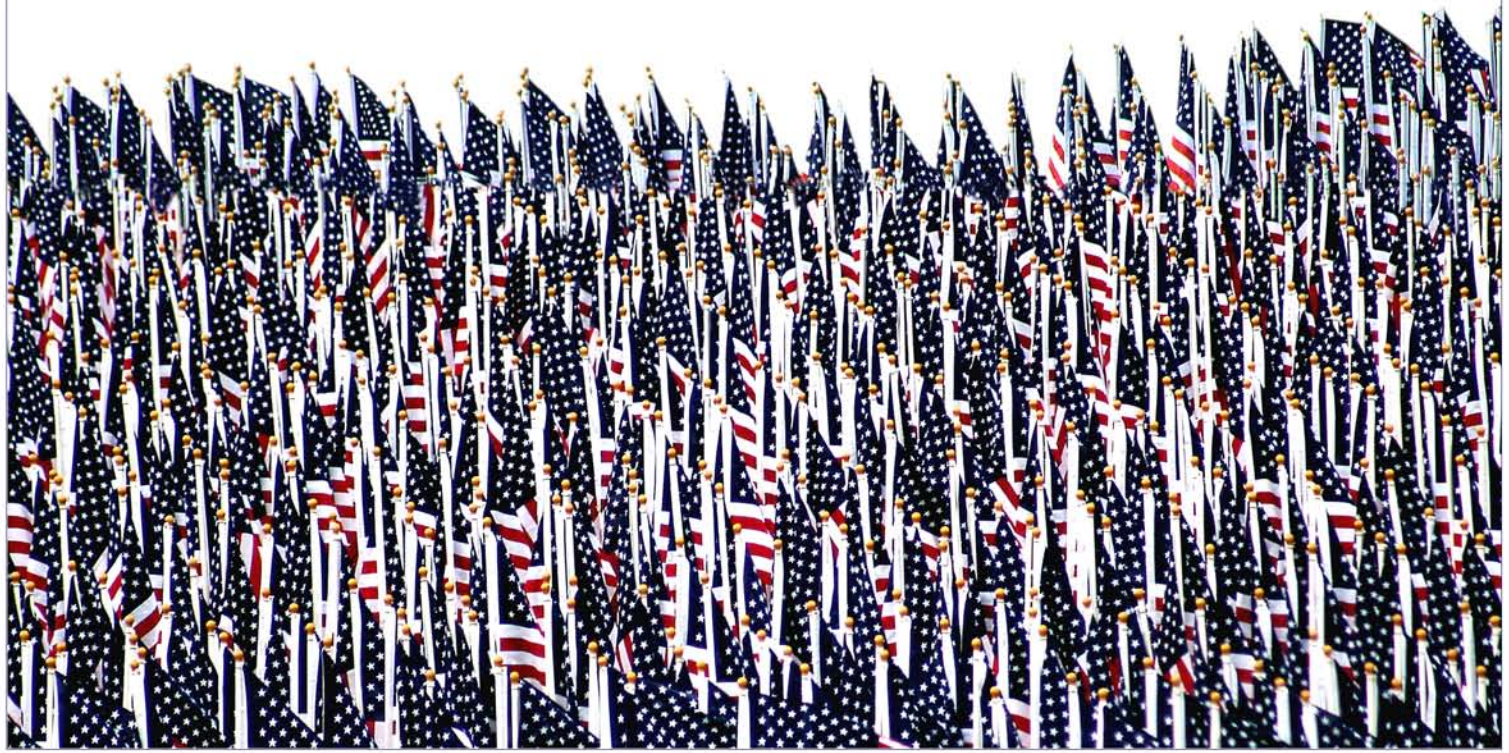
UNITED STATES DEPARTMENT OF DEFENSE

PROGRAM ACQUISITION COSTS BY WEAPON SYSTEM

MAY 2009



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Major Weapons Systems

HIGHLIGHTS

OVERVIEW

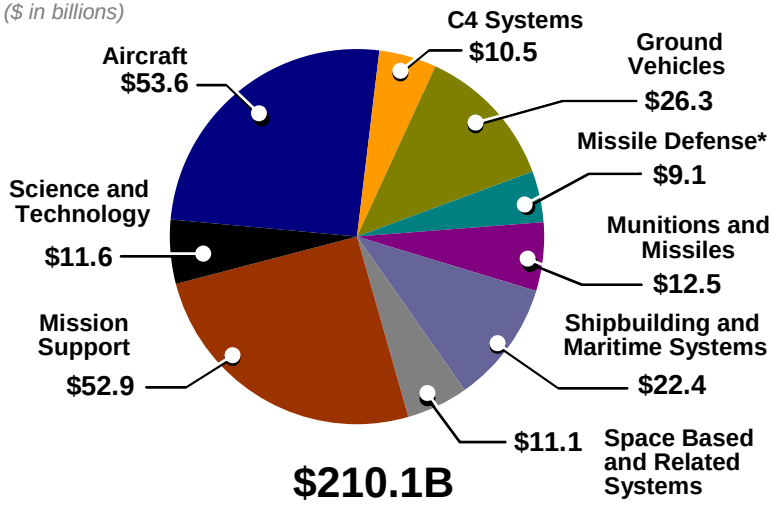
The combined capabilities and performance of U.S. weapons systems are unmatched throughout the world, ensuring that our military forces have the tactical edge over any adversary. The $210.0 billion represents the total FY 2010 funding for procurement and development for both the Base and Overseas Contingency Operations (OCO) requests. The following exhibits are the major programs within the $210.1 billion.

Funding Categories

- Aircraft
- Command, Control, Communications, and Computer (C4) Systems
- Ground Programs
- Missile Defense
- Mission Support
- Munitions and Missiles
- Science and Technology
- Shipbuilding and Maritime Systems
- Space Based and Related Systems

FY 2010 Modernization – Base and OCO

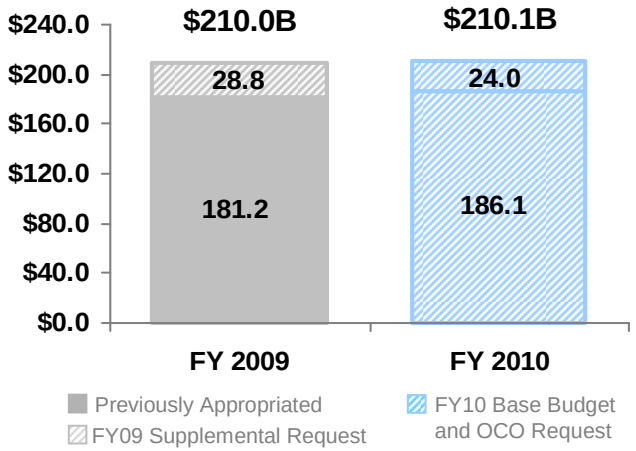
($ in billions)



* *Excludes Missile Defense Agency S&T*

Total Annual Cost

($ in billions)



Numbers may not add due to rounding

Major Weapons Systems Summary ($ in Millions)		FY 2008	FY 2009	2010 Base	2010 OCO	2010 Total Request	Page
Aircraft – Joint Service							
MQ–1/MQ–9	Predator and Reaper	1,000.4	1,153.2	1,033.1	252.8	**1,285.9**	3-7
RQ–4	Global Hawk	959.9	1,453.3	1,451.1	—	**1,451.1**	3-7
RQ–7/RQ–11	Shadow and Raven	293.1	133.4	137.7	87.1	**224.8**	3-8
C–12	Liberty	210.5	493.5	—	105.0	**105.0**	3-8
C–130J	Hercules	3,934.3	1,686.1	2,009.5	282.8	**2,292.3**	3-9
JCA	Joint Cargo Aircraft	176.3	280.1	328.5	—	**328.5**	3-9
F–35	Joint Strike Fighter	6,423.7	6,789.6	10,426.9	—	**10,426.9**	3-10
JPATS T–6A	Texan II	524.6	318.7	282.2	—	**282.2**	3-10
V–22	Osprey	3,057.4	2,722.8	2,860.4	—	**2,860.4**	3-11
Aircraft – USA							
AH–64	Apache Longbow Block 3	185.4	208.8	370.0	—	**370.0**	3-11
CH–47	Chinook	1,407.9	1,304.3	921.6	141.2	**1,062.8**	3-12
LUH	Light Utility Helicopter	228.9	256.4	326.0		**326.0**	3-12
UH–60	Black Hawk	1,447.6	1,178.4	1,390.6	74.3	**1,464.9**	3-13
Aircraft – USN/USMC							
C-40A	Clipper	—	154.5	74.4	—	**74.4**	3-13
E–2/D	Hawkeye	838.0	867.4	970.8	—	**970.8**	3-14
E–6	Mercury	84.6	88.6	102.6	—	**102.6**	3-14
F/A–18E/F	Super Hornet	2,805.7	1,930.2	1,188.7	—	**1,188.7**	3-15
EA–18G	Growler	1,794.8	1,723.7	1,687.8	—	**1,687.8**	3-15
EA–6B	Prowler	256.9	124.0	137.6	45.0	**182.6**	3-16
H–1	Huey/Super Cobra	421.3	640.7	813.2	55.0	**868.2**	3-16
MH–60R	Multi-Mission Helicopter	1,143.8	1,260.3	1,025.2	—	**1,025.2**	3-17
MH–60S	Fleet Combat Support Helicopter	602.3	641.3	542.0	—	**542.0**	3-17
P–8A	Poseidon	861.1	1,239.2	2,987.5	—	**2,987.5**	3-18

Note: FY 2008 and FY 2009 funding includes both Base and OCO

Numbers may not add due to rounding

Major Weapons Systems Summary ($ in Millions)		FY 2008	FY 2009	2010 Base	2010 OCO	2010 Total Request	Page
Aircraft – USAF							
A–10	Thunderbolt	174.5	147.7	262.2	10.0	**272.2**	3-18
B–2	Spirit	380.0	712.0	699.4	—	**699.4**	3-19
C–17	Globemaster	3,993.0	1,115.9	720.1	132.3	**852.4**	3-19
C–5	Galaxy	519.9	701.4	810.6	57.4	**868.0**	3-20
F–15	Eagle	301.9	252.6	404.1	—	**404.1**	3-20
F–16	Falcon	460.4	498.6	365.6	20.0	**385.6**	3-21
F–22	Raptor	4,397.8	4,951.2	1,015.2	—	**1,015.2**	3-21
KC–X	New Tanker	29.7	22.9	439.6	—	**439.6**	3-22
C4 Systems – Joint Service							
JTRS	Joint Tactical Radio System	892.0	946.9	1,063.8	—	**1,063.8**	3-24
C4 Systems – USA							
FCS	Future Combat Systems	3,383.1	3,601.6	2,981.0	—	**2,981.0**	3-24
SINCGARS	Single Channel Ground & Airborne Radio	508.4	187.0	6.8	128.2	**135.0**	3-25
WIN–T	Warfighter Information Network – Tactical	309.1	1,049.0	724.9	13.5	**738.4**	3-25
Ground Programs – Joint Service							
JTLV	Joint Light Tactical Vehicle	146.4	66.0	90.1	—	**90.1**	3-27
MRAP	Mine Resistant Ambush Protected Vehicle	16,838.0	4,393.0	—	5,456.0	**5,456.0**	3-27
Ground Programs – USA							
ASV	Armored Security Vehicle	568.9	318.7	136.6	13.2	**149.8**	3-28
FHTV	Family Of Heavy Tactical Vehicles	3,095.8	1,978.6	812.9	623.2	**1,436.1**	3-28
FMTV	Family Of Medium Tactical Vehicles	2,147.0	1,017.5	1,158.5	461.7	**1,620.2**	3-29
M1 Upgrade	Abrams Tank	2,390.8	1,384.0	471.1	—	**471.1**	3-29
Stryker	Stryker Family of Armored Vehicles	2,919.8	1,388.4	478.9	—	**478.9**	3-30

Note: FY 2008 and FY 2009 funding includes both Base and OCO

Numbers may not add due to rounding

Major Weapons Systems Summary ($ in Millions)		FY 2008	FY 2009	2010 Base	2010 OCO	2010 Total Request	Page
HMMWV	High Mobility Multi-purpose Wheeled Vehicle	3,149.2	1,856.8	290.9	1,456.0	**1,746.9**	3-30
Ground Programs – USN/USMC							
EFV	Expeditionary Fighting Vehicle	240.5	255.3	293.5	—	**293.5**	3-31
Missile Defense – Joint Service							
Missile Defense	Missile Defense	10,709.9	10,920.5	9,301.5	—	**9,301.5**	3-33
AEGIS	AEGIS Ballistic Missile Defense	1,214.1	1,170.5	1,859.5	—	**1,859.5**	3-35
THAAD	Terminal High Altitude Area Defense	881.4	882.4	1,117.5	—	**1,117.5**	3-35
Patriot/PAC–3	Patriot, Army	1,005.4	1,037.1	404.4	—	**404.4**	3-36
Patriot/MEADS	Patriot Medium Extended Air Defense System	401.6	460.8	585.6	—	**585.6**	3-36
Munitions and Missiles – Joint Service							
AMRAAM	Advanced Medium Range Air-Air Missile	315.7	359.4	490.9	—	**490.9**	3-38
AIM–9X	Air Intercept Missile - 9X	118.2	146.7	143.8	—	**143.8**	3-38
Chem–Demil	Chemical Demilitarization	1,616.9	1,649.9	1,707.3	—	**1,707.3**	3-39
JAGM	Joint Air-to-Ground Missile	63.3	180.3	208.8	—	**208.8**	3-39
JASSM	Joint Air-to-Surface Standoff Missile	171.8	232.6	82.2	—	**82.2**	3-40
JDAM	Joint Direct Attack Munition	167.1	200.1	105.0	98.0	**203.0**	3-40
JSOW	Joint Standoff Weapon	159.2	165.0	155.3	—	**155.3**	3-41
SDB	Small Diameter Bomb	253.6	278.6	332.5	7.3	**339.8**	3-41
Munitions and Missiles – USA							
Javelin	Javelin Advanced Tank Weapon	278.5	377.9	148.6	141.0	**289.6**	3-42
HIMARS	High Mobility Artillery Rocket System	306.1	368.8	321.3	60.6	**381.9**	3-42
Munitions and Missiles – USN							
ESSM	Evolved Seasparrow Missile	82.7	84.8	51.4	—	**51.4**	3-43

