boeing 737 aircraft is an all weather, twin engine, maritime patrol aircraft designed to sustain and



improve armed maritime and littoral capabilities in traditional, joint, and combined roles to counter changing and emerging threats. The P-8A will carry a new radar array, which is a modernized version of the Raytheon APS-149 Littoral Surveillance Radar System. The Navy plans to procure up to 117 Poseidons at a unit cost of approximately \$261 million.

Mission: The P-8A Poseidon provides Maritime Patrol Anti-Submarine Warfare (ASW), Anti-Surface Warfare (ASuW), and armed Intelligence, Surveillance and Reconnaissance (ISR) capabilities in maritime and littoral areas above, on, and below the surface of the ocean.

FY 2014 Program: Supports Full Rate Production of 16 P-8A aircraft, support equipment and spares, and provides advance procurement for 16 FY 2015 aircraft. Continues the System Development and Demonstration phase of research, development, and testing of the P-8A systems including developing and building ground and test flight articles and conducting ground and test flights.

Prime Contractors: Airframe: The Boeing Company, Seattle, WA Engine: CFM International (Snecma/General Electric Aviation), Cincinnati, OH

P-8A Poseidon											
EY 2014											
M Qty											
.4 -											
. 6											
.9 -											
.4 16											
r \$ 9. 1. 4.											

*Reflects the FY 2013 President's Budget Request

Command, Control, Communications, and Computer (C4) Systems

The Department is transforming and developing new concepts for the conduct of future joint military operations. The overarching goal is full spectrum dominance—defeat of any adversary or control of any situation across the full range of military operations—achieved through a broad array of capabilities enabled by an interconnected network of sensors, shooters, command, control, and intelligence. This network-based interconnectivity increases the operational effectiveness by assuring access to the best possible information by decision-makers at all levels, thus allowing dispersed forces to communicate, maneuver, share a common user-defined operating picture, and successfully complete assigned missions more efficiently. Netcentricity transforms the way that information is managed to accelerate decision making, improve joint warfighting, and create intelligence advantages. Hence, all information is visible, available, usable and trusted—when needed and where needed—to accelerate the decision cycles.

Net-centricity is a service-based architecture pattern for information sharing. It is being implemented by the Command, Control, Communications, Computer, and Intelligence (C4I) community via building joint architectures and roadmaps for integrating joint airborne networking capabilities with the evolving ground, maritime, and space networks. It encompasses the development of technologies like gateways, waveforms, network management, and information assurance.



FY 2014 Command, Control, Communications, and Computers (C4) Systems – Base: \$7.0 Billion

Joint Tactical Radio System

The Joint Tactical Radio System (JTRS) is a joint DoD effort to develop, produce, integrate, test, and field a family of softwaredefined, secure, multi-channel, digital radios that will be interoperable with existing radios and increase communication and networking capabilities for mobile and fixed



sites. The program encompasses ground, airborne, vehicular, maritime, and small form fit variants of the radio hardware, 15 waveforms for porting into the JTRS hardware, and network management applications. All JTRS products are being developed to ensure interoperability. The JTRS Program of Record(s) transitioned to a Military Department-management program in 2013.

Mission: The JTRS is the Department of Defense family of common software-defined programmable networking radios that will form the foundation of secure interoperable networks for Joint Vision 2020. The JTRS products will be multifunctional, multiband, multimode, network capable, capable of providing communications through a range of low probability of intercept, detection and anti-jam waveforms.

FY 2014 Program: Funds the procurement of Non-Developmental Item hardware and software under low rate initial production, and full rate production to include qualification and operational testing and sustainment of fielded radios and certified waveforms.

Prime Contractors: General Dynamics Decision Systems, Inc., Scottsdale, AZ Lockheed Martin Corporation, Manassas, VA ViaSat Incorporated, Carlsbad, CA BAE Systems/Rockwell Collins Data Link Solutions, L.L.C., Cedar Rapids, IA ITT Corporation, Fort Wayne, IN

Joint Tactical Radio System										
	FY 2012			FY 2014						
			Base Buc	OCO Budget		Total Request		112011		
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E	648.3	-	352.7	-	-	-	352.7	-	279.8	-
Procurement	491.2	7,8	1,272.0	11,059	-	-	1,272.0	11,059	437.9	10,653
Total	1,139.5	17,811	1,624.7	11,059	-	-	1,624.7	11,059	717.7	10,653

*Reflects the FY 2013 President's Budget Request

Warfighter Information Network - Tactical

The Warfighter Information Network- Tactical (WIN-T) is the cornerstone for Army's on-the-move, high speed, high capability backbone communications network, linking Warfighters in the battlefield with the Global Information Grid. The network is intended to provide command, control, communications, computers, intelligence, surveillance and reconnaissance support capabilities. The system is developed as a network for



reliable, secure and seamless video, data, imagery and voice services for the Warfighters in the theater to enable decisive combat actions. The WIN-T program development consists of four increments. Increment I provides "networking at the halt" by upgrading the Joint Network Node (JNN) satellite capability to access the Ka-band defense Wideband Global Satellite (WGS). Increment 2 provides an initial networking on-the-move to the battlefield. Increment 3 provides full networking on-the-move via air tier. Increment 4 provides protected satellite communications on-the-move.

Mission: The WIN-T program provides the United States Army with a transformational modernized network. Using satellite, air, and ground layers, it delivers the fully mobile, flexible, dynamic networking capability enabling Joint land forces to engage enemy forces deeper and more effectively.

FY 2014 Program: Funds the upgrade of 81 Units with Modification kits. The upgrade enables the Units to communicate efficiently with Units that will be fielded with WIN-T Increment 2 capability. It supports Increment 2 Full Rate Production decision for 4 Brigade Combat Teams and I Division; and continues fielding and support for previously procured Low Rate Initial Production equipment; integration of 179 Modification kits for the AN/TRC-190 shelters. It procures and fields Tactical NetOps Management Systems to 48 Units, along with program management support for Single Shelter Switch (SSS), High Capability Line of Sight, Battlefield Video-Teleconferencing Center, and Troposcatter Communications.

Prime Contractor: General Dynamics Corporation, Taunton, MA

Warfighter Information Network-Tactical											ľ
	FY 2012*			EY 2014							
			Base Budget		OCO Budget		Total Request		11 2014		
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	
RDT&E	189.9		278.0		-		278.0	-	272.4	-	
Procurement	811.1	786	892.6	2,166	-		892.6	2,166	973.5	2,139	
Spares	15.0		54.9		-		54.9	-	32.3	-	
Total	1,016.0	3,318	1,225.5	2,166	-	-	1,225.5	2,166	1,278.2	2,139	
											1

Sub-Contractor: Lockheed Martin Corporation, Gaithersburg, MD

* FY 2012 include Base and OCO funding

**Reflects the FY 2013 President's Budget Request



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Ground Programs

The Department continues to modernize its ground force capabilities to ensure the United States remains a dominant force capable of operating in all environments across the full spectrum of conflict. The Army and Marine Corps equip each soldier and Marine with the best equipment available to succeed in both today's and tomorrow's operations.

Modernization and upgrade of select Major Defense Acquisition Programs (MDAPs) is ongoing. Stryker vehicles, Abrams Tank, Bradley Fighting Vehicle and Paladin 155mm Howitzer are all undergoing modernization.

Long-term ground force development is focused on the Ground Combat Vehicle (GCV) and the Amphibious Combat Vehicle (ACV). These Pre-MDAPs will deliver shore and sea-based infantry to the battlefield in vehicles designed for future operational environments.



FY 2014 Ground Programs – Base: \$8.4 Billion
Joint Light Tactical Vehicle

DOD - JOINT

The Joint Light Tactical Vehicle (JLTV) is a joint program currently in development for the Army and Marine Corps. The JLTV is intended to replace the High Mobility Multipurpose Wheeled Vehicle (HMMWV), which is the current light tactical vehicle. The JLTV concept is based on a family of vehicles focused on scalable armor protection and vehicle agility, and mobility required of the light tactical vehicle fleet. The JLTV will provide defensive measures to protect troops while in transport, increase payload capability and achieve commonality of parts and components to reduce the overall life cycle cost of the vehicle. The JLTV project seeks to optimize performance, payload and



protection of the vehicle and crew while ensuring a design that is transportable by CH-47, CH-53, and C-130 aircraft.

Mission: As a light tactical vehicle, JLTV will be capable of performing multiple mission roles, and will be designed to provide protected, sustained, networked mobility for personnel and payloads across the full range of military operations. There are two variants planned: Combat Support Vehicles (3,500 lb) and Combat Tactical Vehicles (5,100 lb).

FY 2014 Program: Continues engineering and manufacturing development (EMD) efforts, Performance testing, Reliability & Maintainability (RAM) testing and Limited User testing, analysis and reports in preparations for MS C.

Prime Contractor: Currently in technology development.

	FY 201	FY 2012* FY 2013**									
	11201	∠	Base Budg	get	OCO Bud	lget	Total Req	uest	1120	17	
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	
RDT&E USA	-	-	72.3	-	-	-	72.3	-	84.2	-	
RDT&E USMC	45.I	-	44.5	-	-	-	44.5	-	50.4	-	
Total	45.1	-	116.8	-	-	-	116.8	-	134.6	-	

* FY 2012 include Base and OCO funding

**Reflects the FY 2013 President's Budget Request

Family of Heavy Tactical Vehicles

The Family of Heavy Tactical Vehicles (FHTV) consists of the Palletized Load System (PLS) and the Heavy Expanded Mobility Tactical Truck (HEMTT). The PLS entered service in 1993 and consists of a 16.5 ton. 10 wheel tactical



truck with self load/unload capability. The PLS carry payload on flat rack cargo bed, trailer, or International Standards Organization (ISO) containers. The HEMTT is a 10-ton, 8 wheel (8x8) truck that comes in several configurations: The Tanker to refuel tactical vehicles and helicopters, Tractor to tow the Patriot missile system and Multi-Launch Rocket System (MLRS), Wrecker to recover vehicles, and Cargo truck with a materiel handling crane. The HEMTT family entered service in 1982.