Note: FY 2008 and FY 2009 funding includes both Base and OCO

Numbers may not add due to rounding

Major Weapons Systems Summary ($ in Millions)		FY 2008	FY 2009	2010 Base	2010 OCO	2010 Total Request	Page
RAM	Rolling Airframe Missile	75.2	70.8	74.8	—	**74.8**	3-43
Standard	Standard Family of Missiles	372.4	462.3	431.4	—	**431.4**	3-44
Tomahawk	Tactical Tomahawk Cruise Missile	490.4	298.5	296.3	—	**296.3**	3-44
Trident II	Trident II Ballistic Missile	1,108.5	1,163.7	1,135.4	—	**1,135.4**	3-45
Shipbuilding and Maritime Systems – Joint Service							
JHSV	Joint High Speed Vessel	231.9	357.5	373.3	—	**373.3**	3-47
Shipbuilding and Maritime Systems – USN							
CVN 21	Carrier Replacement	3,230.8	4,063.3	1,397.3	—	**1,397.3**	3-47
DDG 51	AEGIS Destroyer	47.7	199.4	2,241.3	—	**2,241.3**	3-48
DDG 1000	Destroyer	3,421.0	1,953.5	1,623.2	—	**1,623.2**	3-48
LCS	Littoral Combat Ship	309.6	1,458.9	1,877.8	—	**1,877.8**	3-49
LPD 17	Amphibious Transport Dock Ship	1,510.4	964.5	1,062.2	—	**1,062.2**	3-49
SSN 774	VIRGINA Class Submarine	3,559.4	3,864.6	4,182.0	—	**4,182.0**	3-50
RCOH	CVN Refueling Complex Overhaul	295.3	613.1	1,775.4	—	**1,775.4**	3-50
T–AKE	Auxiliary Dry Cargo/Ammunition Ship	720.6	962.4	940.1	—	**940.1**	3-51
Space Based and Related Systems – USN							
MUOS	Mobile User Objective System	807.8	858.2	903.6	—	**903.6**	3-53
Space Based and Related Systems – USAF							
AEHF	Advanced Extremely High Frequency	762.2	552.0	2,307.8	—	**2,307.8**	3-53
EELV	Evolved Expendable Launch Vehicle	1,098.3	1,383.9	1,321.8	—	**1,321.8**	3-54
GPS	Global Positioning System	805.3	924.4	927.8	—	**927.8**	3-54
NPOESS	National Polar–Orbiting Operational Environmental Satellite System	331.0	287.5	400.5	—	**400.5**	3-55
SBIRS	Space Based Infrared System	982.6	2,335.5	1,013.5	—	**1,013.5**	3-55
WGS	Wideband Global Satellite Communication	333.3	73.7	335.1	—	**335.1**	3-56

Note: FY 2008 and FY 2009 funding includes both Base and OCO

Numbers may not add due to rounding

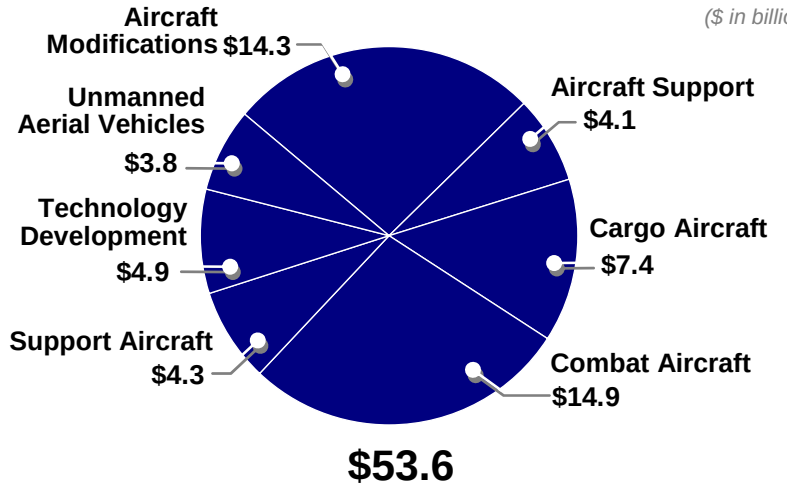
Aircraft

Aviation forces — including fighter/attack, bomber, mobility (cargo/tanker) and specialized support aircraft — provide a versatile striking force capable of rapid deployment worldwide. These forces can quickly gain and sustain air dominance over regional aggressors, permitting rapid air attacks on enemy targets while providing security to exploit the air for logistics, command and control, intelligence, and other functions. Fighter/attack aircraft, operating from both land bases and aircraft carriers, 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 surveillance, airborne warning and control, air battle management, suppression of enemy air defenses, reconnaissance, 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 has continued to increase to support the procurement of aircraft such as the F-35 Joint Strike Fighter, the V-22, the Next-Generation Aerial Refueling Aircraft, and the Navy's F/A-18 E/F and E/A-18G. In addition, $3.8B in FY2010 will fund the development and procurement of Unmanned Aerial Vehicles (UAV) including the MQ–9 Reaper, the RQ–4 Global Hawk, and the tactical Raven and Shadow UAVs.

FY 2010 Aircraft – Base and OCO

($ in billions)



Source: FY 2009 Procurement Programs (P-1) and RDT&E Programs – Investment Categorization 106-WP
Numbers may not add due to rounding

MQ–1 Predator / MQ–9 Reaper

DOD - JOINT

The Predator and Reaper Unmanned Aerial System (UAS) usually comprise of an aircraft segment consisting of aircraft with an array of sensors to include day/night Full Motion Video, Signals Intelligence (SIGINT), and Synthetic Aperture Radar (SAR) sensor payload, avionics, and data links; a ground segment consisting of a Launch and Recovery Element (LRE), and a Mission Control Element (MCE) with embedded ground communications equipment; a support element; and trained personnel. The aircraft is equipped with a color nose camera (generally used by the pilot for flight control), a day variable-aperture TV camera, and a variable-aperture infrared camera (for low light/night). The Army Warrior MQ-1 is being developed with a 2.0L engine; where as the Air Force Predator MQ-1 has a piston engine and the Air Force Reaper MQ–9 has a turbojet engine.

Mission: A single-engine, 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 critical, perishable targets. The Army Warrior also has the unique mission of communications relay.

FY 2010 Program: Continues the implementation of the transformation towards the development and fielding of UASs. The Air Force budget builds to a 43 CAP fleet of MQ–1/9 by the end of FY 2010. Army focuses on a tactical fleet, New Equipment Training (NET), and long lead procurements.

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

MQ–1 Predator / MQ–9 Reaper

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E										
Predator USAF	37.6	–	36.9	–	18.1	–	1.4	–	19.5	–
Reaper USAF	55.9	–	46.4	–	39.2	–	1.4	–	40.6	–
Warrior USA	103.4	–	61.8	–	84.9	–	–	–	84.9	–
Subtotal	197.0	–	145.1	–	142.3	–	2.8	–	145.1	–
Procurement										
Predator USAF	299.2	24	377.7	38	–	–	–	–	–	–
Reaper USAF	374.5	20	444.5	24	489.5	24	–	–	489.5	24
Warrior USA	129.7	8	185.9	15	401.4	24	250.0	12	651.4	36
Subtotal	803.4	52	1,008.1	77	890.8	48	250.0	12	1,140.8	60
Total	1,000.4	52	1,153.2	77	1,033.1	48	252.8	12	1,285.9	60

RQ–4 Global Hawk

DOD - JOINT

Funds 2 Block 30 RQ-4 aircraft, which adds a robust SIGINT capability, and 3 Block 40 RQ-4, with the advanced Multi-Platform Radar Technology Insertion Program (MP-RTIP) system, in concurrent development/production. The RQ-4 can survey large geographic areas with pinpoint accuracy over land and water. Once mission plans are programmed, the aircraft can autonomously taxi, take off, fly, and remain on station capturing mission data, return, and land. Ground-based operators monitor UAV health and status, and can change navigation and sensor plans during flight as necessary.

Mission: Both the Air Force RQ-4 Global Hawk and the Navy RQ-4 Broad Area Maritime Surveillance (BAMS) perform a mission similar to the U-2, which provides high altitude, near-real-time, high-resolution Intelligence, Surveillance, and Reconnaissance (ISR) collection.

FY 2010 Program: Procures 5 USAF aircraft, appropriate payloads for each block configuration, integrated logistics support (to include initial spares, support equipment, technical data, etc.), other support requirements (training devices, etc.), testing, program management support, and related tasks. Also supports continued Navy System Development and Demonstration (SDD).

Prime Contractor: Northrop Grumman Corporation, Rancho Bernardo, CA

RQ-4 Global Hawk

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E										
RQ-4, USAF	274.7	–	310.7	–	317.3	–	–	–	317.3	–
RQ-4, USN	111.3	–	432.5	2	465.8	–	–	–	465.8	–
Subtotal	386.0	–	743.2	2	783.2	–	–	–	783.2	–
Procurement	**USAF**									
RQ-4, AF	573.9	5	710.1	5	667.8	5	–	–	667.8	5
Subtotal	573.9	5	710.1	5	667.8	5	–	–	667.8	5
Total	959.9	5	1,453.3	7	1,451.1	5	–	–	1,451.1	5

RQ-7 Shadow / RQ-11 Raven

DOD - JOINT

The FY 2010 budget continues the implementation of the transformation towards the development and fielding of Unmanned Aircraft Systems.

Mission: The Shadow provides the tactical maneuver commander near-real-time reconnaissance, surveillance, target acquisition, and force protection during day/night and limited adverse weather conditions. Raven is an "over the hill" rucksack-portable, day/night, limited adverse weather, remotely-operated, multi-sensor system in support of combat battalions and below as well as selected combat support units.

FY 2010 Program: Procures multiple variations of quantities for the small unmanned aircraft, system hardware, contractor logistics support, and new equipment training. Additionally, the budget supports modifications and retrofit of aircraft with the congressionally mandated Tactical Common Data Link (TCDL), and purchase of mod kits and retrofit of aircraft systems with Laser Target Designator payloads. These modifications will provide Shadow systems with a secure, digital data link, and enable shadow to provide laser designation capability for both airborne and ground laser weapons systems.

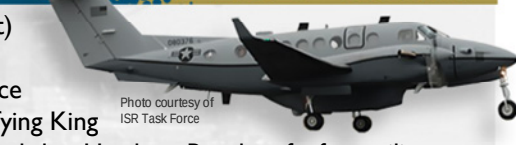
Prime Contractors: Shadow: AAI Corporation Hunt Valley, MD;
Raven: AeroVironment, Monrovia, CA

RQ-7 Shadow / RQ-11 Raven

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E										
Shadow USA	–	–	–	–	–	–	29.5	–	29.5	–
Shadow USMC	–	–	–	–	1.0	–	–	–	1.0	–
Raven USA	22.0	–	2.0	–	2.0	–	–	–	2.0	–
Raven USMC	–	–	–	–	0.6	–	–	–	0.6	–
Subtotal	22.0	–	2.0	–	3.5	–	29.5	–	33.0	–
Procurement										
Shadow USA	72.7	8	37.9	–	–	–	–	–	–	–
Shadow USMC	151.7	36	20.5	4	56.8	11	–	–	56.8	11
Raven USA	33.3	702	57.6	689	35.0	618	44.6	86	79.6	704
Raven USMC	13.4	240	15.4	294	42.4	517	13.0	–	55.4	517
Subtotal	271.0	986	131.4	987	134.2	1,146	57.6	86	191.8	1,232
Total	293.1	986	133.4	987	137.7	1,146	87.1	86	224.8	1,232

C–12 Liberty

DOD - JOINT



The Air Force (Liberty Project) and Army (Medium Altitude Reconnaissance and Surveillance Systems — MARSS) are modifying King Air 350 aircraft manufactured by Hawker Beechcraft for military tactical operations. The systems will include a full motion video (FMV) sensor as well as signals intelligence payloads. The aircraft will have a four-person crew — two pilots and two sensor operators.

Mission: The system will perform airborne intelligence, surveillance and reconnaissance. During missions, the sensor operators will be in direct contact with ground forces and personnel involved in analyzing and disseminating information across the battlefield. The mission equipment is operated by the onboard sensor operators as well as operators located in ground control stations. The aircraft will relay FMV information in real time using line of sight datalinks to One System Remote Video Terminals, Rover video terminals, as well as Video Scout hand held receivers. The aircraft will also relay information collected by the payloads to ground stations using a Ku satellite datalink.

FY 2010 Program: Funds procure six Army aircraft. The Army and Air Force are scheduled to deploy the first of C–12 class aircraft configured with full-motion video and signals intelligence capabilities to U.S. Central Command this spring for use in Afghanistan and Iraq.

Prime Contractor:
Aircraft: Hawker Beechcraft, Wichita, KS
Integration: L-3 Communications, Greenville, TX

C–12 Liberty

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
Procurement USAF	98.5	7	493.5	30	–	–	–	–	–	–
Procurement USA	112.0	8	–	–	–	–	105.0	6	105.0	6
Total	210.5	15	493.5	30	–	–	105.0	6	105.0	6

C–130J Hercules

DOD - JOINT


USAF Photo

The C–130J Hercules is a tactical airlift aircraft modernizing the U.S. tactical airlift capability. It is capable of performing a number of tactical airlift missions including deployment and redeployment of troops and/or supplies within/between command areas in a theater of operation, aeromedical evacuation, air logistic support and augmentation of strategic airlift forces.

Mission: The mission of the C–130J is the immediate and responsive air movement and delivery of combat troops and supplies directly into objective areas primarily through airlanding, extraction, and airdrop and the air logistic support of all theater forces.

FY 2010 Program: Continues the C-130J procurement for the Air Force with 3 aircraft in FY 2010, modification of existing C-130J aircraft, and continues recapitalization of nine HC/MC-130 aircraft. Funding includes 7 additional C-130J aircraft in FY 2008 from supplemental funds. Additionally, one C-130J aircraft is requested in the FY 2010 OCO submission.

Prime Contractor: Lockheed Martin Corporation, Marietta, GA

C-130 Hercules

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E										
C-130	233.3	–	179.3	–	201.3	–	–	–	201.3	–
C-130J	62.1	–	27.3	–	30.0	–	–	–	30.0	–
Subtotal	295.4	–	206.6	–	231.3	–	–	–	231.3	–
Procurement	**USAF**									
C-130J	2,342.3	28	120.7	–	393.6	3	72.0	–	465.6	3
C130J Mods	58.3	–	43.3	–	13.6	–	–	–	13.6	–
C130 Mods	357.6	–	624.5	–	354.4	–	210.8	–	565.2	–
HC/MC-130 Recap	75.2	–	538.0	6	1,016.6	9	–	–	1,016.6	9
Subtotal	2,833.4	28	1,326.5	6	1,778.2	–	282.8	–	2,061.0	–
Procurement	**USN**									
KC-130J	805.5	13	153.0	2	–	–	–	–	–	–
Total	3,934.3	41	1,686.1	8	2,009.5	12	282.8	–	2,292.3	12

Joint Cargo Aircraft

DOD - JOINT


Alenia North America Photo

The Joint Cargo Aircraft (JCA) is an intra-theater light cargo fixed-wing airlift platform that will meet the warfighter need for intra-theater airlift. The aircraft will be a commercial derivative aircraft that meets the Army's immediate requirements and provides the Air Force an additional capability in meeting intra-theater airlift missions.

Mission: The JCA will provide responsive, flexible, and tailored airlift for combat, humanitarian operations and homeland defense.

FY 2010 Program: Begins procurement of JCA for the Air Force with 8 aircraft in FY 2010 and transfers the mission to support direct delivery of Army time sensitive mission critical cargo from the Army to the Air Force.

Prime Contractors: L-3 Communications, Greenville, TX

Joint Cargo Aircraft

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E										
Air Force	20.3	–	16.7	–	9.4	–	–	–	9.4	–
Subtotal	20.3	–	16.7	–	9.4	–	–	–	9.4	–
Procurement										
Army	156.0	4	263.4	7	–	–	–	–	–	–
Air Force	–	–	–	–	319.1	8	–	–	319.1	8
Subtotal	156.0	4	263.4	7	319.1	8	–	–	319.1	8
Total	176.3	4	280.1	7	328.5	8	–	–	328.5	8

F–35 Joint Strike Fighter

DOD - JOINT


USAF Photo

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 JSF consists of three variants: Conventional Take-Off and Landing (CTOL), Short Take-Off and Vertical Landing (STOVL), and Carrier (CV).

Mission: The JSF will complement the Navy F/A-18E/F and the Air Force F-22, and replace the Marine Corps AV-8B, F/A-18C/D and Air Force A-10 and F-16 aircraft. The JSF 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.

FY 2010 Program: Continues the concurrent development and production of F-35 aircraft procuring 30 aircraft (4 CV for Navy, 16 STOVL for Marine Corps and 10 CTOL for Air Force).

Prime Contractors: Lockheed Martin Corporation, Fort Worth, TX
Pratt & Whitney; General Electric/Rolls Royce Fighter Engine Team

F-35 Joint Strike Fighter

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E										
Navy	1,848.9	–	1,744.6	–	1,741.3	–	–	–	1,741.3	–
Air Force	1,939.1	–	1,734.3	–	1,858.1	–	–	–	1,858.1	–
Subtotal	**3,788.0**	**–**	**3,478.9**	**–**	3,599.4	–	–	–	3,599.4	–
Procurement										
Navy	1,223.6	6	1,650.1	7	4,478.0	20	–	–	4,478.0	20
Air Force	1,412.1	6	1,660.6	7	2,349.4	10	–	–	2,349.4	10
Subtotal	**2,635.7**	**12**	**3,310.7**	**14**	**6,827.5**	**30**	–	–	**6,827.5**	**30**
Total	**6,423.7**	**12**	**6,789.6**	**14**	**10,426.9**	**30**	–	–	**10,426.9**	**30**

JPATS T–6A Texan II

DOD - JOINT

USAF Photo

The Joint Primary Aircraft Training System (JPATS) is a joint Navy/Air Force program that will use the T-6A 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: Supports joint Navy and Air Force specialized undergraduate pilot training.

FY 2010 Program: Continues production of JPATS aircraft, supporting procurement of 38 aircraft for the Navy in FY 2010 and JPATS program management, systems engineering and dedicated prime contractor support for the Air Force.

Prime Contractor: Hawker Beechcraft Corporation, Wichita, KS

JPATS T–6A Texan II

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
Procurement										
Air Force	231.4	39	27.6	–	15.7	–	–	–	**15.7**	–
Navy	293.2	44	287.1	44	266.5	38	–	–	**266.5**	**38**
Total	**524.6**	**83**	**318.7**	**44**	**282.2**	**38**	–	–	**282.2**	**38**

V–22 Osprey

DOD - JOINT


USAF Photo

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 US Special Operations Command (USSOCOM). The aircraft will be capable of flying 2,100 miles with one in-flight refueling, giving the services the advantage of a vertical and/or short takeoff and landing (V/STOL) aircraft that could rapidly self-deploy to any location in the world.

Mission: The V–22 mission includes airborne assault, vertical lift, combat search and rescue, and special operations.

FY 2010 Program: Supports procurement of 30 MV-22 and 5 CV-22 aircraft. The procurement objective is 458 aircraft (408 MV-22 aircraft for the Navy/Marine Corps and 50 CV-22 aircraft for USSOCOM). The program is being executed under a 5-year multiyear procurement contract, which began in FY 2008.

Prime Contractors:

Bell Helicopter, Fort Worth, TX
The Boeing Company, Philadelphia, PA

V–22 Osprey

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		FY 2010 Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E										
Navy	125.2	–	68.6	–	89.5	–	–	–	89.5	–
Air Force	23.4	–	18.5	–	19.6	–	–	–	19.6	–
Subtotal	148.6	–	87.1	–	109.1	–	–	–	109.1	–
Procurement										
Navy	2,070.7	23	2,213.8	30	2,300.2	30	–	–	2,300.2	30
Air Force	838.1	10	421.9	6	451.1	5	–	–	451.1	5
Subtotal	2,908.8	33	2,635.7	36	2,751.3	35	–	–	2,751.3	35
Total	3,057.4	33	2,722.8	36	2,860.4	35	–	–	2,860.4	35

AH–64 Apache Longbow Block 3

USA


US Army Photo

The Apache Longbow Block 3 program consists of a mast mounted Fire Control Radar (FCR) integrated into an upgraded and enhanced AH–64 airframe. This program also provides for the installation of the Target Acquisition Designation Sight (TADS) and Pilot Night Vision Sensors (PNVS), plus other safety and reliability enhancements.

Mission: The AH–64 provides a fire-and-forget HELLFIRE air-to-ground missile capability, modernized target acquisition and night vision capabilities.

FY 2010 Program: Supports the remanufacture of 8 AH-64 aircraft to the AH-64 D (Longbow) Block 3 configuration.

Prime Contractors:

Integration: Northrop Grumman Corporation, Baltimore, MD
Lockheed Martin Corporation, Owego, NY
Longbow Apache: The Boeing Company, Mesa, AZ

AH–64 Apache

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		FY 2010 Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	185.4	–	197.7	–	150.8	–	–	–	150.8	–
Procurement	–	–	11.1	–	219.2	8	–	–	219.2	8
Total	185.4	–	208.8	–	370.0	8	–	–	370.0	8

CH–47 Chinook

USA


US Army Photo

The CH-47F program procures new and remanufactured/Service Life Extension Program CH-47F helicopters. The aircraft include 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.

Mission: To provide a system designed to transport ground forces, supplies, ammunition, and other battle-critical cargo in support of worldwide combat and contingency operations.

FY 2010 Program: Funds the acquisition of 39 aircraft, of which 25 will be new build aircraft and 14 will be remanufactured/Service Life Extension Program aircraft.

Prime Contractor: The Boeing Company, Philadelphia PA

CH–47 Chinook

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		**Total Request**	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	**$M**	**Qty**
RDT&E	21.6	–	13.9	–	10.8	–	–	–	**10.8**	**–**
Procurement	1,386.3	47	1,290.4	50	910.8	35	141.2	4	**1,052.0**	**39**
Total	**1,407.9**	**47**	**1,304.3**	**50**	**921.6**	**35**	**141.2**	**4**	**1,062.8**	**39**

LUH Light Utility Helicopter

USA


US Army Image

The Light Utility Helicopter (LUH) will be a utility helicopter replacing the UH-1 and the OH-58 Kiowa Warrior. It will provide reliable and sustainable general and administrative support in permissive environments at reduced acquisition and operating costs. There is no RDT&E funding required for this program. The LUH acquisition strategy provides for the competitive procurement of a commercial-off-the-shelf, non-developmental aircraft.

The UH-72A Lakota is a United States Army light utility helicopter that entered service in 2006, built by the American Eurocopter division of EADS North America. The Lakota is a militarized version of the Eurocopter EC145 modified to the Light Utility Helicopter (LUH) requirements. In June 2006, the US Army selected it as the winner of its LUH program with a 345 aircraft fleet planned.

Mission: The Light Utility Helicopter will provide organic general support at Corps and Division levels. The primary mission for the LUH is to provide aerial transport for logistical and administrative support.

FY 2009 Program: Supports the continued production of 54 aircraft.

Prime Contractor: EADS North America American Eurocopter, Columbus, MS

LUH Light Utility Helicopter

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		**Total Request**	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	**$M**	**Qty**
Procurement	228.9	42	256.4	44	326.0	54	–	–	**326.0**	**54**
Total	**228.9**	**42**	**256.4**	**44**	**326.0**	**54**	**–**	**–**	**326.0**	**54**

UH–60 Black Hawk

USA

US Army Photo

The BLACKHAWK is a four bladed, twin engine, single-rotor helicopter that is designed to carry a crew of four and a combat equipped squad of 11 or an equal cargo load. It is also capable of carrying external loads of up to 6,000 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.

Mission: The BLACKHAWK 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 2010 Program: Continues procurement of the Blackhawk UH-60 under a 5-year multiyear procurement (MYP) contract, which began in FY 2007. The program is currently on schedule and within budget. The budget request supports continued production of 83 aircraft.

Prime Contractor: Sikorsky Aircraft, Stratford, CT

UH–60 Black Hawk

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	93.0	–	35.5	–	33.5	–	–	–	33.5	–
Procurement	1,354.6	77	1,142.9	68	1,357.1	79	74.3	4	1,431.4	83
Total	1,447.6	77	1,178.4	68	1,390.6	79	74.3	4	1,464.9	83

C-40A Clipper

USN

The C-40A is a twin turbofan jet engine, transport aircraft capable of carrying passengers and/or outsized cargo using reconfigurable main deck sections and a specialized, large cargo door.

Mission: The C-40A provides flexible, time critical, intra-theater air logistical support to Navy Component Commanders. Based on the Boeing 737 airframe, the C-40A supports Sea-based logistics as a connector between strategic Airlift Points of Delivery (APOD) and Carrier Onboard Delivery and Vertical Onboard Delivery (COD/VOD) locations. Typical movements include ship parts/resupply, SEAL teams, USMC Fleet Antiterrorism Security Teams, Marine mammals, and Humanitarian/Disaster aid. Additionally, the C-40A provides logistical support for Continental United States (CONUS) Fleet Response Plan (FRP) and Sea Swap lift requirements.

FY 2010 Program: Funds the procurement of one C-40A aircraft and associated spares to replace aging C-9/DC-9 aircraft.

Prime Contractors: The Boeing Company, Kent, WA

C-40A Clipper

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
Procurement	–	–	154.5	2	74.4	1	–	–	74.4	1
Total	–	–	154.5	2	74.4	1	–	–	74.4	1

E–2D Hawkeye

USN

The E-2D Advanced Hawkeye 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 provides Operational Availability for the radar system

Mission: The E-2D aircraft provides advance warning of approaching enemy surface units and aircraft to vector interceptors or strike aircraft to attack. They provide area surveillance, intercept, strike/air traffic control, radar surveillance, search and rescue assistance, communication relay and automatic tactical data exchange. The E-2D Advanced Hawkeye is the next generation of the E-2C aircraft, and will provide the long range air and surface picture, theater air and missile defense, and an expanded littoral capability.

FY 2010 Program: Funds two E-2D Advanced Hawkeye Low Rate Initial Production aircraft and associated support and Advance Procurement for E-2D long lead items for four FY 2011 aircraft. Supports using research and development funds for correcting system obsolescence, testing, replacing communication components, improving operator workstations, and incorporating a Multi-level Security Open Architecture.

Prime Contractors:

Airframe: Northrop Grumman Corporation, St. Augustine, FL
Engine: Rolls-Royce Corporation, Indianapolis, IN
Radar: Northrop Grumman Corporation, Bethpage, NY

E–2D Hawkeye

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	785.8	–	482.8	2	364.6	2	–	–	364.6	2
Procurement	52.2	–	384.6	2	606.2	2	–	–	606.2	2
Total	838.0	–	867.4	2	970.8	2	–	–	970.8	2

E–6 Mercury

USN

The E–6 Mercury aircraft is a uniquely configured Boeing 707 supporting Take Charge and Move Out (TACAMO), Airborne Command Post (ABNCP) and Airborne Launch Control System (ALCS) on a continuous basis (24/7). It has an endurance of 15+ hours without refueling and a maximum endurance of 72 hours with in-flight refueling. Mission range is over 6,000 Nautical Miles.

Mission: The E-6 Mercury TACAMO aircraft provide a survivable, endurable, reliable airborne command, control, and communications link between the President, Secretary of Defense, and U.S. strategic and non-strategic forces.

FY 2010 Program: Funds the performance safety and obsolescence modifications and upgrades to communications systems to ensure improved connectivity and reliability. Supports procurement increases with the first funding for Block I Mission Deficiency Improvements. Block I removes and replaces several high maintenance and/or obsolete mission components including the mission computer, displays, and Command, Control and Communications (C3) modem.

Prime Contractors:

Airframe: The Boeing Company, Wichita, KS
Block I: Rockwell Collins, Richardson, TX

E–6 Mercury

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
Procurement	84.6	–	88.6	–	102.6	–	–	–	102.6	–
Total	84.6	–	88.6	–	102.6	–	–	–	102.6	–

F/A–18E/F Super Hornet


US Navy Photo

The F/A-18E/F Super Hornet is a carrier-based, twin-engine, high-performance, multi-mission, tactical fighter and attack aircraft. With selected external equipment, the aircraft can be optimized to accomplish both fighter and attack missions.

Mission: The F/A-18E/F strike fighter performs traditional missions of fighter escort and fleet air defense, interdiction, and close air support, while still retaining excellent fighter and self-defense capabilities. The F/A-18E/F aircraft possesses enhanced range, payload and survivability features compared with prior C/D model aircraft and was designed to replace the F-14 fighter aircraft.

FY 2010 Program: Funds procurement of nine F/A-18E/F aircraft and associated spares; funds the modification of fielded aircraft for safety, obsolescence, and capability improvements; and continues research, development, and testing of F/A-18E/F related systems. The Department is committed to building a fifth-generation tactical fighter capability that can be produced in large quantity at a sustainable cost.

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

F/A-18E/F Super Hornet

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		**Total Request**	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	**$M**	**Qty**
RDT&E	43.0	–	73.4	–	127.7	–	–	–	**127.7**	**–**
Procurement	2,762.7	37	1,856.8	23	1,061.0	9	–	–	**1,061.0**	**9**
Total	**2,805.7**	**37**	**1,930.2**	**23**	**1,188.7**	**9**	–	**–**	**1,188.7**	**9**

EA–18G Growler


US Navy Photo

The EA-18G Growler is a tandem two-seat, twin turbojet engine, carrier-based, electronic attack variant of the F/A-18F Super Hornet strike fighter.

Mission: The EA-18G 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. The EA-18G can operate autonomously or as a major node in a network centric operation. The EA-18G's electronic suite can both detect, identify, and locate emitters; and suppress hostile emitters through jamming and kinetic effects. The EA-18G replaces the EA-6B aircraft.

FY 2010 Program: Procures 22 EA-18G aircraft and associated spares, and continues research, development, and testing of electronic systems and techniques.

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

EA–18G Growler

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		**Total Request**	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	**$M**	**Qty**
RDT&E	269.4	–	129.7	–	55.4	–	–	–	**55.4**	**–**
Procurement	1,525.4	21	1,594.0	22	1,632.4	22	–	–	**1,632.4**	**22**
Total	**1,794.8**	**21**	**1,723.7**	**22**	**1,687.8**	**22**	–	**–**	**1,687.8**	**22**

EA–6B Prowler

USN

The Improved Capability III (ICAP III) modification to the EA-6B Prowler replaced a 1960s era electronic receiving system with modern equipment, improving the sensitivity, frequency coverage, probability of intercept, and geo-specificity of electronic threat signals. The ICAP III addresses significant obsolescence and maintenance issues of the EA-6B and provides the basic architecture for the incorporation of the EA-18G's electronic receiver system into the EA-6B.

Mission: The EA-6B aircraft is a carrier-based, unique national asset that can also be deployed from land bases. This aircraft provides airborne electronic intercept and attack capability, tactically controlling the electromagnetic environment and degrading, deceiving, denying, and destroying adversary radar and communication capabilities in support of Navy and Marine Corps strike forces.

FY 2010 Program: Continue the research, development, and testing of the improved capability for system improvements and optimization routines. Supports procurement of the overall modification program to extend life of aircraft.