Mission: Provides transportation of heavy cargo to supply and re-supply combat vehicles and weapons systems. The PLS is fielded to transportation units, ammunition units, and to forward support battalions with the capability to self-load and transport a 20 ft. ISO container. The upgraded HEMTT A4 is an important truck to transport logistics behind quick-moving forces such as the M-I Abrams and Stryker. The HEMTT family carries all types of cargo, especially ammunition and fuel, and is used in line haul, local haul, unit resupply, and other missions throughout the tactical environment to support modern and highly mobile combat units.

FY 2014 Program: Procures 220 FHTV vehicles, and also trailers and tracking systems to modernize the heavy tactical vehicle fleet for the Active, National Guard, and Reserve units and to fill urgent theater requirements.

Prime Contractor: Oshkosh Corporation, Oshkosh, WI

		Famil	S							
	FY 2	EY 2	014							
	112	.012	Base B	udget	OCO Bu	dget	Total F	lequest		
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E	5.2	-	3.1	-	-	-	3.1	-	21.3	-
Procurement	645.0	10,732	52.9	1,534	2.1	-	55.0	1,534	14.7	220
Total	650.2	10,732	56.0	1,534	2.1	-	58.1	1,534	36.0	220

* FY 2012 include Base and OCO funding

**Reflects the FY 2013 President's Budget Request

Family of Medium Tactical Vehicles

The Family of Medium Tactical Vehicles (FMTV) consists of diesel DoD Photo powered trucks in the 2 1/2 ton and 5 ton payload class. FMTV vehicles first went into service in 1996. The Program capitalizes on current state of the art automotive technology including a diesel engine, automatic transmission, and central tire inflation system (CTIS). The use of common chassis, engines, tires, and cabs are features over 80 percent commonality of

parts between models and weight classes, which significantly

reduces the logistics burden and operating costs. Numerous models perform a wide variety of missions including cargo transport (cargo model), vehicle recovery operations (wrecker), construction (dump), line haul (tractor), and airdrop missions, and civil disaster relief. The FMTV also serves as the platform for the High Mobility Artillery Rocket System (HIMARS) and support vehicle for the Patriot missile.

Mission: The FMTV provides unit mobility and resupply of equipment and personnel for rapidly deployable worldwide operations on primary and secondary roads, trails, crosscountry terrain, and in all climatic conditions. It is strategically deployable in C-5, C-17, and C-130 aircraft. Experience in Iraq led to the development of an up-armored cab known as the Low Signature Armored Cab (LSAC) for installation on FMTV vehicles that adds ballistic and mine blast protection for the crew.

FY 2014 Program: Procures 837 Medium Tactical Vehicles to support the Army modular transformation effort to modernize the tactical wheeled vehicle fleet for medium size trucks.

Prime Contractor: Oshkosh Corporation, Oshkosh, WI

Family of Medium Tactical Vehicles													
	EY 20	112*		EY 20	14								
	1120	/12	Base Bu	dget	OCO Bu	dget	Total Re	equest	1120	T			
	\$M	Qty	\$M Qty \$M Qty \$M Qty							Qty			
RDT&E	3.8	-	3.0	-	-	-	3.0	-	2.1	-			
Procurement	434.0	1,706	346.1	1,248	28.3	223	374.4	1,471	223.9	837			
Total	437.8	1,706	349.1	1,248	28.3	223	377.4	1,471	226.0	837			
* FY 2012 include	Base and OCO	funding					N	lumbers mo	ay not add due to	rounding			

* FY 2012 include Base and OCO funding

**Reflects the FY 2013 President's Budget Request

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M-I Abrams Tank Upgrade

The MIA2 Abrams is the Army's main battle tank, which first entered service in 1980. It was produced from 1978 until 1992. Since then, the Army has modernized it with a series of upgrades to improve its



capabilities, collectively known as the System Enhancement Package (SEP) and the Tank Urban Survival Kit (TUSK). Currently funded modifications to the MI Abrams include Vehicle Health Management and Power Train Improvement & Integration Optimization, which provide more reliability, durability and fuel efficiency. Survivability enhancements include Frontal Armor upgrades.

Mission: The MIA2 Abrams provides mobile and protected firepower for battlefield superiority against heavy armor forces.

FY 2014 Program: Supports modifications and upgrades needed to maintain the armor facility at a sustainable level and minimize loss of skilled labor. It also procures numerous approved modifications to fielded MIA2 Abrams tanks, including the Data Distribution Unit (DDU) to enable network interoperability, the Vehicle Health Management System (VHMS), loader tray modification to improve safety and the Commander's Remote Operating Weapon Station (CROWS).

Prime Contractor: General Dynamics Corporation, Sterling Heights, MI

		M	- I Abra	ms 7	Fank L	Jpgra	ade			
	EX 201) *			FY 201	3**			EY 20	14
	11 201	2	Base Bud	get	OCO Buc	lget	Total Request		1120	17
	\$M	Qty	\$M	\$M	Qty					
RDT&E	9.3	-	97.3	-	-	-	97.3	-	101.3	-
Procurement	567.4	67	203.5	-	-	-	203.5	-	178.1	-
Spares	7.2	-	-	-	-	-	-	-	-	-
Total	583.9	67	300.8	-	-	-	300.8	-	279.4	-
* FY 2012 include I	Base and OCO fu	nding			nbers ma	y not add due to	rounding			

* FY 2012 include Base and OCO funding

**Reflects the FY 2013 President's Budget Request

Paladin Integrated Management (PIM)

The M109 Family of Vehicles (FOV) consists of the M109A6 Paladin 155mm Howitzer, the most advanced self-propelled cannon system in the Army, and the Field M992A2 Artillery Ammunition Support Vehicle (FAASV), an armored resupply vehicle. The Paladin Integrated Management (PIM) program addresses



concerns about obsolescence, space, weight and power and ensures sustainment of the M109 FOV through 2050. PIM replaces the current M109A6 Paladin and M992A2 FAASV vehicles with a more robust platform, incorporating the M2 Bradley common drive train and suspension components. PIM fills the capability gap created by cancellation in 2009 of the Non-Line of Sight Cannon (NLOS-C) (a component of the Future Combat System program).

Mission: The M109 Family of Vehicles provides the primary indirect fire support for Heavy Brigade Combat Teams, armored and mechanized infantry divisions as well as an armored resupply vehicle.

FY 2014 Program: Supports Developmental Testing (DT) and procures 18 PIM systems.

Prime Contractor: BAE Systems, York, PA

	Pala	din I	ntegra	ted	Mana	gem	ent (P	IM)		
	EY 20	10*			EY 20	14				
	1120	12	Base Budget		OCO Budget		Total Request		11 2014	
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E	116.3	-	167.8	-	-	-	167.8	-	80.6	-
Procurement*	-	-	206.1	17	-	-	206.1	17	260.2	18
Spares	-	-	-	-	-	-	-	-	-	-
Total	116.3	-	373.9	17	-	-	373.9	17	340.8	18

* FY 2012 include Base and OCO funding

**Reflects the FY 2013 President's Budget Request

Ground Combat Vehicle

The Ground Combat Vehicle (GCV) is a Pre-Major Defense Acquisition Program (MDAP) that entered the Technology Development phase in August 2011. It is utilizing an incremental approach for acquiring improved combat vehicle capabilities. The first increment GCV will replace Bradley Infantry Fighting Vehicles (IFVs) in Armored Brigade Combat Teams. The GCV IFV will deploy a full squad of soldiers and operate across a wide range of combat scenarios. It will increase the Infantry's tactical mobility, survivability and lethality against light and heavy armored threats across a variety of missions.

Mission: The GCV IFV will transport and provide an Infantry squad with networking, mobility, force protection and firepower required to make enemy contact under favorable conditions, gain and maintain the initiative, win engagements and establish security over wide areas.

FY 2014 Program: Transitions the GCV to the Engineering & Manufacturing Development (EMD) phase in the third quarter of FY 2014. Contractor will procure hardware and long lead material for system prototypes.

Prime Contractor: TBD

	Ground Combat Vehicle (GCV)												
	FY 201) *			FY 201	3**			EY 20)14			
	11 201	2	Base Budget OCO Budget			Total Req	uest	1120	/17				
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty			
RDT&E	435.0	-	639.9	-	-	-	639.9	-	592.2	-			
Procurement*	-	-	-	-	-	-	-	-	-	-			
Spares	-	-	-	-	-	-	-	-	-	-			
Total	435.0	-	639.9	-	-	-	639.9	-	592.2	-			
* 5/ 2012 : 1 1													

* FY 2012 include Base and OCO funding

**Reflects the FY 2013 President's Budget Request

Numbers may not add due to rounding

USA

Amphibious Combat Vehicle (ACV)

The Amphibious Combat Vehicle (ACV) is a Pre-Major Defense Acquisition Program in the Material Solution Analysis (MSA) phase. The ACV will replace the aging Amphibious Assault Vehicle and may incorporate some of the capabilities of the Expeditionary Fighting Vehicle cancelled in 2011. The ACV provides the Marine Corps with an assault





amphibian capability that is able to transition from forcible entry operations to sustained operations ashore. It will deliver Marine Infantry from ship to shore and then maneuver with other combat vehicles in Marine Air Ground Task Force operations.

Mission: The ACV will provide the Marine landing force with armored mobility from ship to objective for traditional warfare and other employment capabilities across the Range of Military Operations. It will self-deploy from amphibious ships, deliver a 17 Marine Infantry squad from a launch distance of at least 12 miles from shore and transition from water to ground operations without tactical pause.

FY 2014 Program: Continues the ACV in the Material Solution Analysis (MSA) phase.

Prime Contractor: TBD

Amphibious Combat Vehicle (ACV)													
	EY 20	112*		FY 2013**									
	1120	12	Base Bud	FI 2014									
	\$M	Qty	\$M	\$M	Qty								
RDT&E	37.0	-	95.1	-	-	-	95.I	-	137.0	-			
Procurement*	-	-	-	-	-	-	-	-	-	-			
Spares	-	-	-	-	-	-	-	-	-	-			
Total	37.0	-	95.I	-	-	-	95.I	-	137.0	-			
* FY 2012 include E	Base and O	CO fundir	may not	add due to r	ounding								

**Reflects the FY 2013 President's Budget Request

GROUND VEHICLES

Missile Defense

Missile Defense is a general term for air and missile defense. This category includes cruise missile, air and ballistic missile defense systems program development. The Missile Defense Agency and the Army are the program developers. Missile Defense includes all components designed to defeat hostile ballistic missiles of various ranges. A missile defense system includes interceptor missiles, as well as the associated sensors and command, control, battle management, and communications. Other significant investments include construction, targets and countermeasures, and research, development, testing, and evaluation activities. Encompassed in this category are all programs that are either critical to the functionality of missile defense or support missile defense as a primary mission.