Prime Contractors: Northrop Grumman Corporation, Bethpage, NY

EA–6B Prowler

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		**Total Request**	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	**$M**	**Qty**
RDT&E	50.9	–	90.7	–	97.6	–	–	–	**97.6**	**–**
Procurement	206.0	–	33.3	–	40.0	–	45.0	–	**85.0**	**–**
Total	**256.9**	**–**	**124.0**	**–**	**137.6**	**–**	**45.0**	**–**	**182.6**	**–**

H–1 Huey/Super Cobra

USMC

The H–1 Helicopter Upgrade program converts AH–1W and UH–1N helicopters to the AH–1Z and UH–1Y, 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.

Mission: The H–1 Upgrades provide offensive air support, utility support, armed escort, and airborne command and control during naval expeditionary operations or joint and combined operations.

FY 2010 Program: Provides for the production of 30 aircraft (16 UH-1Y new build aircraft, 12 AH-1Z remanufactured aircraft, and 2 new build AH-1Z aircraft).

Prime Contractor: Bell Helicopter, Fort Worth, TX

H–1 Huey/Super Cobra

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		**Total Request**	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	**$M**	**Qty**
RDT&E	4.5	–	3.8	–	32.8	–	–	–	**32.8**	**–**
Procurement	416.8	15	636.9	20	780.4	28	55.0	2	**835.4**	**30**
Total	**421.3**	**15**	**640.7**	**20**	**813.2**	**28**	**55.0**	**2**	**868.2**	**30**

MH–60R Multi-Mission Helicopter

USN

The MH–60R Multi-Mission Helicopter Upgrade program provides battle group protection, and adds significant capability in coastal littorals and regional conflicts. The upgrade scope includes new H–60 series airframes, significant avionics improvements, enhancements to the acoustic suite, new radars, and an improved electronics surveillance system.

Mission: The MH-60R will be the forward deployed fleet's primary Anti-Submarine and Anti- Surface Warfare platform.

FY 2010 Program: Provides funding for continued production and supports a 5-year multiyear procurement contract covering FY 2007 through FY 2011.

Prime Contractors:

Airframe: Sikorsky Aircraft, Stratford, CT

Avionics: Lockheed Martin Corporation, Owego, NY

MH–60R Multi-Mission Helicopter

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	74.2	–	70.1	–	82.0	–	–	–	82.0	–
Procurement	1,069.6	28	1,190.2	31	943.2	24	–	–	943.2	24
Total	1,143.8	28	1,260.3	31	1,025.2	24	–	–	1,025.2	24

MH–60S Fleet Combat Support Helicopter

USN

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 (VERTREP), day/night ship-to-ship, ship-to-shore, and shore-to-ship external transfer of cargo; internal transport of passengers, mail and cargo, vertical onboard delivery; air operations; and day/night search and rescue. Organic Airborne Mine Countermeasures (OAMCM) has been added as a primary mission for the MH-60S. Five separate sensors will be integrated into the MH 60S helicopter and will provide Carrier Battle Groups and Amphibious Readiness Groups with an OAMCM capability.

FY 2010 Program: Supports a follow-on 5-year multiyear procurement begun in FY 2007 and running through FY 2011.

Prime Contractor: Sikorsky Aircraft, Stratford, CT

MH–60S Fleet Combat Support Helicopter

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	38.1	–	47.1	–	49.1	–	–	–	49.1	–
Procurement	564.2	20	594.2	20	492.9	18	–	–	492.9	18
Total	602.3	20	641.3	20	542.0	18	–	–	542.0	18

P–8A Poseidon

USN

The P–8A Poseidon is an all-weather, twin engine, land-based, network enabled, maritime patrol aircraft designed to sustain and improve armed maritime and littoral Intelligence, Surveillance, and Reconnaissance (ISR) capabilities in traditional, joint, and combined roles to counter changing and emerging threats. The P–8A is a commercial derivative of the Boeing 737 aircraft.

Mission: The P-8A will provide armed Anti-Submarine Warfare (ASW), Anti-Surface Warfare (ASuW), Intelligence Surveillance and Reconnaissance (ISR) in maritime and littoral areas above, on and below the surface of the ocean. The P-8A is the replacement for the P-3C Orion aircraft. The Poseidon will have a substantial role in Sea Power 21 and will satisfy several mission requirements in Sea Shield, Sea Strike, and FORCEnet

FY 2010 Program: Funds the procurement of six P-8A aircraft and associated spares, and continues the research, development, and test of P-8A systems.

Prime Contractors:
Airframe: The Boeing Company, Kent, WA
Engine: CFM International (General Electric Aviation and SNECMA), Cincinnati, OH

P–8A Poseidon

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		FY 2010 Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	861.1	–	1,129.0	–	1,162.4	–	–	–	1,162.4	–
Procurement	–	–	110.2	–	1,825.1	6	–	–	1,825.1	6
Total	861.1	–	1,239.2	–	2,987.5	6	–	–	2,987.5	6

A–10 Thunderbolt

USAF

The A-10 Thunderbolt is designed for close air support of ground forces and is capable of delivering a full range of air-to-ground munitions as well as self defense air-to-air missiles. It is a twin-engine aircraft that can be used against all ground targets, including tanks and armored vehicles.

Mission: The primary mission of the A-10 is to provide day and night close air support for land forces. The A-10 has a secondary mission of supporting search and rescue and Special Forces operations. It also possesses a limited capability to perform certain types of interdiction. All of these missions may take place in a high or low threat environment.

FY 2010 Program: Continues the modernization of the A-10 aircraft. Primary modifications funded in FY 2010 are the wing replacement and precision engagement.

Prime Contractor: The Boeing Company, St. Louis, MO
Lockheed Martin Corporation, Owego, NY

A–10 Thunderbolt

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		FY 2010 Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	6.5	–	4.0	–	9.7	–	–	–	9.7	–
Procurement	168.0	–	143.7	–	252.5	–	10.0	–	262.5	–
Total	174.5	–	147.7	–	262.2	–	10.0	–	272.2	–

B–2 Spirit

USAF

The B–2 Spirit is an inter-continental bomber that employs low observable technology to achieve its mission. The bomber is an all-wing aircraft with twin weapon bays. The B–2's low observability is derived from a combination of reduced infrared, acoustic, electromagnetic, visual, and radar signatures. The dramatically reduced sum of these signatures makes it difficult for today's sophisticated defensive systems to detect, track, and engage the B–2 aircraft. The B–2 aircraft is capable of delivering massive firepower in a short time, anywhere in the world through high-threat defenses, using both conventional and nuclear munitions.

Mission: The primary mission of the B–2 is to enable any theater commander to hold at risk and, if necessary, attack an enemy's war-making potential, especially time-critical targets that, if not destroyed in the first hours or days of a conflict, would allow unacceptable damage to be inflicted on the friendly side. The B–2 will also retain its potential as a nuclear bomber, reinforcing the deterrence of nuclear conflict.

FY 2010 Program: Continues the modification of the B-2 aircraft, primarily upgrades to the radar system and aft deck programs.

Prime Contractor: Northrop Grumman Corporation, El Segundo, CA

B–2 Spirit

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		**Total Request**	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	**$M**	**Qty**
RDT&E	277.9	–	364.1	–	415.4	–	–	–	**415.4**	**–**
Procurement	102.1	–	347.9	–	284.0	–	–	–	**284.0**	**–**
Total	**380.0**	**–**	**712.0**	**–**	**699.4**	**–**	**–**	**–**	**699.4**	**–**

C–17 Globemaster

USAF

The C–17 Globemaster is a wide-body aircraft capable of airlifting outsized and oversized payloads over intercontinental ranges, with or without in-flight refueling. Its capabilities include rapid direct delivery of forces by airland or airdrop into austere tactical environments with runways as short as 3,000 feet. The C–17 aircraft is capable of performing both inter-theater and intra-theater airlift missions.

Mission: The C–17 aircraft provides outsize intra-theater airland/airdrop capability not available in the current airlift force. It provides rapid strategic delivery of troops and all types of cargo to main operating bases or directly to forward bases in the deployment area.

FY 2010 Program: Supports production shutdown activities for production of new aircraft and continues the modification of existing C-17 aircraft. The Department has determined that the C-17 aircraft already procured satisfies the Department's airlift requirement. The primary modification in FY 2010 is the Large Aircraft Infrared Countermeasures (LAIRCM).

Prime Contractor: The Boeing Company, Long Beach, CA
Pratt & Whitney Corporation, East Hartford, CT

C-17 Globemaster

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		**Total Request**	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	**$M**	**Qty**
RDT&E	166.2	–	235.4	–	161.9	–	–	–	**161.9**	**–**
Procurement	3,826.8	15	880.5	–	558.2	–	132.3	–	**690.5**	**–**
Total	**3,993.0**	**15**	**1,115.9**	**–**	**720.1**	**–**	**132.3**	**–**	**852.4**	**–**

C–5 Galaxy

The C-5 Galaxy is 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. It can carry fully equipped, combat-ready troops to any area in the world on short notice and provide full field support necessary to maintain a fighting force.

FY 2010 Program: Continues the modernization of the C-5 aircraft. The Avionics Modernization Program (AMP) and the Reliability Enhancement and Re-engining Program (RERP) are the primary modernization programs for the C-5 fleet.

Prime Contractor: Lockheed Martin Corporation, Marietta, GA

C-5 Galaxy	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		FY 2010 Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	174.0	–	127.1	–	95.3	–	–	–	95.3	–
Procurement	345.9	–	574.3	–	715.3	–	57.4	–	772.7	–
Total	**519.9**	–	**701.4**	–	**810.6**	–	**57.4**	–	**868.0**	–

F–15 Eagle

The F-15's superior maneuverability and acceleration are achieved through high engine thrust-to-weight ratio and low wing loading. A multi-mission avionics system sets the fighter apart from other fighter aircraft. The F-15 is an extremely maneuverable, tactical fighter designed to permit the Air Force to gain and maintain air supremacy over the battelfield.

Mission: The F-15 performs both air superiority and all-weather, deep penetration, and night/under-the-weather attack with large air-to-surface weapon payloads.

FY 2010 Program: Continues development and procurement of modifications for upgrading the F-15 aircraft to enhance flight safety and improve reliability and maintainability.

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

F–15 Eagle	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		FY 2010 Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	114.9	–	198.9	–	311.2	–	–	–	311.2	–
Procurement	187.0	–	53.7	–	92.9	–	–	–	92.9	–
Total	**301.9**	–	**252.6**	–	**404.1**	–	–	–	**404.1**	–

F–16 Falcon

USAF


USAF Photo

The F-16 is a single seat, fixed wing, high performance fighter aircraft powered by a single engine. The advanced technology features include a blended wing body, reduced static margin, and fly-by-wire flight control system.

Mission: The F-16 aircraft is a lightweight, high performance, multipurpose fighter capable of performing a broad spectrum of tactical air warfare tasks at affordable cost well into the next century. F-16 aircraft provide high-performance air-to-air and air-to-surface attack capability.

FY 2010 Program: Continues the development and procurement of modifications to upgrade the F-16 aircraft. The primary modifications funded in FY 2010 are the Engine Service Life, Modular Mission Computer Upgrade, Embedded GPS/INS and Falcon Star.

Prime Contractors: Lockheed Martin Corporation, Fort Worth, TX
Pratt & Whitney Corporation, East Hartford, CT
General Electric Aviation, Evandale, OH

F–16 Falcon

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		**Total Request**	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	**$M**	**Qty**
RDT&E	76.8	–	126.8	–	141.0	–	–	–	**141.0**	**–**
Procurement	383.6	–	371.8	–	224.6	–	20.0	–	**244.6**	**–**
Total	**460.4**	**–**	**498.6**	**–**	**365.6**	**–**	**20.0**	**–**	**385.6**	**–**

F–22 Raptor

USAF


USAF Photo

The F-22 Raptor program is producing the next generation air superiority fighter for the first part of the century. 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-22A will enhance U.S. air superiority capability against the projected threat and will eventually replace the F-15 aircraft. The F-22 is a critical component of the Global Strike Task Force, and is designed to protect air dominance rapidly at great distances and to defeat threats attempting to deny access to our Nation's Joint Forces.

FY 2010 Program: Continues critical F-22 modernization through incremental capability upgrades and key reliability and maintainability efforts.

Prime Contractors: Lockheed Martin Corporation, Marietta, GA and Ft. Worth, TX
The Boeing Company, Seattle, WA
Pratt & Whitney, East Hartford, CT

F–22 Raptor

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		**Total Request**	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	**$M**	**Qty**
RDT&E	607.8	–	605.7	–	569.3	–	–	–	**569.3**	**–**
Procurement	3,790.0	20	4,345.5	24	445.9	–	–	–	**445.9**	**–**
Total	**4,397.8**	**20**	**4,951.2**	**24**	**1,015.2**	**–**	**–**	**–**	**1,015.2**	**–**

KC–X New Tanker

The KC-X Aerial Refueling Tanker will replace the aging fleet of KC-135 tankers. KC-X, the first phase of KC-135 recapitalization, will procure aircraft to replace roughly one-third of the current KC-135 tanker fleet.

USAF Photo
KC–135 Pictured

Mission: The KC-X 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.

FY 2010 Program: Supports source selection and development of a new aerial refueling tanker.

Prime Contractor: Currently in Source Selection

KC–X New Tanker

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		**Total Request**	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	**$M**	**Qty**
RDT&E	29.7	–	22.9	–	439.6	–	–	–	**439.6**	–
Total	**29.7**	–	**22.9**	–	**439.6**	–	**–**	–	**439.6**	–

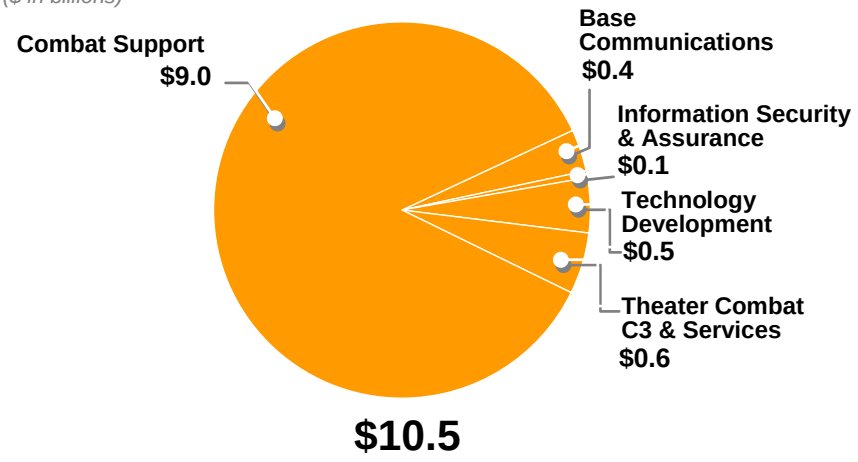
Command, Control, Communications and Computer (C4) Systems

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. Net-centricity 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 services-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. This growth is supported in the FY 2010 President's budget with programs like the Future Combat Systems, Warfighter Information Network-Tactical (WIN-T), Joint Tactical Radio System, Next Generation Enterprise Network (NGEN), Joint Battle Command–Platforms and Interim Gateway.

FY 2010 Command, Control, Communications, and Computer (C4) Systems – Base and OCO

($ in billions)



Source: FY 2009 Procurement Programs (P-1) and RDT&E Programs – Investment Categorization 106-WP
Numbers may not add due to rounding

Joint Tactical Radio System

DOD - JOINT

USMC Photo

The Joint Tactical Radio System (JTRS) is a joint DoD effort lead by the Navy to develop, produce, integrate, test and field a family of software-defined, secure, multi-channel, digital radios that will be interoperable with existing radios and increase communication and networking capabilities for mobile and fixed sites. Ground, airborne, vehicular, maritime, and small form factor variants of the radio hardware and 36 waveforms for importing into the JTRS hardware encompasses program. All JTRS products are being developed in a joint environment, enhancing hardware and software commonality and reusability.

Mission: The JTRS products will simultaneously receive, transmit and relay voice, data, and video communications with software re-programmable, net-workable, multi-band, and multi-mode system.

FY 2010 Program: Funds the design, development and manufacture of JTRS engineering development models (EDMs) and low rate initial production (LRIP), to include hardware and software.

Prime Contractors: The Boeing Company, Anaheim, CA
Lockheed Martin Corporation, Marietta, GA
ViaSat Incorporated, San Diego, CA
General Dynamics Corporation, Scottsdale, AZ

Joint Tactical Radio System

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	830.8	–	843.1	–	876.4	–	–	–	876.4	–
Procurement	44.5	–	87.3	–	150.3	–	–	–	150.3	–
O&M	16.7	–	16.5	–	37.1	–	–	–	37.1	–
Total	892.0	–	946.9	–	1,063.8	–	–	–	1,063.8	–

Future Combat Systems

USA

FUTURE COMBAT SYSTEMS
FCS
One Team-The Army/Defense/Industry

Future Combat Systems (FCS) is the Army's principal modernization program. It improves the Army's ability to move, shoot and communicate on the battlefield with an unprecedented level of joint interoperability, shared situation awareness, and ability to execute highly synchronized mission operations. It is a complex acquisition program that involves developing and integrating a family of unmanned ground and air vehicles, unattended ground sensors and a network into the current brigade combat team (BCT) structure. It is 6 years into a 10-year development schedule.

The FCS program has been restructured for the FY 2010 President's budget from a core program with spin-outs of mature technologies to the current force to an incremental program focused on improving the Infantry Brigade Combat Team (IBCT) by adding FCS technologies and replacing the most vulnerable platforms in the Heavy Brigade Combat Team (HBCT).

Mission: FCS is designed to transform the Army into a more rapidly deployable and responsive force, moving away from the large division-centric structure.

FY 2010 Program: Continues development of three unmanned ground vehicles, two unmanned aerial vehicles, non-line-of-sight launch system, unattended ground sensors and an information network. Terminates the current manned ground vehicles (MGV) efforts, non-line-of-sight (NLOS) cannon program and the medium-range munitions. Creates a new combat vehicle development program to replace the aging current force systems.

Prime Contractors: The Boeing Company, St. Louis, MO
Science Applications International Corporation (SAIC), Torrance, CA

Future Combat Systems

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	3,302.8	–	3,380.2	–	2,653.0	–	–	–	2,653.0	–
Procurement	80.3	–	221.4	–	327.9	–	–	–	327.9	–
Total	3,383.1	–	3,601.6	–	2,981.0	–	–	–	2,981.0	–

Single Channel Ground & Airborne Radio

USA


US Army Photo

The Single Channel Ground and Airborne Radio System (SINCGARS) is a flexible and secure combat radio while over time has evolved from voice-only into a software defined, open architecture system with networking capabilities. The SINCGARS includes a frequency-hopping and jam-resistant feature that can defeat less sophisticated jamming techniques.

Mission: The SINCGARS provides clear, secure voice and data communications that provide situational awareness and transmit command and control (C2) information across the entire battlefield. The SINCGARS continues its evolutionary development with the fielding of the Advanced SINCGARS System Improvement Program (ASIP) radio. The SINCGARS ASIP radio provides for enhanced data and voice communications while using commercial internet protocols. The family of SINCGARS radios is employed on such weapon systems as the Bradley M2A3, PATRIOT, ABRAMS MIA2SEP, and the Longbow Apache helicopter.

FY 2010 Program: Procures SINCGARS radios to provide command and control for combat, combat support, and combat service support units.

Prime Contractors: ITT, Fort Wayne, IN and Gaithersburg, MD
General Dynamics Corporation, Tallahassee, FL

Single Channel Ground & Airborne Radio

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		FY 2010 Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
Procurement	508.4	–	187.0	–	6.8	–	128.2	–	135.0	–
Total	**508.4**	–	**187.0**	–	**6.8**	–	**128.2**	–	**135.0**	–

Warfighter Information Network- Tactical

USA

The Warfighter Information Network- Tactical (WIN-T) is the Army's on-the-move, high speed, high capability backbone communications network, linking warfighters in the battlefield with the Global Information Grid (GIG). This network is intended to provide command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) support capabilities. The system, however, is being 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 consists of four increments. Increment 1 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 on 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 designs, develops and fields a future satellite-based communications and network for the warfighters based on the Army's move to a modular, brigade combat team structure.

FY 2010 Program: Continues System Development and Demonstration (SDD) efforts for Increments 1 and 2; procures WIN-T systems for fielding to 10 additional Army units (for a total of 55 units by FY 2015).

Prime Contractors: Lockheed Martin Corporation, Gaithersburg, MD
General Dynamics Corporation, Taunton, MA

Warfighter Information Network- Tactical

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		FY 2010 Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	309.1	–	393.1	–	180.7	–	–	–	180.7	–
Procurement	–	–	655.9	–	544.2	–	13.5	–	557.7	–
Total	**309.1**	–	**1,049.0**	–	**724.9**	–	**13.5**	–	**738.4**	–

Ground Programs

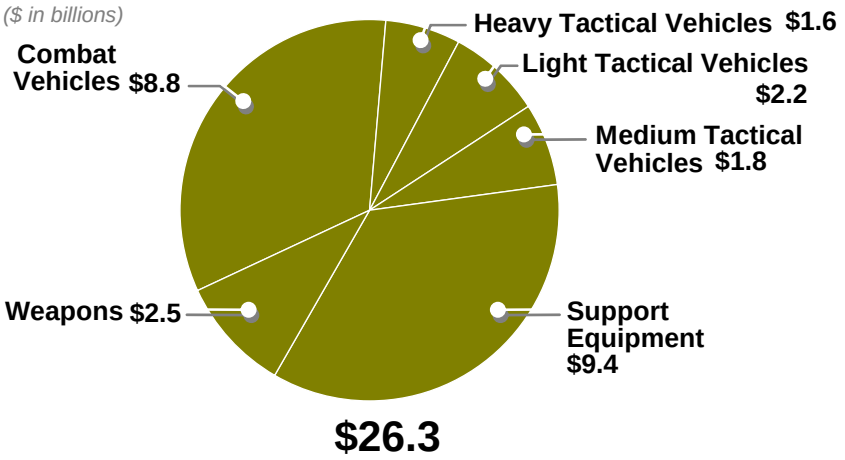
The Department continues to modernize the Army and Marine Corps' Combat and Tactical Wheeled Vehicle fleets. Both Services plan to modernize their fleets by replacing older vehicles and combat losses with new procurement or upgrading existing vehicles through recapitalization. Their plans call for improvements in the capabilities of vehicles by inserting advanced technologies into the current vehicles as quickly as possible.

During the last several years, ground-based conflicts such as Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) have increased the demand for ground vehicles. Ground vehicle funding has seen an average annual compounded growth of 45 percent from FY 2002 to FY 2008. This funding growth is due, in large measure, to the procurement of Mine Resistant Ambush Protected (MRAP) vehicles to support forces in Iraq and Afghanistan. The MRAPs have been entirely funded through Supplemental funds. The MRAP is a heavily armored vehicle capable of mitigating the effects of underbody mines and small arms fire threats. It provides survivable, safe, and sustainable vehicles to troops in theater.

Ongoing operations also resulted in acquisition of tactical vehicles:

- Light Tactical Vehicles such as the High Mobility Multipurpose Wheeled Vehicle (HMMWV) comprise about half of the tactical wheeled vehicle fleet for the Army. The Joint Lightweight Tactical Vehicle (JLTV) is a joint Army and Marine Corps program currently in development and is intended to replace the HMMWV;
- Medium Tactical Vehicles provide a significant portion of the supply and ammunition delivery to the combat vehicle fleet;
- Heavy Tactical Vehicles consist of cargo and missile carriers, load-handling systems, fuel tankers, wreckers and materiel-handling cranes;

FY 2010 Ground Programs – Base and OCO



Source: FY 2009 Procurement Programs (P-1) and RDT&E Programs – Investment Categorization 106-WP
Numbers may not add due to rounding

- Integration of new technologies across various types of combat vehicles increases firepower, lethality, mobility, and survivability;
- The Abrams tank upgrades include armor protection, a nuclear, biological, and chemical protection system, improved power, and a second-generation thermal sensor;
- The Stryker family of armored vehicles is the centerpiece for the Stryker Brigade Combat Teams and provides the Army with a mobile weapon system that operates with speed and can maneuver in combat terrain and urban areas.
- The Expeditionary Fighting Vehicle (EFV) is currently in development and is the keystone for the Marine Corps Expeditionary Maneuver Warfare fighting concepts. It will provide the Marine Corps a primary means of tactical mobility during the conduct of amphibious/ground combat operations.

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 three mission role variants: General Purpose 3,500 lb; Infantry Carrier 4,500 lb; and Utility 5,100 lb.

FY 2010 Program: Continues the program in technology development at acquisition lifecycle Milestone A.

Prime Contractor: Currently in Technology Development

Joint Light Tactical Vehicle

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E USA	106.4	–	22.0	–	32.1	–	–	–	32.1	–
RDT&E USMC	40.0	–	44.0	–	58.0	–	–	–	58.0	–
Total	146.4	–	66.0	–	90.1	–	–	–	90.1	–

MRAP Vehicle — DOD - JOINT

ATC Photo

The Mine Resistant Ambush Protected (MRAP) vehicle family is a joint acquisition program that provides the nation's operating forces with vehicles that are capable of defeating or mitigating the effects of Improvised Explosive Devices (IEDs) and rocket propelled grenades while conducting operations in the highest threat areas. A raised chassis, heavy armor, and V-shaped hull deflect from underneath, the blast effect created by mines or IEDs providing passengers with effective and reliable protection. There are three versions of the MRAP vehicle: Category I is the smallest version of MRAP and is primarily intended for operations in the urban combat environment, carrying up to 7 personnel. Category II is a multi-mission platform capable of supporting security, convoy escort, troop or cargo transport, medical, explosive ordnance disposal, and carries up to 11 personnel. Category III is the largest of the MRAP family is primarily intended for the role of mine and IED clearance operations, and carries up to 13 personnel.

Mission: The MRAP vehicle fleet has multiple missions to include reconnaissance, convoy operations, troop transport, ambulance, combat engineer and explosive ordnance disposal missions for maneuver units. The MRAP is also designed to mitigate explosive hazards by identifying and clearing mines by neutralizing the effects of explosive devices.

FY 2010 Program: Procures 1,080 lighter MRAP All Terrain Vehicles (ATV) with integrated armor and safety initiatives to provide a lighter, more mobile and maneuverable variant to support operations in Afghanistan.

Prime Contractors: Various

MRAP Vehicle

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
MRAP Fund	16,838.0	9,380	4,393.0	1,000	–	–	5,456.0	1,080	5,456.0	1,080
Total	16,838.0	9,380	4,393.0	1,000	–	–	5,456.0	1,080	5,456.0	1,080

Armored Security Vehicle

The M1117 Armored Security Vehicle (ASV) is a lightly armored all-wheel drive vehicle with 360 degree armor protection against armor piercing, high explosive fragmentation, and anti-tank mines under the wheels and under the hull. The ASV has a crew of three plus one passenger. It has a full collective NBC protection system and a digitized package, which includes Blue Force Tracker and Single Channel Ground and Airborne Radio System (SINCGARS) radio.

The ASV provides protection to the crew compartment, gunner's station, and the ammunition storage area. The turret is fully enclosed with both an MK-19 40mm grenade machine gun, an M-2 Browning .50 caliber machine gun and with a multi-salvo smoke grenade launcher. The ASV provides ballistic, blast and overhead protection for its four person crew. The ASV has a payload of 3,360 lbs and supports Army transformation with its 400 mile plus rang, top speed of nearly 70 miles per hour, and C-130 deployability.

Mission: The ASV is a turreted, armored, all-wheel drive vehicle that supports military police missions, such as rear area security, law and order operations, and protects convoys in hostile areas, battlefield circulation, and enemy prisoner of war operations, over the entire spectrum of war and operations other than war.

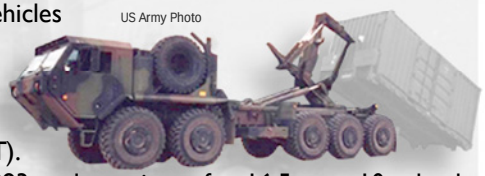
FY 2010 Program: Procures 150 ASV vehicles in the Baseline budget and integrated armor in the Overseas Contingency Operations budget.

Prime Contractor: Textron, New Orleans, LA

Armored Security Vehicle

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		**Total Request**	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	**$M**	**Qty**
Procurement	568.9	685	318.7	345	136.6	150	13.2	–	**149.8**	**150**
Total	**568.9**	**685**	**318.7**	**345**	**136.6**	**150**	**13.2**	**–**	**149.8**	**150**

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: Tanker to refuel tactical vehicles and helicopters, Tractor to tow Patriot missile system and Multi-Launch Rocket System (MLRS), Wrecker to recover vehicles, and Cargo transport. The HEMTT entered service in 1982.

Mission: Provides transportation of heavy cargo to supply and re-supply combat vehicles and weapons systems. The HEMTT is used in line haul, local haul, unit resupply, and other missions throughout the tactical environment to support modern and highly mobile combat units. The PLS is fielded to transportation units, ammunition units, and to forward support battalions with the capability to self-load and transport 20 ft. International Standards Organization (ISO) container. The HEMTT A4 is an important truck to transport logistics behind quick-moving forces such as the M-1 Abrams and Stryker. The HEMTT trucks carry all types of cargo, especially ammunition and fuel.

FY 2010 Program: Procures various FHTV vehicles, trailers, and tracking systems to fill urgent theater requirements and modernize the Heavy Tactical Vehicle fleet for the Active, National Guard, and Reserve units.

Prime Contractor: Oshkosh Truck Corporation, Oshkosh, WI

Family of Heavy Tactical Vehicles

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		**Total Request**	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	**$M**	**Qty**
Procurement	3,095.8	(-)	1,978.6	(-)	812.9	(-)	623.2	(-)	**1,436.1**	**(-)**
Total	**3,095.8**	**(-)**	**1,978.6**	**(-)**	**812.9**	**(-)**	**623.2**	**(-)**	**1,436.1**	**(-)**

Family of Medium Tactical Vehicles

USA

DoD Photo

The Family of Medium Tactical Vehicles (FMTV) is a family of diesel powered trucks in the 2 1/2 ton and 5 ton payload class. The vehicle first went into service in 1996. It 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% 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, cross-country 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 2010 Program: Procures 3,889 Medium Tactical Vehicles in the Baseline budget and 1,643 vehicles in the Overseas Contingency Operations budget to support the Army modular transformation effort to modernize the tactical wheeled vehicle fleet for medium size trucks.