The Department continues to invest and build inventories of air and missile defense capabilities, such as the Patriot Advanced Capability-3 (PAC-3) missiles, Standard Missile-3 (SM-3) interceptors, Terminal High Altitude Area Defense (THAAD) interceptors, and the Army Navy/Transportable Radar Surveillance-2 (AN/TPY-2) radar. Further, the Department continues to seek expanded international efforts for missile defense with allies and partners to provide pragmatic and cost-effective missile defense capabilities.



FY 2014 Missile Defense – Base: \$8.5 Billion

Numbers may not add due to rounding

Note: \$8.5 billion does not include the Missile Defense Agency's Science and Technology (\$350.0 million), Military Construction (\$212.0 million), nor the Operation and Maintenance (\$256.0 million) funding. The total Ballistic Missile Defense funding is \$9.2 billion for the FY 2014 request.

Ballistic Missile Defense

DOD - JOINT

The Ballistic Missile Defense (BMD) portfolio provides defensive capabilities against ballistic missile threats from rogue nations or accidental or unauthorized launches. Ballistic missile defense is an integrated layered system, to include sea, ground, air and space elements, capable of intercepting any range of threat in the boost, midcourse or terminal phases of flight. Major elements of BMD include the Patriot Advanced Capability-3 (PAC-3) Missile, the PAC-3 Missile Segment Enhancement (MSE), the Aegis BMD, the Terminal High Altitude Area Defense (THAAD), and the Ground-based Midcourse Defense (GMD).

Mission: Develop, field, and sustain a missile defense capability to defend the United States against limited ballistic missile attack, and defense against regional ballistic missile threats to U.S. forces, allies, and partners.

FY 2014 Program: Continues the research, development, testing, fielding and conversion and integration of Aegis BMD capable ships, along with the sustainment of ballistic missile defense programs. Continues the production and fielding of THAAD and the Army Navy/Transportable Radar Surveillance-2 (AN/TPY-2) Forward Based Mode Radar. Provides the development, sustainment and flight test rotation for GMD and initiates refurbishment and other efforts to increase the deployable inventory from 30 to 44 Ground-Based Interceptors by FY 2017.

Ballistic Missile Defense														
	EX 201	1)		FY 2013*										
	11201		Base Budge	et	OCO Bu	dget	Total Req	uest	1120	17				
	\$M	Qty	\$M	\$M	Qty									
RDT&E	7,909.4	-	7,327.9	-	-	-	7,327.9	-	6,289.5	-				
Procurement	2,167.3	-	1,933.4	-	-	-	1,933.4	-	2,393.5	-				
Spares	6.8	-	10.1	-	-	-	10.1	-	10.2	-				
MILCON	67.2	-	188.3	-	-	-	188.3	-	212.1	-				
0&M	201.7	-	260.0	256.2	-									
Total	10,352.4	-	9,719.7	-	-	-	9,719.7	-	9,161.5	-				

Prime Contractors: Boeing, Lockheed Martin, Northrop Grumman, Raytheon

*Reflects the FY 2013 President's Budget Request

Numbers may not add due to rounding

Includes the Missile Defense Agency's FY 2014 Military Construction (\$212 million), Science and Technology (\$350 million), and Operation and Maintenance (\$256 million) resources.

Includes the Army's modifications and spares resources.

Aegis Ballistic Missile Defense

The Aegis Ballistic Missile Defense System (BMDS) is a key sea-based element of the Ballistic Missile Defense program and provides an enduring, operationally effective and supportable BMD capability on Aegis cruisers and destroyers. The Aegis BMD builds upon the existing Navy Aegis Weapons System (AWS) and Standard Missile-3 (SM-3) capabilities. The Aegis BMD upgrades expand capability through a series of incremental, evolutionary improvements to counter more difficult threats and provide limited engagements in the terminal phase of flight.



Mission: The Aegis BMDS provides a forward-deployable,

mobile capability to detect and track ballistic missiles of all ranges, and the ability to destroy short- medium-, intermediate-range ballistic missiles, and selected long-range class threats in the midcourse phase of flight. The Aegis BMD delivers an enduring, operationally effective and supportable capability on Aegis cruisers and destroyers in defense of the U.S., deployed forces, and friends and allies.

FY 2014 Program: Supports procurement of 52 SM-3 Block IB missiles. Also procures BMD upgrades for one Aegis ship and installation onboard four Aegis ships. Continues the development of the Aegis BMD Weapon System 5.0 and 5.1.

Prime Contractors: Aegis Weapon System: Lockheed Martin Corporation, Moorestown, NJ SM-3 Interceptor: Raytheon Company, Tucson, AZ

		AEC								
	FY 20	12			FY 201	3*			FY 20	14
	FY 2012 Base Budget OCO Budget Total								1120	17
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E	1,139.0	-	992.4	-	-	-	992.4	-	937.1	-
Procurement	378.4	28	389.6	29	-	-	389.6	29	580.8	52
Total	1,517.4	28	1,382.0	29	-	-	1,382.0	29	1,517.9	52

*Reflects the FY 2013 President's Budget Request

Numbers may not add due to rounding

THAAD Ballistic Missile Defense

The Terminal High Altitude Area Defense (THAAD) is a key element of the Ballistic Missile Defense System. The THAAD Battery will provide rapidly-transportable interceptors, using "Hit-To-Kill" technology to destroy ballistic missiles inside and outside the atmosphere. A Battery consists of six truck-mounted launchers, 48 interceptors (8 per launcher), one AN/TPY-2 radar, and one Tactical Fire Control/Communications (TFCC) component.



Mission: Provide Combatant Commanders with a rapidly deployable, ground-based missile defense capability against short and medium-range ballistic missiles and asymmetric threats inside and outside the atmosphere.

FY 2014 Program: Supports procurement of one THAAD Battery, 36 interceptors and associated components, as well as support and training equipment. Also supports continued development of the Build 2.0 capability, and testing of THAAD components.

Prime Contractor: Lockheed Martin Corporation, Sunnyvale, CA

	Terminal High Altitude Area Defense (THAAD)													
	FY 20	12			FY 20	14								
	1120	12	Base Budg	Base Budget OCO Budget Total Request										
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty				
RDT&E	381.0	-	316.9	-	-	-	316.9	-	269.0	-				
Procurement	604.7	44	460.7	36	-	-	460.7	36	581.0	36				
Total	985.7	44	777.7	36	-	-	111.1	36	850.0	36				

*Reflects the FY 2013 President's Budget Request

Numbers may not add due to rounding

Patriot/PAC-3

The Army's Patriot Advanced

Capability (PAC-3) missile is the latest improvement to the Patriot air and missile defense system. The Patriot is the only combat-proven system capable of defeating Tactical Ballistic Missiles (TBMs), Cruise Missiles, and Air-Breathing threats worldwide. Joint efforts between the Army and the Missile Defense Agency have been successful in integrating PAC-3 capabilities into the Ballistic Missile Defense System (BMDS). The PAC-3 units are the Combatant Commanders' most capable asset to protect forward deployed forces.

Mission: The Patriot system contributes to the BMDS overall situational awareness for short range terminal ballistic missile threats. It can cue other systems while protecting Joint assets. The Patriot forces remain forward stationed in multiple theaters of operations, and the Army just recently activated its 15th Patriot battalion.

FY 2014 Program: Continues improvements in software for further probability of fratricide reduction, improve communications, interoperability, supportability, electronic warfare capabilities and support transition to the Integrated Air and Missile Defense (AIMD) architecture. Continues procurement of ten Enhanced Launcher Electronics Systems (ELES) to increase the warfighter's PAC-3 capability.

Prime Contractor: Lockheed Martin Missiles and Fire Control, Dallas, TX

			P	atriot	PAC-	3								
	נע סנ			FY 2013*										
	ri zu	112	Base	·	14									
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty				
RDT&E	-	-	110.0	-	-	-	110.0	-	70.1	-				
Procurement	730.9	124	846.2	84	-	-	846.2	84	256.4	-				
Spares	5.0	-	6.8	-	-	-	6.8	-	10	-				
Total	736.0	124	963.0	84	-	-	963.0	84	336.7	-				
*Deflects the EV 2	012 Prosident'	Dudgot I	Doguost				Num		ant add dun to u	rounding				

*Reflects the FY 2013 President's Budget Request

Numbers may not add due to rounding

DOD - JOINT

PAC-3/MSE Missile

DOD - JOINT

The Missile Segment Enhancement (MSE) is a performance improvement to the existing Patriot Advanced Capability (PAC-3) missile. The

MSE upgrade enhances the PAC-3 missile by

adding a dual pulse, I I-inch diameter

Solid Rocket Motor (SRM), improved lethality, a thermally hardened front-end, upgraded batteries, enlarged fixed fins, more responsive control surfaces, and upgraded guidance software. These improvements result in a more agile, lethal interceptor missile with enhanced Insensitive Munitions (IM) compliance. The PAC-3 MSE can be fired from a Patriot system.

Mission: The PAC-3 MSE is a hit-to-kill, surface-to-air missile that can intercept tactical ballistic missiles, cruise missiles, and air-breathing threats that have chemical, biological, radiological, nuclear and conventional high explosive warheads. The MSE extends the PAC-3 range, filling a critical performance gap, and affords greater protection for U.S. and allied forces.

FY 2014 Program: Begins Low Rate Initial Production of the MSE interceptor (56 missiles) to increase range and altitude capability, meeting the ever-changing threat.

Prime Contractor: Lockheed Martin Missiles and Fire Control, Dallas, TX

			P	AC- 3	B/MSE								
	EX 20	12		FY 2013*									
	1120	12	Base Bud	get	1120	17							
	\$M	Qty	\$M	\$M Qty \$M Qty \$M Qty									
RDT&E	86.I	-	69.0	-	-	-	69.0	-	68.8	-			
Procurement	75.0	-	12.9	-	-	-	12.9	-	540.4	56			
Total	161.1	-	81.9	-	-	-	81.9	-	609.2	56			
										1.			