Prime Contractor: Stewart and Stevenson, Sealy, TX

Family of Medium Tactical Vehicles

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		FY 2010 Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
Procurement	2,147.0	6,802	1,017.5	3,724	1,158.5	3,889	461.7	1,643	1,620.2	5,532
Total	**2,147.0**	**6,802**	**1,017.5**	**3,724**	**1,158.5**	**3,889**	**461.7**	**1,643**	**1,620.2**	**5,532**

M–1 Abrams Tank Upgrade

USA

US Army Photo

The M1 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. The current M1 Abrams tank modernization effort supports two variants. The M1A1 Situational Awareness (SA) and the M1A2 System Enhancement Program (SEP). The M1A1 SA modernization includes steel encased depleted uranium for increased frontal and turret side armor protection, suspension improvements, an advanced computer system with embedded diagnostics, a second generation thermal sensor, and a laser rangefinder to designate targets from increased distances. The M1A2 SEP tank modernization includes a commander's independent thermal weapons station, position navigation equipment, improved fire control system, and an improved AGT1500 turbine engine.

Mission: The M1A2 Abrams is the Army's main battle tank that provides mobile and protected firepower for battlefield superiority against heavy armor forces.

FY 2010 Program: Upgrades and fields M1A2 SEP tanks to armor units including the 1st Armor Division.

Prime Contractor: General Dynamics Corporation, Sterling Heights, MI

M–1 Abrams Tank Upgrade

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		FY 2010 Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	29.1	–	37.0	–	101.7	–	–	–	101.7	–
Procurement	2,361.7	260	1,347.0	111	369.4	22	–	–	369.4	22
Total	**2,390.8**	**260**	**1,384.0**	**111**	**471.1**	**22**	**–**	**–**	**471.1**	**22**

Stryker Family of Armored Vehicles

Stryker is a 19-ton wheeled armored vehicle that will provide the Army a family of ten different vehicles. The Stryker can be deployed by C-130, C-17, and C-5 aircraft and be combat-capable upon arrival in any contingency area. It can reach speeds of 62 mph on the highway and has a maximum range of 312 miles. There are 2 basic versions which include the Infantry Carrier Vehicle (ICV) and the Mobile Gun System (MGS). There are 8 different configurations which include the Reconnaissance Vehicle (RV); Anti-Tank Guided Missile (ATGM); Nuclear, Biological, Chemical, and Radiological Vehicle (NBCRV); Medical Evacuation Vehicle (MEV) Commander's Vehicle (CV); Fire Support Vehicle (FSV); Mortar Carrier (MC); and Engineer Squad Vehicle (ESV).

Mission: The Stryker vehicle is designed to enable the Brigade Combat Team to maneuver more easily in close and urban terrain while providing protection in open terrain. It fills the Army's current transformation goal to equip a strategically deployable (C-17/C-5) and operationally deployable (C-130) brigade capable of rapid movement anywhere on the globe in a combat ready configuration.

FY 2010 Program: Procures survivability enhancements, systems engineering, and training devices. No vehicles will be procured in FY 2010.

Prime Contractor: General Dynamics Corporation, Sterling Heights, MI

Stryker Family of Armored Vehicles

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	127.7	–	79.4	–	90.3	–	–	–	90.3	–
Procurement	2,792.1	677	1,309.0	88	388.6	–	–	–	388.6	–
Total	**2,919.8**	**677**	**1,388.4**	**88**	**478.9**	**–**	–	–	**478.9**	–

High Mobility Multipurpose Wheeled Vehicle

The High Mobility Multi-purpose Wheeled Vehicle (HMMWV) is a light, highly mobile, diesel powered, air transportable, 4-wheel drive tactical vehicle with a common chassis. The HMMWV can be configured through the use of common components and kits to become a cargo/troop carrier, armament carrier, shelter carrier, ambulance, and a platform for mounted anti-tank TOW missile launchers. The HMMWV's high power-to-weight ratio, 4 wheel drive, and high ground clearance combine to give it cross-country mobility. The M1151 Enhanced Armament Carrier and M1152 Enhanced Shelter Carrier have a heavier chassis and improved engine that enable the use of removable add-on armor (B kits) protection that can be installed or removed to meet mission requirements. The B-kits add armor to doors, rocker panel, and front wheel wells.

Mission: The HMMWVs provide a common light tactical vehicle capability and are designed for use over all types of roads and in all weather conditions.

FY 2010 Program: Procures 1,824 HMMWV's in the Base budget and 8,444 HMMWV's in the Overseas Contingency Operations with integrated armor and safety initiatives to replace inventories of HMMWV's that have reached the end of their service life.

Prime Contractor: AM General, Mishawaka, IN

High Mobility Multipurpose Wheeled Vehicle

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
Procurement USA	2,796.9	17,012	1,676.0	10,995	281.1	1,770	1,251.0	8,444	1,532.1	10,214
Procurement USMC	352.3	1,206	180.8	301	9.8	54	205.0	–	214.8	54
Total	**3,149.2**	**18,218**	**1,856.8**	**11,296**	**290.9**	**1,824**	**1,456.0**	**8,444**	**1,746.9**	**10,268**

Expeditionary Fighting Vehicle

USMC

USMC Photo

The Expeditionary Fighting Vehicle (EFV) is an armored, amphibious, and fully tracked infantry combat vehicle that is a keystone for the Marine Corps Expeditionary Maneuver Warfare and Ship-to-Objective Maneuver warfighting concepts. The EFV provides the Marine Corps' Marine Rifle Squad with tactical mobility during amphibious operations and subsequent ground combat operations ashore. The EFV will be launched from Navy amphibious ships at distances up to 25 miles. The vehicles can travel inland up to 340 miles without refueling and can carry a crew of 3 plus 17 combat-loaded Marines. The EFV will be armed with a 30mm cannon and 7.62 mm machine gun. The EFV will replace the Amphibious Assault Vehicle (AAV), which was originally fielded in 1972.

Mission: The EFV is a self-deploying armored amphibious vehicle that provides high speed transport of the Marine infantry from ships located beyond the horizon to conduct operations ashore. Although not a main battle tank, the EFV will have the speed and maneuvering capabilities to conduct operations with battle tanks on land and provide land mobility and direct fire support during combat operations.

FY 2010 Program: Continues system development. The first EFV is scheduled for initial production in FY 2012.

Prime Contractor: General Dynamics Corporation, Woodbridge, VA

Expeditionary Fighting Vehicle

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		**Total Request**	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	**$M**	**Qty**
RDT&E	240.5	–	255.3	–	293.5	–	–	–	**293.5**	–
Total	**240.5**	–	**255.3**	–	**293.5**	–	–	–	**293.5**	–

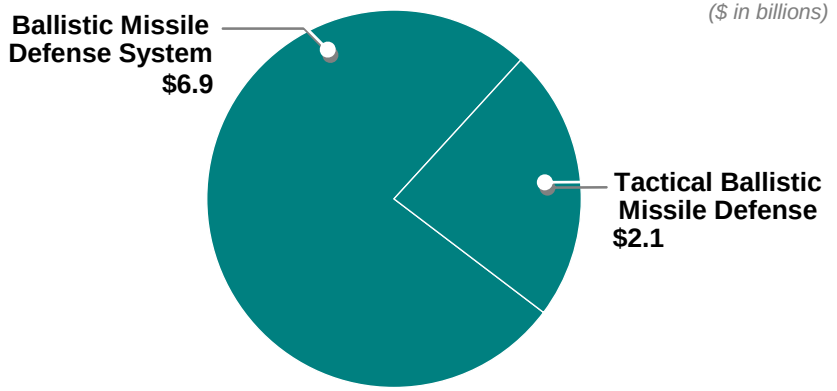
Missile Defense

The goal of the Nation's missile defense investment is to develop and progressively field a system to defend the U.S., its deployed forces, and its Allies and friends against ballistic missiles with a focus on threats from rogue states. This category includes all missile defense systems designed to defeat hostile ballistic missiles of various ranges.

Components include interceptor missiles themselves as well as the associated sensors and command, control, battle management, and communications systems. There are also significant investments in construction, targets and counter-measures, and research, development, test, and evaluation activities. Included in this category are all programs that are either critical to the functionality of missile defense or support missile defense as a primary mission. Representative programs are the AEGIS (ship-based), Terminal High Altitude Area Defense (THAAD) (ground-based), Ground-Based Midcourse Defense (GMD) (ground-based), and Patriot Advance Capability – 3 (PAC-3) (ground based).

FY 2010 Missile Defense – Base and OCO

($ in billions)



$9.1

106-WP

Note: $9.1B does not include $0.2B for BRAC, MILCON or MDA S&T
Source: FY 2009 Procurement Programs (P-1) and RDT&E Programs – Investment Categorization
Numbers may not add due to rounding

Missile Defense

DOD - JOINT

An integrated, layered Ballistic Missile Defense System (BMDS) program, designed to focus on threats from rogue states. The system capability will protect the United States, its Allies and deployed forces from all phases of ballistic missile attack. The program is managed as one system that is exploring concepts, developing and fielding the earliest possible capability in ground, sea, space and air which will intercept any range of threat in the boost, midcourse or terminal phases of flight trajectory. Major elements include AEGIS Ballistic Missile Defense (BMD), Ground Based Midcourse (GMD), Terminal High Altitude Area Defense (THAAD), Sensors (Sea-Based, Early Warning and Forward Based Radars), Command, Control Battle Management, and Communications (C2BMC), Airborne Laser (ABL), Space Tracking and Surveillance System (STSS), and Patriot Advanced Capability-3 (PAC-3) components. Further, the program is involved internationally in cooperative efforts for advancements of the mission.

Mission: To develop, field, and sustain an initial missile defense capability to defend the United States, its Allies, and our deployed forces against rogue nation attacks, to close gaps and improve this capability against rogue states, and to develop options to defeat near-term and emerging threats.

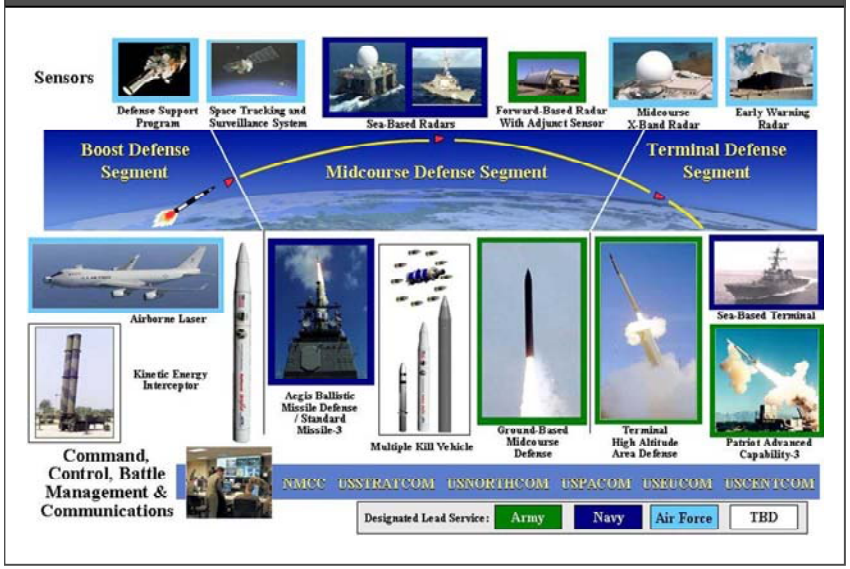
FY 2010 Program: Continues the development, procurement, fielding, and sustainment of ground-based and sea-based interceptors; AEGIS BMD capable ships, and sensors. Also continues to fund the Base Realignment and Closure (BRAC) relocation of the Missile Defense Agency (MDA) to Huntsville, AL. Total program funds of $9.3 billion include MDA BRAC, Military Construction (MILCON) and Science and Technology (S&T). The Israeli Cooperative Program resources are captured in the BMD Terminal funding in FY 2008 and in FY 2009.

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

Missile Defense

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		FY 2010 Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	9,605.0	–	9,372.4	–	8,186.1	–	–	–	8,186.1	–
Procurement	994.9	–	1,218.6	–	998.6	–	–	–	998.6	–
MILCON	–	–	169.5	–	30.2	–	–	–	30.2	–
BRAC	110.0	–	160.0	–	86.6	–	–	–	86.6	–
Total	10,709.9	–	10,920.5	–	9,301.5	–	–	–	9,301.5	–

The Integrated Ballistic Missile Defense System



Planned BMDS Interceptor Inventory (Cumulative Totals)

	FY 2008	FY 2009	FY 2010 Base Budget	FY 2010 OCO Budget	FY 2010 Total Request
	Qty	Qty	Qty	Qty	Qty
Ground Based Interceptor (GBI)	24	28	35	–	35
Standard Missile -3	44	54	80	–	80
THAAD Interceptor	–	8	32	–	32
PAC-3 Interceptor	603	681	791	–	791
Total	671	771	938	–	938

Planned BMDS Tactical Capability Inventory (Cumulative Totals)

	FY 2008	FY 2009	FY 2010 Base Budget	FY 2010 OCO Budget	FY 2010 Total Request
	Qty	Qty	Qty	Qty	Qty
GBI Silos	28	30	30	–	30
AEGIS ships	18	21	27	–	27
THAAD Batteries	2	2	4	–	4
Patriot/PAC-3 Fire Units	48	56	60	–	60
Total	96	109	121	–	121

Missile Defense (MDA)

	FY 2008	FY 2009	FY 2010		
			Base Budget	OCO Budget	Total Request
	$M | Qty	$M | Qty	$M | Qty	$M | Qty	$M | Qty
RDT&E, DW, MDA					
BMD Technology	106.4 | –	119.3 | –	109.8 | –	– | –	109.8 | –
BMD Terminal	1,034.5 | –	956.7 | –	719.5 | –	– | –	719.5 | –
BMD Midcourse (GMD)	2,198.7 | –	1,507.5 | –	982.9 | –	– | –	982.9 | –
BMD Boost (ABL)	503.5 | –	400.8 | –	186.7 | –	– | –	186.7 | –
BMD Sensors (Radars)	574.2 | –	767.6 | –	636.9 | –	– | –	636.9 | –
BMD Interceptor	330.9 | –	385.5 | –	– | –	– | –	– | –
BMD Test and Targets	619.1 | –	911.7 | –	966.8 | –	– | –	966.8 | –
Advanced Concepts/Special Programs	193.2 | –	175.7 | –	301.6 | –	– | –	301.6 | –
BMD AEGIS	1,214.1 | 23	1,113.7 | 12	1,690.8 | 18	– | –	1,690.8 | 18
Space Tracking & Surveillance System (STSS)	226.5 | –	208.9 | –	180.0 | –	– | –	180.0 | –
Multiple Kill Vehicle (MKV)	223.1 | –	283.5 | –	– | –	– | –	– | –
BMD Space	16.2 | –	24.7 | –	12.5 | –	– | –	12.5 | –
BMD Command & Control, Battle Mgt & Comm (C2BMC)	440.0 | –	288.3 | –	340.0 | –	– | –	340.0 | –
Sea Based X-Band Radar (SBX)	155.2 | –	146.7 | –	174.6 | –	– | –	174.6 | –
BMD European Components	– | –	465.5 | –	50.5 | –	– | –	50.5 | –
Israeli Cooperative	– | –	– | –	119.6 | –	– | –	119.6 | –
BMD Enabling Programs	416.9 | –	402.8 | –	369.1 | –	– | –	369.1 | –
BMD Other Programs	403.1 | –	335.4 | –	279.3 | –	– | –	279.3 | –
Subtotal MDA, RDT&E	**8,655.6 | –**	**8,494.3 | –**	**7,120.6 | –**	**– | –**	**7,120.6 | –**