*Reflects the FY 2013 President's Budget Request

Numbers may not add due to rounding

Ground-based Midcourse Defense

The Ground-based Midcourse Defense (GMD) element is a key component of the Ballistic Missile Defense System (BMDS), providing Combatant Commanders capability to engage ballistic missiles in the midcourse phase of flight. This phase, compared to boost or terminal, allows significant time for sensor viewing from multiple platforms and, thus, provides multiple engagement opportunities for hit-to-kill interceptors. The Ground-Based Interceptor (GBI) is made up of a three-stage, solid fuel booster and an exo-atmospheric kill vehicle. When launched, the booster missile carries the kill vehicle toward the target's predicted location in space. Once released from the booster, the 152 pound kill vehicle uses data received in-flight from ground-based radars and its own on-board sensors to hit directly the incoming missile by ramming the warhead with a closing speed of approximately 15,000 miles per hour. Interceptors are currently emplaced at Fort Greely, Alaska and Vandenberg Air Force Base, California. The GMD fire control centers have been established in Colorado and Alaska.



DOD - JOINT

Mission: The GMD provides the Combatant Commanders capability to

defend the United States, including Hawaii and Alaska, against limited long range ballistic missiles during the midcourse phase of flight.

FY 2014 Program: Continues the development and sustainment of the GMD weapon system, which includes the deployment of 26 GBIs at Fort Greely, AK and 4 GBIs at Vandenberg AFB, CA. Continues flight testing to support the Integrated Master Test Plan (IMTP) requirements. Continues development and manufacturing of GBIs. Continues the Stockpile Reliability Program (SRP) and component aging testing in order to understand the health of the deployed assets. Initiate the rebuild and High Altitude Electromagnetic Pulse (HEMP) harden Missile Field I at Fort Greely, Alaska.

Prime Contractor: Boeing Defense and Space (BDS), St. Louis, MO

		Grou	nd-base	d Mi	dcour	se D	efense			
	EY 20	10			FY 201	3*			EX 20	14
	1120	12	Base Bud	get	1120	17				
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E	1,143.3	5	903.2	5	-	-	903.2	5	1,033.9	I
Procurement	-	-	-	-	-	-	-	-	-	-
Total	1,143.3	5	903.2	5	-	-	903.2	5	1,033.9	I
*Reflects the FY 20) 13 President's Bi	udget Requ	est				Nun	nbers ma	ay not add due to	rounding

Numbers may not add due to rounding



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Munitions and Missiles

Munitions is a general term for ammunition and missiles. Ammunition are explosives consisting of all kinds of bombs, grenades, rockets, mines, projectiles, and other similar devices. There are conventional and nuclear missiles used for both tactical and strategic purposes. Many missiles are precision guided with the technical sophistication to allow guidance corrections during flight-to-target. Some programs include non-explosive articles that enhance the performance of other munitions. For example, the Joint Direct Attack Munitions (JDAM) adds guidance capability when attached to a gravity bomb, making it a "smart" bomb. Note: Interceptor missiles supporting the missile defense mission are included in the Missile Defense section.

The Department continues to build inventories of standoff weaponry, such as the Joint Air-to-Surface Standoff Missile, the Joint Standoff Weapon, and the Small Diameter Bomb.



FY 2014 Munitions and Missiles – Base: \$9.2 Billion



The Advanced Medium Range Air-to-Air Missile (AMRAAM) is an all-weather, allenvironment radar guided missile developed to improve capabilities against very lowaltitude and high-altitude, high-speed targets in an electronic countermeasures environment. The AMRAAM is a joint Navy/Air Force program led by the Air Force.

Mission: The mission of the AMRAAM is to destroy low and high altitude, high-speed enemy targets in an electronic countermeasures environment. The AMRAAM is a fireand-forget air-to-air missile, and has replaced the AIM-7 Sparrow as the U.S. military's standard beyond visual range intercept missile. The missile has undergone various service The current generation AIM-120D, has a two-way data link, life improvements. Global Position System-enhanced Inertial Measurement Unit, an expanded no-escape envelope, improved High-Angle Off-Boresight capability, and increase in range over previous variants.

FY 2014 Program: Continues production as well as product improvements such as fuzing, guidance, and kinematics.

	Adva	anced	l Mediur	n Ra	nge A	ir-to-	Air Mi	ssile		
	EX 20	12			FY 201	3*			EX 20	14
	1120	12	Base Bud	get	OCO Bud	lget	Total Ree	quest	1120	17
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E										
Air Force	75.3	-	87.0	-	-	-	87.0	-	84.2	-
Navy	2.8	-	2.9	-	-	-	2.9	-	2.6	-
Subtotal	78.1	-	89.9	-	-	-	89.9	-	86.8	-
Procurement							-	-		
Air Force	202.2	112	229.6	113	-	-	229.6	113	340.0	199
Navy	105.1	67	102.7	67	-	-	102.7	67	95.4	54
Subtotal	307.3	179	332.3	180	-	-	332.3	180	435.4	253
Spares	3.5	-	1.0	-	-	-	1.0	-	2.1	-
Total	388.9	179	423.2	180	-	-	423.2	180	524.3	253
*Reflects the FY 20) 13 President's	Budget Re	eauest				Numl	bers mav	not add due to	rounding

Prime Contractor: Raytheon Company, Tucson, AZ



The Air Intercept Missile-9X (AIM-9X), also known as SIDEWINDER, is a short range airto-air missile that provides a launch-and-leave air combat missile, which uses passive infrared energy for acquisition and tracking of enemy aircraft. The AIM-9X retains several components from the previous Sidewinder generation, the AIM-9M (primarily the motor and warhead), but incorporates a new airframe with much smaller fins and canards, and relies in a jet-vane steering system for significantly enhanced agility. The new guidance unit incorporates an imaging infrared seeker.

The AIM-9X Block II incorporates additional air-to-air beyond visual range targeting capabilities, a new fuze, and a two way datalink. The AIM-9X is a joint Navy/Air Force program led by the Navy.

Mission: The mission of the AIM-9X is to destroy low and high altitude, high-speed enemy targets in an electronic countermeasures environment.

FY 2014 Program: Begins AIM-9X Block II full rate production of as well as product improvements, such as data link capabilities, and battery and safety improvements.

			Air Inter	cept	Missi	le – 9	X			
	EV 20				FY 201	3*			EV 20	
	FT 20	12	Base Bud	get	OCO Bud	lget	Total Re	quest	FI ZU	14
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E										
Air Force	7.9	-	8.2	-	-	-	8.2	-	15.5	-
Navy	8.5	-	21.1	-	-	-	21.1	-	39.2	-
Subtotal	16.4	-	29.3	-	-	-	29.3	-	54.7	-
Procurement							-	-		
Air Force	88.5	127	88.0	164	-	-	88.0	164	119.9	225
Navy	50.2	69	80.2	150	-	-	80.2	150	117.2	225
Subtotal	138.7	196	168.2	314	-	-	168.2	314	237.1	450
Spares	7.2	-	7.0	-	-	-	7.0	-	8.6	-
Total	162.3	196	204.5	314	-	-	204.5	314	300.4	450
*Reflects the FY 20	113 President's	Rudget R	Pauest				Num	hers may	not add due to	rounding

Prime Contractor: Raytheon Missile Systems, Tucson, AZ

Chemical Demilitarization

DOD - JOINT

US Army Photo

The Chemical Demilitarization Program is composed of one Major Defense Acquisition Program, which is the Assembled Chemical Weapons Alternatives (ACWA) Program, and the U. S. Army Chemical Materials Agency (CMA), with the goal of destroying a variety of chemical agents and weapons, including the destruction of former chemical weapon production facilities. This program is designed to eliminate the existing chemical weapons stockpile in compliance with the Chemical Weapons Convention (CWC) signed in 1997 – while ensuring the safety and security of the workers, the public, and the environment.

Mission: There are three mission areas within the Chemical Demilitarization Program:

- I. Destroy chemical agents and weapons stockpile using neutralization technologies;
- 2. Destroy recovered chemical warfare material (CWM) apart from the stockpile; and
- 3. Chemical stockpile emergency preparedness.

FY 2014 Program: Continues closure activities at three CMA sites (Tooele, UT; Anniston, AL; and Umatilla, OR). Funds on going construction efforts and continues systemization activities at the ACWA Program sites (Pueblo, CO and Blue Grass, KY) to accelerate completing destruction of the remaining 10 percent of the U.S, chemical weapons stockpile as close to 2017 as possible, in accordance with the National Defense Authorization Act for FY 2008.

Prime Contractors: URS Corporation, Arlington, VA; Bechtel National Incorporated, Pueblo, CO; Bechtel Parsons, Richmond, KY

		C	Chemical	Den	nilitar	izati	on			
	EY 20	12			FY 201	3*			EY 20	14
	1120	12	Base Bud	get	OCO Bud	lget	Total Req	uest	1120	17
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
Chemical										
Agents and	1 / [[4		1 201 0				1 201 0			
Munitions	1,455.0	-	1,301.0	-	-	-	1,301.0	-	1,007.1	-
Destruction										
MILCON	75.3	-	151.0	-	-	-	151.0	-	-	-
Total	1,530.9	-	1,452.8	-	-	-	1,452.8	-	1,057.1	-
*D. a. the TV 2/		D					N I			

*Reflects the FY 2013 President's Budget Request



The JASSM Baseline provides a survivable, precision cruise missile to kill hard, medium, and soft targets. It is a 2,000-pound class weapon with a 1,000-pound multi-purpose, hardened (blast/frag/penetrator) warhead. JASSM can cruise autonomously in adverse weather, day or night, to defeat high value targets even when protected by next generation defenses. JASSM navigates to a pre-planned target using a Global Positioning System-aided Inertial Navigation System and transitions to automatic target correlation using an imaging infrared seeker in the terminal phase of flight. Maximum unclassified range for the baseline JASSM variant is greater than 200 nautical miles. JASSM is integrated on the F-15E, F-16, B-52, B-1, and B-2.

The JASSM-ER increment is highly common with the JASSM Baseline variant, offers a more fuel-efficient engine and greater fuel capacity, and adds 2.5 times the standoff range (>500nm). [ASSM-ER maintains the same outer mold line and low-observable properties as JASSM Baseline, but replaces the turbojet engine (Teledyne) with higher thrust, more fuel efficient turbofan engine (Williams International). Maximum unclassified range for the JASSM-ER variant is greater than 500 nautical miles. JASSM-ER is currently only integrated on the B-I.

Mission: The mission of the JASSM is to destroy targets from a long-range standoff position deliverable by fighter and bomber aircraft.

FY 2014 Program: ASSM continues Full Rate Production (FRP) while ASSM-ER will begin FRP in FY2014.

	j	loint	Air to S	urfac	e Stai	ndoff	Missile	9		
	EY 20	12			FY 201	3*			EY 20	14
	1120	12	Base Bud	get	quest	1120	17			
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E	5.7	-	8.0	-	-	-	8.0	-	6.4	-
Procurement	236.2	202	240.4	157	-	-	240.4	157	291.2	183
Total	241.9	202	248.4	157	-	-	248.4	157	297.6	183
*Reflects the FY 20	13 President's	Budget Re	equest		bers may	not add due to	rounding			

Prime Contractor: Lockheed Martin Corporation, Troy, AL



The Joint Direct Attack Munition (JDAM) is a joint Air Force and Navy program led by the Air Force. The JDAM improves the existing inventory of general purpose gravity bombs by integrating a Global Positioning System (GPS)/inertial navigation guidance capability that improves accuracy and adverse weather capability.

A Laser JDAM (LJDAM) variant increases operational flexibility for an expanded target set. The laser sensor kit added to the JDAM weapon kit provides ability to attack targets of opportunity, including land-moving and maritime targets, when designated by an airborne or ground laser.

Mission: This program enhances DoD conventional strike system capabilities by providing the ability to precisely attack time-critical, high value fixed or maritime targets under adverse environmental conditions and from all altitudes.

FY 2014 Program: Continues production of the system at low rate, given acceptable inventory levels of JDAM.

Prime Contractor: The Boeing Company, St. Charles, MO

		J	oint Di	rect A	ttack	Muniti	on							
	FY 20	12*		FY 2013** FY 2014										
	1120	12	Base Bu	lget	equest	112014								
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty				
RDT&E	-	-	-	-	-	-	-	-	2.5	-				
Procurement														
Air Force	127.2	4,259	101.9	3,259	53.9	1,419	155.8	4,678	188.5	6,965				
Total	127.2	4,259	101.9	3,259	53.9	1,419	155.8	4,678	191.0	6,965				

* FY 2012 include Base and OCO funding \Box

**Reflects the FY 2013 President's Budget Request



The Joint Standoff Weapon (JSOW - AGM-154) program is a joint Navy and Air Force program led by the Navy. The JSOW provides day, night, and adverse weather environment munition capability, and consists of three variants. The JSOW baseline (BLU-97) provides a day/night all-weather environment submunition for soft and area targets. The JSOW anti-armor variant (BLU-108) contains precision-guided anti-armor submunition warheads. The JSOW Unitary incorporates the dual-stage Broach penetrating warhead with terminal accuracy via Automatic Target Acquisition Seeker Technology.

Mission: The JSOW is a primary standoff precision guided munition. The day/night, adverse weather capability provides continuous munitions operations from a survivable standoff range.

FY 2014 Program: Continues JSOW Unitary production along with product improvements to introduce a network-enabled, maritime target capability for the Navy only.

Prime Contractor: Raytheon Missile Systems, Tucson, AZ

			Joint St	tand	off We	eapoi	n			
	EY 20	12			FY 20	3*			EY 20	14
	1120	12	Base Bud	get	OCO Bud	lget	Total Red	quest	1120	17
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E	7.3	-	5.5	-	-	-	5.5	-	0.4	-
Procurement	131.7	246	127.6	280	-	-	127.6	280	136.8	328
Spares	0.2	-	0.2	-	-	-	0.2	-	0.3	-
Total	139.2	246	133.3	280	-	-	133.3	280	137.5	328
			-							1.

*Reflects the FY 2013 President's Budget Request

Small Diameter Bomb

The Small Diameter Bomb (SDB) is a joint Air Force and Navy program led by the Air Force to provide a conventional small sized, precision guided, standoff air-to-ground weapon that can be delivered from both fighters and bombers. The SDB I was a fixed target attack weapon. The SDB-II incorporates a seeker and data link which expands the use to moving targets.

USAF Image

DOD - JOINT

Mission: The mission of the SDB II is to destroy targets from a medium-range

standoff position deliverable by both fighters

and bombers, with higher loadout and less collateral damage compared to other weapons.

FY 2014 Program: Funds Engineering and Manufacturing Development (EMD) and begins Low Rate Initial Production (LRIP) of SDB II for use against moving, relocatable, and fixed targets.

Prime Contractor: Raytheon Missile Systems, Tucson, AZ (SDB II)

			Small	Diam	eter E	Bomb)			
	EX 201	า*			FY 201	3**			EV 20	
	FT 201	Ζ.	Base Bud	get	OCO Bud	dget	Total R	equest	FT 20	17
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E										
Air Force	133.9	-	143.0	-	-	-	143.0		115.0	-
Navy	23.2	-	31.1	-	-	-	31.1	-	46.0	-
Subtotal	157.1	-	174.1	-	-	-	174.1	-	161.0	-
Procurement							-			
Air Force	20.1	150	42.0	144	-	-	42.0	144	42.4	144
Spares	-	-	14.8	-			14.8		8.0	
Total	177.2	150	230.9	144	-	-	230.9	144	211.4	44
* FY 2012 include	Base and OCO fu	nding						Numbers may	y not add due to	o rounding

**Reflects the FY 2013 President's Budget Request

Javelin Advanced Anti-Tank Weapon

The Javelin Advanced Anti-tank Weapon System-Medium is a man-portable fire-andforget weapon system used against tanks with conventional and reactive armor. Special features of Javelin are the choice of top attack or direct fire mode, integrated day/night sight, soft launch permitting fire from enclosures, and imaging infrared seeker.

Javelin can be employed for a variety of combat missions, but is used primarily against armored vehicles and in a

direct-attack mode, for use against buildings and bunkers. It uses an imaging infrared two-dimensional staring Focal plane array (FPA) seeker, and a tandem warhead with two shaped charges: a precursor warhead to defeat reactive armor, and a primary warhead to penetrate base armor and other structures.

Mission: To defeat armored targets with a man-portable, shoulder-fired weapon.

FY 2014 Program: Continues full rate production of missiles, Command Launch Units (CLU), and training devices.

Prime Contractor: Raytheon Missile Systems/Lockheed Martin Javelin Joint Venture, Tucson, AZ and Orlando, FL

	J	avelin	Advanc	ed A	Anti-Ta	ank V	Neapo	n		
	EY 20	12			FY 201	3*			EX 20	14
	1120	12	Base Bud	get	quest	1120	17			
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E	9.7	-	5.0	-	-	-	5.0	-	5.0	-
Procurement	172.5	710	81.1	400	-	-	81.1	400	110.5	449
Total	182.2	710	86.1	400	-	-	86.I	400	115.5	449

*Reflects the FY 2013 President's Budget Request

Numbers may not add due to rounding

JSA

USMC Photo

Guided Multiple Launch Rocket System

The Guided Multiple Launch Rocket System (GMLRS) consists of a C-130 transportable, wheeled, indirect fire, rocket/missile system capable of firing all rockets and missiles in the current and future Multiple Launch Rocket System (MLRS) family of munitions.



US Army Photo

GMLRS uses an on-board Inertial Measurement Unit (IMU) in combination with a Global Positioning System (GPS) guidance system to provide improved performance. The missile, which has a range of approximately 70 kilometers, can carry a variety of different warheads, including unitary and scatterable sub-munitions. A new warhead is currently in development, which eliminates the use of submunitions, but performs as a drop-in replacement for the currently-fielded Dual-Purpose Improved Conventional Munition (DPICM) warhead. The purpose of this development, is to design a warhead that leaves no unexploded submunitions on the battlefield.

Mission: The mission of GMLRS is to neutralize or suppress enemy field artillery and air defense systems and supplement cannon artillery fires.

FY 2014 Program: Continues full rate production as well as product improvements such as insensitive munition and alternative warhead development.

Prime Contractor: Lockheed Martin Corporation, Dallas, TX

	C	Guided	m							
	FY 20) 2*				FY 2	014			
			Base Bu	ıdget	OCO Bu	ıdget	Total R	equest		
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E	64.6	-	143.0	-	-	-	143.0	-	110.6	-
Procurement	333.2	3,194	218.7	1,608	20.5	186	239.2	1,794	237.2	1,788
Total	397.8	3,194	361.7	1,608	20.5	186	382.2	1,794	347.8	1,788

* FY 2012 include Base and OCO funding

**Reflects the FY 2013 President's Budget Request



The Evolved Seasparrow Missile (ESSM) is an improved version of the NATO Seasparrow missile, designed for ship self-defense.

ESSM has an 8-inch diameter forebody that tapers to a 10-inch diameter rocket motor. The guidance package uses a semi-active homing seeker, in combination with a midcourse data uplinks. The missile uses a high-thrust, solid-propellant rocket motor provides high thrust for maneuverability with tail control via a Thrust Vector Controller (TVC). This gives the missile, a capability to engage and defeat agile, high-speed, low-altitude anti-ship cruise missiles (ASCMs), low velocity air threats (LVATs), such as helicopters, and high-speed, maneuverable surface threats.

Mission: The mission of the ESSM is to provide to the Navy a missile with performance to defeat current and projected threats that possess low altitude, high velocity, and maneuver characteristics beyond the engagement capabilities of other ship self-defense systems.

FY 2014 Program: Continues full rate production.

Prime Contractor: Raytheon Missile Systems, Tucson, AZ

		Ε	volved S	easp	oarrow	y Mis	sile		j	
	EY 201	1.0*			FY 201	3**			EY 20	14
	1120		Base Bud	get	uest	112014				
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E	-	-	-	-	-	-	-	-	-	-
Procurement	48.5	35	58.2	37	-	-	58.2	37	76.8	53
Total	48.5	35	58.2	37	-	-	58.2	37	76.8	53

* FY 2012 include Base and OCO funding

**Reflects the FY 2013 President's Budget Request

Rolling Airframe Missile

The Rolling Airframe Missile (RAM) is a high firepower, Lightweight complementary self-defense system to engage anti-ship cruise missiles.