Missile Defense (MDA)

	FY 2008	FY 2009	FY 2010		
			Base Budget	OCO Budget	Total Request
	$M | Qty	$M | Qty	$M | Qty	$M | Qty	$M | Qty
Procurement, DW, MDA					
THAAD Missiles, Proc	– | –	104.8 | –	420.3 | 26	– | –	420.3 | 26
AEGIS, SM-3 Missiles, Proc	– | –	56.8 | –	168.7 | –	– | –	168.7 | –
Sub-total MDA, Proc	**– | –**	**161.6 | –**	**589.0 | –**	**– | –**	**589.0 | –**
MILCON, MDA	0.0 | –	169.5 | –	30.2 | –	– | –	30.2 | –
BRAC, MDA	110.0 | –	160.0 | –	86.6 | –	– | –	86.6 | –
Subtotal MDA	**8,765.6 | –**	**8,985.4 | –**	**7,826.4 | –**	**– | –**	**7,826.4 | –**

Missile Defense (Non MDA)

RDT&E, Army					
PAC-3/MEADS Combined Aggregate Program (CAP)	401.6 | –	429.8 | –	569.2 | –	– | –	569.2 | –
Missile /Air Defense Product Improvement Program	29.2 | –	37.7 | –	39.3 | –	– | –	39.3 | –
Aerostat Joint Program Office (JLENS)	464.9 | –	355.3 | –	360.1 | –	– | –	360.1 | –
Subtotal, RDT&E, Army	**895.7 | –**	**822.8 | –**	**968.6 | –**	**– | –**	**968.6 | –**
Procurement, Army					
Patriot/PAC-3, Army Proc	994.9 | 108	1,026.0 | 108	393.2 | 59	– | –	393.2 | 59
Patriot/MEADS, Army, Proc	0.0 | –	31.0 | –	16.4 | –	– | –	16.4 | –
Subtotal, Army, Proc	**994.9 | –**	**1,057.0 | –**	**409.6 | –**	**– | –**	**409.6 | –**
BMD Joint Staff, RDT&E, DW	53.7 | –	55.3 | –	96.9 | –	– | –	96.9 | –
Total Missile Defense	**10,709.9 | –**	**10,920.5 | –**	**9,301.5 | –**	**– | –**	**9,301.5 | –**

Numbers may not add due to rounding

AEGIS Ballistic Missile Defense

DOD - JOINT

The AEGIS is a Missile Defense Agency (MDA) program and a key element of the Ballistic Missile Defense System (BMDS), while building upon the existing U.S. Navy AEGIS Weapons System (AWS) and Standard Missile (SM) infrastructures. AEGIS provides a forward-deployable, mobile capability to detect and track Ballistic Missiles of all ranges, and the ability to destroy Short-Range Ballistic Missile, Medium-Range Ballistic Missile, Intermediate-Range Ballistic Missile, and selected long-range class threats in the midcourse phase of flight. Spiral upgrades to both the AEGIS BMD Weapon System (AWS) and the SM-3 configurations will enable AEGIS BMD to provide effective, supportable defensive capability against more difficult threats, including Long Range Ballistic Missiles, and expand capability to counter limited engagements in the terminal phase of flight.

Mission: The AEGIS BMD is delivering an enduring, operationally effective and supportable BMDS capability on AEGIS cruisers and destroyers to defend the nation, deployed forces, friends and allies, and to incrementally increase this capability by delivering evolutionary spiral improvements as part of the BMDS upgrades.

FY 2010 Program: Procures and installs the AEGIS Weapon System upgrades for 6 additional AEGIS ships (increases total from 21 to 27). RDT&E funds procure SM-3 Block 1B missiles. The Procurement funds the continuous FY 2008 and FY 2009 delivery of SM-3 Block 1A missiles.

Prime Contractor:

AWS: Lockheed Martin Corporation, Moorestown, NJ
SM-3: Raytheon Company, Tucson, AZ

AEGIS Ballistic Missile Defense

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		FY 2010 Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	1,214.1	–	1,113.7	–	1,690.8	18	–	–	1,690.8	18
Procurement	–	–	56.8	–	168.7	–	–	–	168.7	–
Total	1,214.1	–	1,170.5	–	1,859.5	18	–	–	1,859.5	18

THAAD

DOD - JOINT

The Terminal High Altitude Area Defense (THAAD) is a Missile Defense Agency (MDA) key element of the Ballistic Missile Defense System (BMDS). THAAD Tactical groups will provide rapidly-transportable interceptors, using "Hit-To-Kill" technology to destroy ballistic missiles inside and outside the atmosphere. A Battery consists of three truck-mounted launchers, 24 interceptors (eight per launcher), one AN/TPY-2 radar, and one fire control/ communications (TFCC) component.

Mission: To provide any Combatant Commander the rapidly deployable, ground-base missile defense components that deepen, extend and compliment the Ballistic Missile Defense System (BMDS), which will defeat ballistic missiles of all types and ranges in all phases of flight.

FY 2010 Program: Supports the development, testing, fielding and sustainment of the THAAD components. The initial fielding to the Army of two Batteries at Fort Bliss, TX will be completed. An extensive unit training program will continue to train the soldiers on how to use and maintain the components as an operational unit. Funding will continue the purchase of Battery 3 and long lead items for Batteries 4 and 5. The changes to the program will increase THAAD missile manufacturing capability to 4 per month. The THAAD missiles are being procured in the Procurement appropriation and are fully funded beginning in FY 2010. Flight testing will transition from the Pacific Missile Range Facility (PMRF) in Kauai, HI to the Reagan National Test Facility at Kwajalein Atoll in FY 2010 to allow engagement of longer range targets.

Prime Contractor: Lockheed Martin Corporation, Sunnyvale, CA

Terminal High Altitude Area Defense

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		FY 2010 Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	881.4	–	777.6	–	697.2	–	–	–	697.2	–
Procurement	–	–	104.8	–	420.3	26	–	–	420.3	26
Total	881.4	–	882.4	–	1,117.5	26	–	–	1,117.5	26

Patriot / PAC-3

DOD - JOINT


US Army Photo

The Army's Patriot Advanced Capability (PAC-3) is the latest improvement to the proven air and missile defense system. The Army and the Missile Defense Agency jointly continue to evolve the successful integration of the PAC-3 capabilities into the Ballistic Missile Defense System (BMDS). The PAC-3 units are proven in combat and remain the only ground force capable of defeating Tactical Ballistic Missile, Cruise Missile, and Air Breathing threats worldwide today. The current Army plan to grow the force incorporates the decision to add two additional Patriot PAC-3 configuration battalions. This addition to the force is a result of increased requirements to support combatant commander's (COCOM) concerns about the rapid growth of threats to U.S. forces deployed in the Overseas Contingency Operations.

Mission: The Patriot contributes to the BMDS overall situational awareness for short and intermediate range terminal ballistic missile threats. It can cue other systems while protecting BMDS assets against large caliber rockets and air breathing threats. The Patriot also provides Cruise Missile engagement capabilities and is further enhanced by networked BMDS remote sensors supplying early warning data increasing the probability of successful threat engagement. The PAC-3 units are the COCOMs most capable system to protect Soldiers, Allies, and assets against these threats.

FY 2010 Program: Continues procurement of the PAC-3 missiles, system upgrades, and modifications. The Army is preparing to transition missile production from the PAC-3 version to the Missile Segment Enhancement (MSE) version in FY 2011.

Prime Contractor: Lockheed Martin Corporation, Dallas, TX (PAC-3 Missile)

Patriot / PAC-3

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		**Total Request**	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	**$M**	**Qty**
RDT&E	10.5	–	11.1	–	11.2	–	–	–	**11.2**	**–**
Procurement	994.9	108	1,026.0	108	393.2	59	–	–	**393.2**	**59**
Total	**1,005.4**	**108**	**1,037.1**	**108**	**404.4**	**59**	**–**	**–**	**404.4**	**59**

Patriot / MEADS

DOD - JOINT

The Medium Extended Air Defense System (MEADS) is a cooperative effort between the United States, Germany, and Italy to develop a ground based air and terminal ballistic missile defense capability system as a replacement for Patriot (U.S. and Germany), Hawk (Germany), and Nike Hercules (Italy). The MEADS will be a highly mobile, tactically deployable system providing defense to critical assets from short and medium range ballistic missiles, cruise missiles, and other air breathing threats. Mounted on wheeled vehicles, the system will include launchers carrying several interceptors along with advanced radars that will provide 360-degree coverage on the battlefield. Interceptors will use the latest Hit-To-Kill technology (directly hitting the target to destroy it). The cooperative effort will help promote interoperability within North Atlantic Treaty Organization forces and will help bridge the gap between short-range maneuver air and missile defense systems and the long-range Ballistic Missile Defense System elements. The Missile Segment Enhancement (MSE) is the primary missile for the system, which performs at an extended range.

Mission: Provides a capability that can rapidly be deployed to critical areas around the globe, providing missile defense coverage wherever and whenever it is needed.

FY 2010 Program: Funds the System Development and Demonstration (SDD) phase of the program by continuing the design and development of the system and completing the Critical Design Review.

Prime Contractor: MEADS International, Orlando, Fl

Patriot / MEADS

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		**Total Request**	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	**$M**	**Qty**
RDT&E	401.6	–	429.8	–	569.2	–	–	–	**569.2**	**–**
Procurement	–	–	31.0	–	16.4	–	–	–	**16.4**	**–**
Total	**401.6**	**–**	**460.8**	**–**	**585.6**	**–**	**–**	**–**	**585.6**	**–**

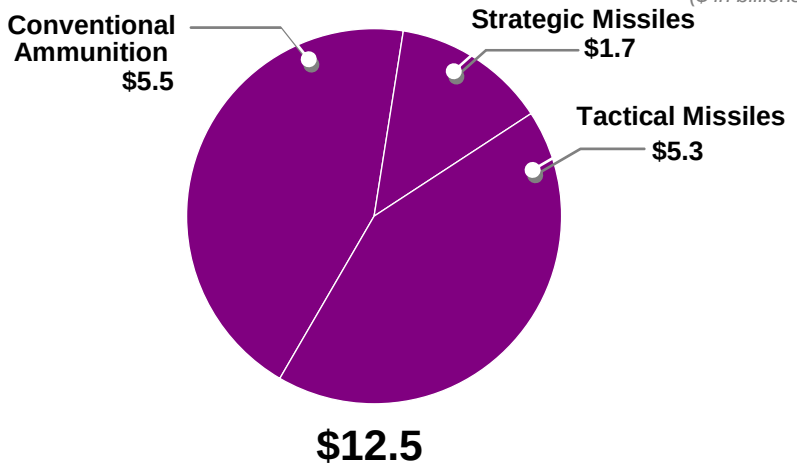
Munitions and Missiles

Munitions is a general term for ammunition and missiles including conventional ammunition, bombs, missiles, warheads, and mines. This category includes conventional and nuclear weapons and weapons used for both tactical and strategic purposes. Many of the missiles and munitions 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 Munition (JDAM) adds guidance capability when attached to a gravity bomb, making it a "smart" bomb. 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 2010 Munitions and Missiles – Base and OCO

($ in billions)



Source: FY 2009 Procurement Programs (P-1) and RDT&E Programs – Investment Categorization 106-WP
Numbers may not add due to rounding

Advanced Med. Range Air-to-Air Missile — DOD - JOINT

The Advanced Medium Range Air-to-Air Missile (AMRAAM) is an all-weather, all-environment radar guided missile developed to improve capabilities against very low-altitude 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.

FY 2010 Program: Continues full rate production as well as product improvements such as fuzing, guidance, and kinematics.

Prime Contractor: Raytheon Company, Tucson, AZ

Advanced Med. Range Air-to-Air Missile

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E										
Air Force	36.4	–	54.1	–	50.0	–	–	–	50.0	–
Navy	2.5	–	8.5	–	3.6	–	–	–	3.6	–
Subtotal	38.9	–	62.6	–	53.6	–	–	–	53.6	–
Procurement										
Air Force	190.8	133	203.8	133	291.8	196	–	–	291.8	196
Navy	86.0	52	93.0	57	145.5	79	–	–	145.5	79
Subtotal	276.8	185	296.8	190	437.3	275	–	–	437.3	275
Total	315.7	185	359.4	190	490.9	275	–	–	490.9	275

Air Intercept Missile – 9X — DOD - JOINT

The Air Intercept Missile-9X (AIM-9X) is a short range air-to-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 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 2010 Program: Continues full rate production as well as product improvements, such as data link capabilities, and battery and safety improvements.

Prime Contractor: Raytheon Company, Tucson, AZ

Air Intercept Missile – 9X

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E										
Air Force	7.7	–	5.7	–	5.9	–	–	–	5.9	–
Navy	4.8	–	6.7	–	2.3	–	–	–	2.3	–
Subtotal	12.5	–	12..4	–	8.2	–	–	–	8.2	–
Procurement										
Air Force	52.3	149	77.0	163	78.8	219	–	–	78.8	219
Navy	53.4	170	57.3	144	56.8	161	–	–	56.8	161
Subtotal	105.7	319	134.3	307	135.6	380	–	–	135.6	380
Total	118.2	319	146.7	307	143.8	380	–	–	143.8	380

Chemical Demilitarization

DOD - JOINT


US Army Photo

The Chemical Demilitarization Program is composed of two major defense acquisition programs 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. Under the CWC, the United States has an obligation to destroy the chemical weapons stockpile by April 29, 2012.

Mission: There are five mission areas within the Chemical Demilitarization Program: (1) destroy chemical agents and weapons stockpile using incineration technology; (2) destroy bulk container chemical agents stockpiles using neutralization technology; (3) destroy chemical agents and weapons stockpiles using neutralization technologies; (4) destroy Chemical Warfare Material (CWM) apart from the stockpile including: disposal of binary chemical weapons, former production facilities, and recovered chemical weapons; and (5) chemical stockpile emergency preparedness.

FY 2010 Program: Continue safe and secure destruction operations at the U.S. Army Chemical Materials Agency (CMA) existing sites, with a goal of 90% destruction of the U.S. chemical weapons by 2012. Funds construction efforts at the Assembled Chemical Weapons Alternatives (ACWA) Program sites in order to complete destruction of the remaining 10% of the U.S. chemical stockpile as close to 2017 as possible, in accordance with the National Defense Authorization Act (NTAA) for FY 2008.