The systems design is based upon the infra-red seeker of the Stinger (FIM-92) missile, and the warhead, rocket motor and fuse from the Sidewinder (AIM-9) missile. The missile uses Radio Frequency (RF) for midcourse guidance, and transitions to



Infrared (IR) guidance for terminal engagement. Currently there are two RIM-116 configurations: Block 1 (RIM-116B) and Block 2 (RIM-116C). The Block 1 missile is in full rate production, and the Block 2 configuration is currently in low rate production and undergoing developmental and organizational testing.

Mission: The mission of the RAM is to provide high firepower close-in defense of combatant and auxiliary ships by utilizing a dual mode, passive radio frequency/infrared missile in a compact 21 missile launcher.

FY 2014 Program: Continues production of missiles and alterations

Prime Contractor: Raytheon Missile Systems, Tucson, AZ

			Rolling /	Airfr	ame N	1issil	е			
	EY 20	12			FY 20	3*			EY 20	14
	1120	12	Base Bud	get	OCO Bud	uest	1120	17		
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E	-	-	-	-	-	-	-	-	-	-
Procurement	66.2	61	66.8	62	-	-	66.8	62	67.6	66
Total	66.2	61	66.8	62	-	-	66.8	62	67.6	66

*Reflects the FY 2013 President's Budget Request



The STANDARD missile family consists of various air defense missiles including supersonic, medium, and extended range; surface-to-air; and surface-to-surface missiles. The Standard Missile-6 is a surface Navy Anti-Air Warfare (AAW) missile that provides area and ship self defense. The missile is intended to project power and contribute to raid annihilation by destroying manned fixed and rotary wing aircraft, Unmanned Aerial Vehicles (UAV), Land Attack Cruise Missiles (LACM), and Anti-Ship Cruise Missiles (ASCM) in flight. It was designed to fulfill the need for a vertically launched, extended range missile compatible with the Aegis Weapon System (AWS) to be used against extended range threats at-sea, near land, and overland. SM-6 combines the tested legacy of STANDARD Missile-2 (SM-2) propulsion and ordnance with an active Radio Frequency (RF) seeker modified from the AIM-120 Advanced Medium Range Air-to-Air Missile (AMRAAM), allowing for over-the-horizon engagements, enhanced capability at extended ranges and increased firepower.

Mission: The mission of the STANDARD missile family is to provide all-weather, anti-aircraft and surface-to-surface armament for cruisers, destroyers, and guided missile frigates. The most recent variant of Standard Missile is SM-6, which incorporates an AMRAAM seeker for increased performance, including overland capability.

FY 2014 Program: Continues production of the SM-6 variant.

Standard Family of Missiles												
	EY 20	12		EV 2014								
			Base Budget		OCO Budget		Total Request					
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty		
RDT&E	55.6	-	63.9	-	-	-	63.9	-	75.6	-		
Procurement	356.9	89	399.5	94	-	-	399.5	94	368.0	81		
Spares	6.6	-	19.9	-			19.9	-	19.0			
Total	419.1	89	463.4	94	-	-	463.4	94	443.6	81		

Prime Contractor: Raytheon Missile Systems, Tucson, AZ

*Reflects the FY 2013 President's Budget Request



Tomahawk provides an attack capability against fixed and mobile/moving targets, and can be launched from both surface ships and submarines. Key elements of the Block IV Tomahawk design are an improved navigation and guidance computer; improved anti-jam Global Positioning System (GPS) capability; improved responsiveness and flexibility through two-way satellite communications for in-flight re-targeting; a loiter capability; and the ability to send a Battle Damage Indication Image (BDII) of over flown areas prior to impact.

Block IV Tomahawk delivers a 1,000 lb class unitary warhead at a range of 900 nm. For guidance, the Block IV Tomahawk normally employs inertial guidance or GPS over water to follow a preset course; once over land, the missile's guidance system is aided by Terrain Contour Matching (TERCOM). Terminal guidance is provided by the Digital Scene Matching Area Correlation (DSMAC) system or GPS, producing an accuracy of about 10 meters.

Mission: The mission of the TOMAHAWK is to provide a long-range cruise missile launched from a variety of platforms against land and sea targets.

FY 2014 Program: Continues production at a minimum sustaining rate.

Prime Contractor: Raytheon Missile Systems, Tucson, AZ

Tactical Tomahawk Cruise Missile												
	EY 20	12		EY 2014								
	1120	12	Base Bud	Base Budget		OCO Budget		quest	112014			
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty		
RDT&E	8.6	-	11.3	-	-	-	11.3	-	12.4	-		
Procurement	297.6	196	309.0	196	-	-	309.0	196	312.5	196		
Total	306.2	196	320.3	196	-	-	320.3	196	324.9	196		

*Reflects the FY 2013 President's Budget Request

Trident II Ballistic Missile Modifications

The Trident II (D5) is a submarine launched ballistic missile with greater range, payload capability, and accuracy than the Trident I (C4) missile.

Mission: The mission of the Trident II (D5) ballistic missile is to deter nuclear war by means of assured retaliation in response to a major attack on the United States or its Allies, and to enhance nuclear stability by deterring an enemy first strike. The Trident II (D5) missile is carried on the OHIO CLASS Fleet Ballistic Missile Submarines through 2042 and has the ability to precisely attack time-critical, high value, Fixed targets. The D5 deploys the MK-5 re-entry vehicle with the W88 nuclear warhead. The importance of this program as a key component to the sea-based leg of the nuclear triad was re-confirmed by the President and Congress with the ratification of the New START Treaty in 2011.

FY 2014 Program: Funds the development of advanced components to improve the reliability, safety and security of Arming, Fuzing and Firing systems, and the procurement and production costs for flight test instrumentation, 12 Solid Rocket Motors, the Post Boost Control System, the Life Extension Program (LEP) and spares. The LEP consists of the procurement of 24 missile electronic and guidance Supportability Mods/Strategic Programs Alteration (SPALT) kits. Also includes \$14 million in RDT&E to fund studies for the National Nuclear Security Administration W88 LEP.

US Navy Photo

USN

Prime Contractor: Lockheed Martin Corporation, Sunnyvale, CA

	Trident II Ballistic Missile Mods													
	FY 20	12			FY 2014									
	1120	12	Base Budg	Base Budget			Total Request							
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty				
RDT&E	87.5		105.9				105.9		98.I	-				
Procurement	1,475.5	24	1,405.7				1,405.7	-	1,365.3	-				
Total	1,563.0	24	1,511.6	-	-	-	1,511.6	-	1,463.4	-				

*Reflects the FY 2013 President's Budget Request

Numbers may not add due to rounding

MUNITIONS AND MISSILES



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Shipbuilding and Maritime Systems

A central principle to the U.S. Maritime Strategy is forward presence. Forward presence promotes conflict deterrence by ensuring forces are in a position to expeditiously respond to conflict. Therefore, sea services must buy, build, and maintain maritime systems in accordance with mission need.

The Shipbuilding Portfolio for FY 2014 includes the funding for 8 new ships (2 Virginia Class nuclear attack submarines; I Arleigh Burke Class Flight IIA destroyer; 4 Littoral Combat Ships (LCS); I Afloat Forward Staging Base (AFSB)) These procurements will allow the U.S. Navy to maintain maritime superiority well into the 21st century. The following highlights the FY 2014 Shipbuilding Portfolio budget request:



FY 2014 Shipbuilding and Maritime Systems – Base: \$23.3 Billion

Support ship subcategory includes funding in the National Defense Sealift Fund (NDSF) Numbers may not add due to rounding

CVN-21 Carrier Replacement

Aircraft carriers are the centerpiece of U.S. Naval forces. **US Navy Image** Currently, there are 10 active carriers in the Navy's fleet. The CVN-21 ships will include new technologies and improvements such that the ship and air wings can operate with fewer personnel by replacing maintenance-intensive systems with low maintenance systems. This class will utilize all electric utilities, eliminating steam service lines from the ship, reducing maintenance requirements and improving corrosion control efforts. The new AIB reactor, Electromagnetic Aircraft Launch System (EMALS), Advanced Arresting Gear (AAG) and Dual Band Radar (DBR) all offer enhanced capability with reduced manning requirements.

Mission: Provide the core capabilities of forward presence, deterrence, sea control, power projection, maritime security and humanitarian assistance. The Gerald R. Ford class will be the premier forward asset for crisis response and early decisive striking power in a major combat operation.

FY 2014 Program: Funds second year of construction for USS John F. Kennedy (CVN 79), completion costs for USS Gerald R. Ford (CVN 78) and continued development of ship systems.

Prime Contractor: Huntington Ingalls Incorporated, Newport News, VA

CVN 21 Carrier Replacement												
	FY 20		FY 2014									
	1120	12	Base Bud	Base Budget		OCO Budget		uest	112014			
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty		
RDT&E	136.9	-	173.5	-	-	-	173.5	-	47.	-		
Procurement	554.7	-	608.2	Ι	-	-	608.2	Ι	1,532.9	-		
Total	691.6	-	781.7	I	-	-	781.7	I	1,680.0	-		

*Reflects the FY 2013 President's Budget Request

Numbers may not add due to rounding

USN

DDG-51 AEGIS Destroyer

The DDG-51 AEGIS Destroyer Class ships operate defensively and offensively as units of Carrier Strike Groups and Surface Action Groups, in support of Underway Replenishment Groups and the Marine Amphibious Task Forces in multi-threat environments, which include air, surface, and subsurface threats. The DDG-51 class ship is armed with a vertical launching system, which accommodates 96 missiles and a 5-inch gun that provides Naval Surface Fire Support to forces ashore and anti-ship gunnery capability and is the first class of destroyers delivered with a ballistic missile defense capability.

Mission: Provides air and maritime dominance and land attack capability with its AEGIS Anti-Submarine and Tomahawk Weapon Systems.

FY 2014 Program: Funds one DDG-51 AEGIS Destroyer (DDG 119) as part of a multiyear procurement for 9 ships from FY 2013 - FY 2017 and provides Advance Procurement for 2 ships in FY 2015.

Prime Contractors: General Dynamics Corporation, Bath, ME Huntington Ingalls Incorporated, Pascagoula, MS

DDG 51 AEGIS Destroyer											
	EY 2012			FY 2013*							
	1120	12	Base Bud	Base Budget		OCO Budget		uest	112014		
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	
RDT&E	-	-	-	-	-	-	-	-	-	-	
Procurement	2,081.4	I	3,514.9	2			3,514.9	2	2,004.0	I	
Total	2,081.4	I	3,514.9	2	-	-	3,514.9	2	2,004.0	I	

*Reflects the FY 2013 President's Budget Request

Numbers may not add due to rounding

USN

Littoral Combat Ship



Mission: Defeats asymmetric threats, and assures naval and joint forces access into contested littoral regions by prosecuting small boats, mines countermeasures, and littoral anti-submarine warfare.

FY 2014 Program: Funds construction of four LCS seaframes and procurement of mission modules.

Prime Contractors: Lockheed Martin, Marinette, WI and Austal USA, Mobile, AL

			Littoral	Cor	nbat S	Ship				
	FY 2012 FY 2013*									
	1120	12	Base Budget		OCO Budget		Total Request		112014	
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty
RDT&E	297.1	-	429.4	-	-	-	429.4	-	406.4	-
Procurement	1,820.9	4	1,907.4	4	-	-	1,907.4	4	1,983.1	4
Total	2,118.0	4	2,336.8	4	-	-	2,336.8	4	2,389.5	4
										1.

*Reflects the FY 2013 President's Budget Request

Procurement quantities reflect seaframes only

SSN-774 Virginia Class Submarine

The Virginia Class Submarine is a multi-mission nuclear-powered attack submarine that provides the Navy with the capabilities to maintain undersea supremacy in the 21st century. Characterized by advanced stealth and enhanced features



for Special Operations Forces, this submarine is able to operate in deep ocean antisubmarine warfare and littoral operations. Equipped with vertical launchers and torpedo tubes, the submarine is able to launch Tomahawk cruise missiles as well as heavy weight torpedoes and anti-ship missiles.

Mission: Seeks and destroys enemy ships across a wide spectrum of scenarios, working independently and in concert with a battle group, separate ships, and independent units. Provides theatre commanders with time sensitive critical information for accurate knowledge of the battlefield.

FY 2014 Program: Funds two ships at \$3.7 billion as part of an multiyear procurement contract and advance procurement of \$1.6 billion for two ships in FY 2015. Continues funding development of the Virginia Payload Module and technology, prototype components, and systems engineering needed for design and construction.

Prime Contractors: General Dynamics Corporation, Groton, CT Huntington Ingalls Incorporated, Newport News, VA

l	S	SN 7	74 Virgi	nia (Class S	Subr	narine					
	FY 20	12		FY 2014								
	1120	12	Base Bud	get	OCO Budget		Total Request		112014			
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty		
RDT&E	112.2	-	165.2	-	-	-	165.2	-	118.8	-		
Procurement	4,682.7	2	4,092.5	2	-	-	4,092.5	2	5,299.0	2		
Total	4,794.9	2	4,257.7	2	-	-	4,257.7	2	5,417.8	2		

*Reflects the FY 2013 President's Budget Request

Numbers may not add due to rounding

SHIPBUILDING AND MARITIME
CVN Refueling Complex Overhaul

The CVN Refueling Complex Overhaul (RCOH) life extension program provides for the modernization of nuclear powered fleet aircraft carriers. A RCOH includes replacement of expended nuclear fuel, general maintenance, renovation, and system modernization and upgrades all of which extend the useful operational life of the ship.



Mission: Refuels and upgrades the Nimitz class aircraft carriers at mid-life to ensure reliable operations during the remaining ship life.

FY 2014 Program: Funds the procurement of long-lead items and long-lead efforts for the Refueling and Complex Overhaul of USS George Washington (CVN 73) and completion of USS Abraham Lincoln (CVN 72).

Prime Contractor: Huntington Ingalls Incorporated, Newport News, VA

CVN Refueling Complex Overhaul												
	EV 20	10		FY 2013*								
	FT 20	12	Base Bud	get	OCO Bud	lget	Total Request		112014			
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty		
RDT&E	-	-	-	-	-	-	-	-	-	-		
Procurement	693.8	I	1,613.3	-	-	-	1,613.3	-	1,951.2	-		
Total	693.8	I	1,613.3	-	-	-	1,613.3	-	1,951.2	-		

*Reflects the FY 2013 President's Budget Request

Numbers may not add due to rounding

FY 2014 Program Acquisition Costs by Weapon System

Ohio Replacement (OR) Program

The Ohio Replacement Program is designed to replace the current class of ballistic missile submarines. Currently in the research and development stage, ship requirements and specifications are being refined. The ships will begin construction in FY 2021 for FY 2028 delivery when the first Ohio class ships are due to be decommissioned.

Mission: Provides a sea-based strategic nuclear force.

FY 2014 Program: Funds the

research and development of nuclear technologies and systems for future ships.



Ohio Replacement (OR) Program													
	EX 20	10			FY 201	3*	0		EX 20	14			
	FT 20	12	Base Bud	get	OCO Budget		Total Request		11 2014				
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty			
RDT&E	1,046.6	-	564.9	-	-	-	564.9	-	1,083.7	-			
Procurement	-	-	-	-	-	-	-	-	-	-			
Total	1,046.6	-	564.9	-	-	-	564.9	-	1,083.7	-			
*Reflects the FY 20	13 President's E	Budget Re	auest				Num	bers mav	not add due to i	rounding			

Prime Contractor: TBD

SHIPBUILDING AND MARITIME SYSTEMS

Afloat Forward Staging Base

An Afloat Forward Staging Base (AFSB) is a Mobile Landing Platform (MLP) variant which will include a flight deck, berthing, fuel storage, equipment storage and repair spaces. The AFSB will operate globally in support of patrol craft, auxiliary boats, helicopters, and special operations forces by providing a base of operations for multiple missions including counter-piracy/smuggling, maritime security, mine clearing, humanitarian aid and disaster relief. The AFSB variant will include additional accommodations, aviation



and hangar space, additional logistics and underway replenishment capabilities, and additional command, control, communications, computers and intelligence capabilities to support future missions.

Mission: Provides the Combatant Commanders (COCOMs)/Joint Force Commanders a highly flexible operational and logistics support capability to meet widely varied expeditionary missions ranging from delivering combat ready personnel ashore in reinforcement mission in support of an Expeditionary Strike Force to conducting independent operations in a permissive environment.

FY 2014 Program: Funds procurement of one AFSB.

Prime Contractor: TBD

Afloat Forward Staging Base												
	EX 20	12			EX 20	FY 2014						
	1120	12	Base Bud	get	OCO Bu	dget	Total Re	quest	112014			
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty		
RDT&E	-	-	-	-	-	-	-	-	-	-		
Procurement	-	-		-	-	-	-	-	524.0	I		
Total	-	-	-	-	-	-	-	-	524.0	I		
*Reflects the FY 20)] 3 President's	Rudøet Re	- eauest				Ν	lumbers r	nav not add due to	rounding		

SHIPBUILDING AND MARITIME SYSTEMS

Space Based and Related Systems

Space assets support deployed United States forces by providing communications services, navigation capabilities, and information collected by remote sensors such as weather satellites and intelligence collection systems. Space forces contribute to the overall effectiveness of U.S. military forces by acting as a force multiplier that enhances combat power. The capability to control space contributes to achieving information superiority and battle space dominance.

Procurement of satellites and launch services are typically funded two years prior to launch. Generally speaking, the first two satellites of a new system are purchased with Research, Development, Test & Evaluation (RDT&E) funding and the remainder of the satellites are purchased with procurement funding. The Air Force is continuing approaches to maximize efficient satellite and launch vehicle acquisitions. These approaches include using block buys and fixed-price contracting to stabilize requirements, promoting a stable RDT&E investment for evolutionary growth, and modifying the annual funding approach for industrial base efficiency.

The FY 2014 budget highlights include the continued incremental funding for procurement of the space vehicles Advanced Extremely High Frequency (AEHF)-5, AEHF-6, Space Based Infrared System (SBIRS) Geosynchronous Earth Orbit (GEO)-5 and GEO-6, and continues the Space Modernization Initiative RDT&E activities. Also funds the procurement of Global Positioning System (GPS) III satellites 7 and 8, as well as the block buy of Evolved Expendable Launch Vehicle (EELV) Launch Services, specifically five launch vehicles, and up to ten Launch Capability activities per year.



FY 2014 Space Based and Related Systems – Base: \$8.0 Billion

Does not include MDA or S&T Space related funding

Mobile User Objective System

The Mobile User Objective System (MUOS) is the next generation DoD advanced narrow band Ultra High Frequency (UHF) communications satellite constellation. It consists of four satellites in geosynchronous orbit with one on-orbit spare and a fiber optic terrestrial network connecting four ground stations. The MUOS satellite includes the new networked payload and a separate legacy payload. The MUOS will replace the existing UHF Follow-On (UFO) constellation and provide a much higher data rate capability for mobile users.

- There will be 16 beams per satellite with data rates of 64 kbps "on-the-move"
- The DoD Teleport will be the portal to the Defense Information System Network (DSN, SIPRNET and NIPRNET)
- MUOS-1 was launched in February 2012 and is currently providing legacy UHF satellite communications in the Pacific Command and Area of Responsibility
- The launch of MUOS-2 is planned for July 2013, with the five-satellite, global constellation expected to achieve full operational capability in 2017.

Mission: The MUOS will provide the mobile warfighter with point-to-point and netted communications services with a secure, "communications-on-the-move" capability on a 24 hours a day, 7 days a week basis.

FY 2014 Program: Funds on-orbit testing for satellite #2; remaining testing and preparation efforts to support launch of satellite #3 scheduled for July 2014; and continues production of satellites #4 and #5, scheduled for launch in July 2015 and October 2016, respectfully.

Mobile User Objective System											
	EY 20	12		FY 2013*							
			Base Budg	get	OCO Budget		Total Request		112014		
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	
RDT&E	237.2	-	145.9	-	-	-	145.9	-	36.0	-	
Procurement	238.2	-	21.5	-	-	-	21.5	-	23.0	-	
Total	475.4	-	167.4	-	-	-	167.4	-	59.0	-	
*Reflects the FY 20	013 President's	Budget R	equest				Number	rs may n	ot add due to r	ounding	

Prime Contractor: Lockheed Martin Corporation, Sunnyvale, CA

SPACE BASED AND RELATED SYSTEMS

Advanced Extremely High Frequency

The Advanced Extremely High Frequency (AEHF) system will be a four satellite constellation of communications satellites in geosynchronous orbit that will replenish the existing EHF system, MILSTAR, at a much higher capacity and data rate capability.

- 24-hour low, medium, and eXtended data rate satellite connectivity from 65 N to 65 S latitude worldwide
- 8 full time spot beam antennas @ 75 bps to 8.192 Mbps data rate
- 24 time shared spot beam coverages @ 75 bps to 2.048 Mbps data rate
- 2 crosslink antennas per satellite (60 Mbps)
- AEHF-I and AEHF-2 are in orbit and operational.
- The launch of AEHF-3 is planned in 2013 and AEHF-4 in 2017. AEHF-5 and AEHF-6 are scheduled to replace AEHF-1 and AEHF-2 at the end of their useful life and will deliver outside this budget plan.

Mission: The constellation provides survivable, anti-jam, worldwide secure communications for strategic and tactical users aimed at withstanding shocks from a nuclear attack. It also provides transmission of tactical communications, such as real-time video, battlefield maps, and targeting data. The AEHF is a collaborative program that also includes resources for Canada, the United Kingdom, and the Netherlands.

FY 2014 Program: Continues incremental funding for procurement of the space vehicles AEHF-5 and AEHF-6, and continues the Space Modernization Initiative (SMI) RDT&E activities. SMI will reduce future production costs by improving insertion of new technologies to replace obsolete parts and materials.

Advanced Extremely High Frequency												
	EV 20	10		FY 2013*								
	1120	12	Base Bud	Base Budget		get	Total Reques		112017			
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty		
RDT&E	385.0	-	229.2	-	-	-	229.2	-	272.9	-		
Procurement	551.5	2	557.2	-	-	-	557.2	-	379.6	-		
Total	936.5	2	786.4	-	-	-	786.4	-	652.5	-		
		0 / 0								1.		

Prime Contractor: Lockheed Martin Corporation, Sunnyvale, CA

*Reflects the FY 2013 President's Budget Request

Numbers may not add due to rounding

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e Courtesy of Lockheed Martin

SPACE BASED AND RELATED SYSTEMS

Evolved Expendable Launch Vehicle

The Evolved Expendable Launch Vehicle (EELV) replaced the heritage Delta, Atlas, and Titan launch vehicle families. The EELV provides the DoD, the National Reconnaissance Office (NRO), and other government and commercial purchasers launch services for medium to heavy lift class satellites. As of December 2006, the United Launch Alliance joint venture is the sole provider of EELV launch services.

- EELV intends to include new entrants when certified.
- 100% mission success with over 56 consecutive operational launches.
- The program is being restructured to introduce competition. Increased quantity buy authorities and improved contracting approaches have resulted in savings of over \$1.1 billion, reflected in this budget.

Mission: The EELV program provides launch services and capability for medium and heavy class satellites.

FY 2014 Program: Continues the block buy of EELV Launch Services (ELS), specifically five launch vehicles, which are usually ordered no-later-than 24 months prior to the planned mission; and, funds EELV Launch Capability (ELC) activities, such as launch preparation, site and operations activities, post mission analysis, and other related tasks. ELC funds can support up to ten launches in a year.



Photos

courtesy Of ULA

Atlas V

USAF

Delta IV

Heavy

		Evolv	ved Expe	ndab	le Laun	ich V	ehicle		
	EY 20	12			FY 201	3*			EY 20
	1120	12	Base Bud	Base Budget OCO Bu			Total Req	uest	1120
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M
RDT&E	14.1	-	8.0	-	-	-	8.0	-	28.0
Procurement	1,681.7	5	1,679.9	4	-	-	1,679.9	4	1,852.9

4

Prime Contractor: United Launch Alliance, Centennial, CO

*Reflects the FY 2013 President's Budget Request; Air Force qty and funding only.

1.687.8

5

1.695.8

Numbers may not add due to rounding

1.880.9

14

Qty

5

5

SPACE BASED AND RELATED SYSTEMS

1.687.8

4

Total

Global Positioning System

The Global Positioning System (GPS) provides world-wide, 24 hour a day, all weather 3-dimensional position, navigation and precise timing (PNT) information for military

and civil users. The fully operational GPS constellation is expected to consist of 27 satellites.

The GPS III space vehicles will be fully backward compatible with legacy signals while

delivering new capabilities and enhancements to include a new LIC Galileo-compatible signal (civil), L5 (safety of life), and a more powerful M-code (military) signal, and a path for graceful growth to on-ramp future capabilities. The GPS Next Generation Operational Control System (OCX) will enable operational use of all modernized GPS signals, as well as enabling improved PNT performance.

Mission: The GPS constellation provides worldwide PNT to military and civilian users.

FY 2014 Program: Funds the procurement of GPS III satellites 7 and 8, as well as the advanced procurement for the satellites 9 and 10. Continues the development of GPS OCX Blocks I and 2, and funds the technology development of Military GPS User Equipment (MGUE) Increment I. Funds the GPS Program Office's responsibility as the Prime Integrator (Enterprise Integration) effort to synchronize space, control and user segment programs and manage civil/military specifications and requirements.

Prime Contractors: GPS III: Lockheed Martin Corporation, Newtown, PA GPS OCX: Raytheon Company, Aurora, CO GPS MGUE Inc I: L3 Interstate Electronics Corp, Anaheim, CA Rockwell Collins International,

I B · I IA

				Ray	theon Co	ar Kap ompar	ng, El Segu	ndo, C	A			
Global Positioning System												
	FY 2012 FY 2013*											
	1120	12	Base Budget		OCO Budg	OCO Budget		uest				
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty		
RDT&E	922.8	-	817.0	-	-	-	817.0	-	742.0	-		
Procurement	601.7	2	551.1	2	-	-	551.1	2	533.6	2		
Total	1,524.5	2	1,368.1	2	-	-	1,368.1	2	1,275.6	2		

*Reflects the FY 2013 President's Budget Request

Numbers may not add due to rounding

ESA

mage Courtesy of Lockheed Martin

SPACE BASED AND RELATED SYSTEMS

Space Based Infrared System

Space Based Infrared System (SBIRS) will field a four satellite constellation in Geosynchronous Earth Orbit (GEO) and a two hosted payload constellation in Highly Elliptical Orbit (HEO) with an integrated centralized ground station serving all SBIRS space elements. The SBIRS is the follow-on system to the Defense Support Program (DSP).

The infrared (IR) payload consists of scanning IR sensor providing two times the revisit rate and three times the sensitivity of DSP. Staring IR sensor providing a higher fidelity and persistent coverage for areas of interest

- HEO-1 and HEO-2 payloads went operational in 2008 and 2009, respectively. HEO-3 is planned to be delivered to the host in June 2013 and HEO-4 in May 2015.
- GEO-1 satellite was launched in 2011 and the quality of its data is exceeding performance expectations. The launch of GEO-2 is planned in March 2013, with GEO-3 and GEO-4 delivery in December 2015 and 2016. GEO-5 and GEO-6 are scheduled to replace GEO-1 and GEO-2 at the end of their useful life and will deliver outside this budget plan.

Mission: The SBIRS provides initial warning of ballistic missile attack on the United States, its deployed forces, or its allies.

FY 2014 Program: Continues incremental funding for procurement of the space vehicles GEO-5 and GEO-6, and continues the Space Modernization Initiative (SMI) RDT&E activities. SMI will reduce future production costs by improving insertion of new technologies to replace obsolete parts and materials.

Space Based Infrared System												
	FY 20	12		FY 2013*								
	1120	12	Base Budg	Base Budget		get	Total Request					
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty		
RDT&E	621.6	-	448.6	-	-	-	448.6	-	352.5	-		
Procurement	324.9	-	454.3	2	-	-	454.3	2	583.2	-		
Total	946.5	-	902.8	2	-	-	902.8	2	935.7	-		

Prime Contractor: Lockheed Martin Corporation, Sunnyvale, CA

*Reflects the FY 2013 President's Budget Request

Numbers may not add due to rounding

1

age Courtesy of Lockheed Martin

Wideband Global Satellite

The Wideband Global Satellite (WGS) system is planned to consist of a ten satellite constellation in geosynchronous orbit providing worldwide communication coverage for tactical and fixed users. Dual-frequency WGS satellites augment, then replace the Defense Satellite Communications System (DSCS) X-band frequency service and augments the one-way Global Broadcast Service (GBS)Ka-band frequency capabilities. Additionally, the WGS provides a new high capacity two-way Ka-band frequency service. Each satellite features the following capabilities:

- X-band: 8 spot-beam transmit/receive via steerable phased-array antennas; one Earth coverage beam
- · Ka-band: 10 gimbaled dish antennas
- 35 x 125 MHz channels
- 2.1 Gbps capacity

The WGS system currently consists of eight U.S. funded, and two funded via international partnerships with Australia, Canada, Denmark, Luxembourg, the Netherlands and New Zealand. WGS #1-3 have been operational since the beginning of 2008, and WGS #4 became operational in July 2012. Satellite vehicles WGS #5 and #6 are scheduled to be launched in 2013. The remaining Block II Follow-on satellite vehicles WGS #7 through WGS #10 will be fully operational by 2019.

Mission: The WGS constellation provides high-capacity communications capabilities to support national objectives and to enable joint and coalition operations.

FY 2014 Program: Funds the checkout, launch and support costs of WGS # 5 and #6 and development completion of architecture evolution studies to increase WGS capacity.

Wideband Global Satellite											
	EY 20	10		FY 2013*							
	FT 20		Base Budget		OCO Budget		Total Request		- FT 2014		
	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	\$M	Qty	
RDT&E	12.1	-	12.0	-	-	-	12.0	-	13.9	-	
Procurement	792.9	2	36.8	-	-	-	36.8	-	38.4	-	
Total	804.9	2	48.9	-	-	-	48.9	-	52.3	-	

Prime Contractor: The Boeing Company, El Segundo, CA

*Reflects the FY 2013 President's Budget Request



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