Prime Contractors: URS Corporation, Arlington, VA
Parsons Corporation, Newport, IN
Bechtel Parsons, Richmond, KY

Chemical Demilitarization

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
Chemical Agents and Munitions Destruction	1,512.7	–	1,505.6	–	1,560.8	–	–	–	1,560.8	–
MILCON	104.2	–	144.3	–	146.5	–	–	–	146.5	–
Total	1,616.9	–	1,649.9	–	1,707.3	–	–	–	1,707.3	–

Joint Air-to-Ground Missile

DOD - JOINT

The Joint Air To Ground Missile (JAGM) is a joint Army and Navy program led by the Army to provide a conventional, precision-guided, air-to-ground weapon that can be delivered from both fixed and rotary wing aircraft. The JAGM is intended to replace the aging inventory of Hellfire and Maverick missiles. The concept of JAGM is to employ a multi-mode seeker to attack fixed and moving targets alike.

Mission: The mission of JAGM is to provide close air support with the ability to attack fixed and moving targets. Although a different program, JAGM is meant to fill the same capability as the earlier terminated Joint Common Missile.

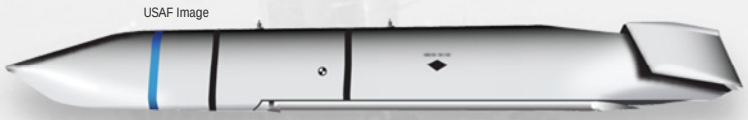
FY 2010 Program: Continues system development.

Prime Contractor: Currently in Source Selection

Joint Air-to-Ground Missile

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E USA	51.7	–	118.1	–	127.4	–	–	–	127.4	–
RDT&E USN	11.6	–	62.2	–	81.4	–	–	–	81.4	–
Total	63.3	–	180.3	–	208.8	–	–	–	208.8	–

Joint Air to Surface Standoff Missile — DOD - JOINT



The Joint Air-to-Surface Standoff Missile (JASSM) is a joint Air Force and Navy program led by the Air Force to provide a conventional precision guided, long range standoff cruise missile that can be delivered from both fighters and bombers.

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

FY 2010 Program: Puts production on hold pending test results to occur in FY 2009 due to technical production issues. If testing is successful, FY 2009 funding will be used to continue full rate production between FY 2009 and FY 2010. Remaining production and development funding in FY 2010 is to address JASSM reliability issues.

Prime Contractor: Lockheed Martin Corporation, Orlando, FL

Joint Air to Surface Standoff Missile

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	11.8	–	32.9	–	29.5	–	–	–	29.5	–
Procurement	160.0	111	199.7	175	52.7	–	–	–	52.7	–
Total	171.8	111	232.6	175	82.2	–	–	–	82.2	–

Joint Direct Attack Munition — DOD - JOINT

The Joint Direct Attack Munition (JDAM) is a joint Air Force/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.

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

FY 2010 Program: Continues production of the system.

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

Joint Direct Attack Munition

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
Procurement USAF	124.1	4,312	190.8	7,049	103.0	3,592	98.0	3,860	201.0	7,452
Procurement USN	43.0	1,412	9.3	169	2.0	–	–	–	2.0	–
Total	167.1	5,724	200.1	7,218	105.0	3,592	98.0	3,860	203.0	7,452

Joint Standoff Weapon

DOD - JOINT

The Joint Standoff Weapon (JSOW - AGM-154) program is a joint Navy/Air Force program led by the Navy. The JSOW provides day, night and adverse weather environment munition capability, and consists of two variants. The JSOW baseline (BLU-97) provides a day, night, and all-weather environment submunition for soft and area targets. 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. The Air Force terminated production of JSOW in FY 2005, favoring other weapons to meet the requirement.

FY 2010 Program: Continues production and product improvements of JSOW Unitary for the Navy only.

Prime Contractor: Raytheon Company, Tucson, AZ

Joint Standoff Weapon

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		**Total Request**	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	**$M**	**Qty**
RDT&E	28.8	–	22.4	–	10.0	–	–	–	**10.0**	**–**
Procurement	130.4	370	142.6	496	145.3	430	–	–	**145.3**	**430**
Total	**159.2**	**370**	**165.0**	**496**	**155.3**	**430**	**–**	**–**	**155.3**	**430**

Small Diameter Bomb

DOD - JOINT

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.

Mission: The mission of the SDB 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 2010 Program: Continues production of SDB Increment I for fixed target attack, and continues development of Increment II for moving target attack.

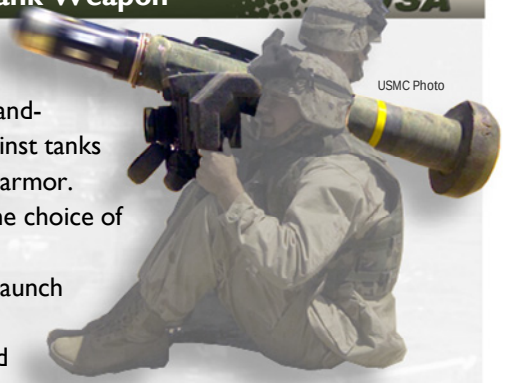
Prime Contractor: The Boeing Company, St. Charles, MO

Small Diameter Bomb

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		**Total Request**	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	**$M**	**Qty**
RDT&E										
Air Force	147.6	–	126.3	–	153.8	–	–	–	**153.8**	**–**
Navy	11.3	–	19.5	–	43.9	–	–	–	**43.9**	**–**
Subtotal	**158.9**	**–**	**145.8**	**–**	**197.7**	**–**	**–**	**–**	**197.7**	**–**
Procurement										
Air Force	94.7	1,395	132.8	2,612	134.8	2,340	7.3	100	**142.1**	**2,440**
Subtotal	**94.7**	**1,395**	**132.8**	**2,612**	**134.8**	**2,340**	**7.3**	**100**	**142.1**	**2,440**
Total	**253.6**	**1,395**	**278.6**	**2,612**	**332.5**	**2,340**	**7.3**	**100**	**339.8**	**2,440**

Javelin Advanced Anti-Tank Weapon

USA


USMC Photo

The Javelin Advanced Anti-tank Weapon System-Medium is a man-portable fire-and-forget 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.

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

FY 2010 Program: Continues full rate production of missiles, Command Launch Units (CLU) and training devices.

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

Javelin Advanced Anti-Tank Weapon

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		FY 2010 Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
Procurement	278.5	1,320	377.9	1,320	148.6	470	141.0	864	289.6	1,334
Total	**278.5**	**1,320**	**377.9**	**1,320**	**148.6**	**470**	**141.0**	**864**	**289.6**	**1,334**

High Mobility Artillery Rocket System

USA


US Army Photo

The High Mobility Artillery Rocket System (HIMARS) 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.

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

FY 2010 Program: Continues full rate production as well as product improvements such as insensitive munition and alternative warhead development. Funds are for development and procurement of guided rockets.

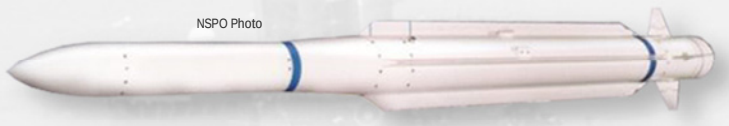
Prime Contractor: Lockheed Martin Corporation, Dallas, TX

High Mobility Artillery Rocket System

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		FY 2010 Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	42.4	–	59.6	–	27.7	–	–	–	27.7	–
Procurement	263.7	2,070	309.2	2,652	293.6	2,628	60.6	678	354.2	3,306
Total	**306.1**	**2,070**	**368.8**	**2,652**	**321.3**	**2,628**	**60.6**	**678**	**381.9**	**3,306**

Evolved Seasparrow Missile

USN


NSPO Photo

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

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 2010 Program: Continues full rate production.

Prime Contractor: Raytheon Company, Tucson, AZ

Evolved Seasparrow Missile

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		FY 2010 Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
Procurement	82.7	79	84.8	75	51.4	50	–	–	51.4	50
Total	**82.7**	**79**	**84.8**	**75**	**51.4**	**50**	**–**	**–**	**51.4**	**50**

Rolling Airframe Missile

USN

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


US Navy Photo

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 2010 Program: Continues production of missiles and alterations

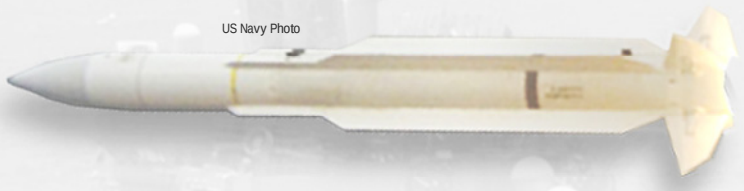
Prime Contractor: Raytheon Company, Tucson, AZ

Rolling Airframe Missile

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		FY 2010 Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
Procurement	75.2	90	70.8	90	74.8	90	–	–	74.8	90
Total	**75.2**	**90**	**70.8**	**90**	**74.8**	**90**	**–**	**–**	**74.8**	**90**

Standard Family of Missiles

USN



The STANDARD missile family consists of various air defense missiles including supersonic, medium, and extended range; surface-to-air; and surface-to-surface missiles.

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.

FY 2010 Program: Continues production of the SM-2 variant, as well as the follow-on SM-6 variant.

Prime Contractor: Raytheon Company, Tucson, AZ

Standard Family of Missiles

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		FY 2010 Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	214.6	–	237.0	–	182.2	–	–	–	182.2	–
Procurement	157.8	75	225.3	70	249.2	62	–	–	249.2	62
Total	**372.4**	**75**	**462.3**	**70**	**431.4**	**62**	**–**	**–**	431.4	62

Tactical Tomahawk Cruise Missile

USN

The Tactical Tomahawk is a Navy cruise missile weapon system with a long-range conventional warhead system, which is sized to fit torpedo tubes and capable of being deployed from a variety of surface ship and submarine platforms.

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 2010 Program: Continues production at a minimum sustaining rate.

Prime Contractor: Raytheon Company, Tucson, AZ

Tactical Tomahawk Cruise Missile

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		FY 2010 Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	14.6	–	18.2	–	13.2	–	–	–	13.2	–
Procurement	475.8	496	280.3	207	283.1	196	–	–	283.1	196
Total	**490.4**	**496**	**298.5**	**207**	**296.3**	**196**	**–**	**–**	296.3	196

Trident II Ballistic Missile

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 and to enhance nuclear stability by providing no incentive for enemy first strike. The Trident II (D5) missile has the ability to precisely attack time-critical, high value, fixed targets.

FY 2010 Program: Funds program and production support (including flight test instrumentation and additional re-entry system hardware) and the D5 Missile Life Extension Program, which procures missile motors and other critical components.

Prime Contractor: Lockheed Martin Corporation, Sunnyvale, CA

Trident II Ballistic Missile

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		**Total Request**	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	**$M**	**Qty**
RDT&E	64.3	–	78.6	–	74.9	–	–	–	**74.9**	**–**
Procurement	1,044.2	12	1,085.1	24	1,060.5	24	–	–	**1,060.5**	**24**
Total	**1,108.5**	**12**	**1,163.7**	**24**	**1,135.4**	**24**	**–**	**–**	**1,135.4**	**24**

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 respond to conflict expeditiously. To ensure expeditious responses to conflict, sea services must buy, build, and maintain maritime systems in accordance with mission need.

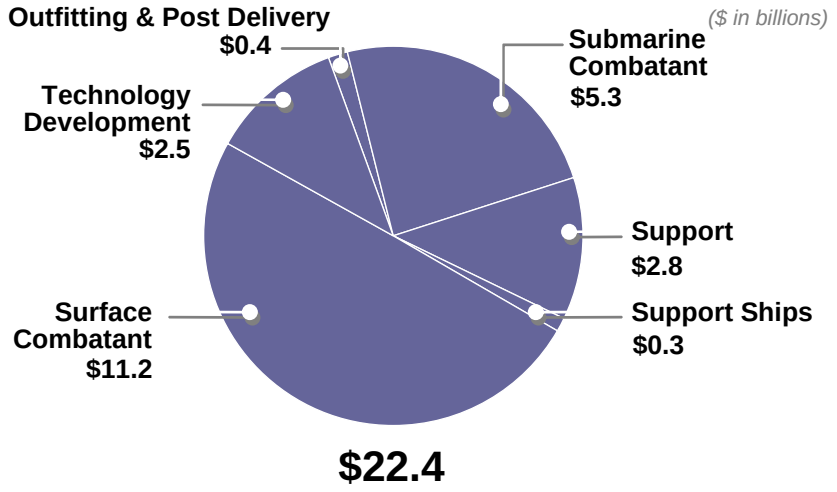
The Shipbuilding Portfolio details programs that ensure the overall maritime mission is accomplished. The Shipbuilding Portfolio consists of bought, built, and maintained systems, subsystems, and components. A subset of the Shipbuilding Portfolio is the Shipbuilding Program. The Shipbuilding Program focuses on maritime system acquisitions and aims to achieve a minimum force structure of 313 ships for global missions.

The Navy's 313-ship fleet will allow the U.S. to maintain maritime superiority well into the 21st century. The mobilization of the 313-ship fleet will ensure missions are accomplished. The following highlights the FY 2010 Shipbuilding Portfolio budget request:

Highlights of the FY 2010 Shipbuilding Portfolio:

- DDG 51 AEGIS Destroyer – one ship procured.
- DDG 1000 – second year of incremental funding for the FY 2009 ship.
- JHSV – two ships procured (1 Navy, 1 Army).
- LCS – three ships procured at $460 million unit cost cap.
- MLP – advance procurement for a future ship.

FY 2010 Shipbuilding and Maritime Systems – Base and OCO



106-WP

Note: $0.9 billion in the National Defense Sealift Fund appropriation (T-AKE ships) not included
Source: FY 2009 Procurement Programs (P-1) and RDT&E Programs – Investment Categorization
Numbers may not add due to rounding

- LPD 17 – second year of incremental funding for the tenth ship in FY 2009 and advance procurement for the eleventh ship in FY 2011.
- T-AKE – two ships procured as part of the Maritime Prepositioning Force Future mission.
- VIRGINIA Class – one ship procured in multiyear procurement contract and advance procurement for future ships.

Joint High Speed Vessel — DOD - JOINT

The Joint High Speed Vessel (JHSV) is a cooperative Army and Navy effort for a high speed shallow draft vessel designed for rapid intra-theater transport.

Mission: The JHSV ships provide combatant commanders high-speed, intra-theater sealift mobility, inherent cargo handling capacity, and the agility to achieve positional advantage over operational distances. Delivery of the first JHSV is scheduled for the first quarter of FY 2012.

FY 2010 Program: Procures two predominantly commercially designed vessels, one for the Army and one for the Navy.

Prime Contractor: Austal USA, Mobile, AL

Joint High Speed Vessel

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E										
Navy	18.4	–	11.9	–	8.4	–	–	–	8.4	–
Army	5.0	–	2.9	–	3.1	–	–	–	3.1	–
Subtotal	23.4	–	14.8	–	11.5	–	–	–	11.5	–
Procurement										
Navy	–	–	174.3	1	178.0	1	–	–	178.0	1
Army	208.6	1	168.3	1	183.7	1	–	–	183.7	1
Subtotal	208.6	1	342.6	2	361.7	2	–	–	361.7	2
Total	231.9	1	357.5	2	373.3	2	–	–	373.3	2

CVN 21 Carrier Replacement — USN

Currently, there are 11 active carriers in the Navy's fleet. The CVN 21 ships will include new technologies such as an integrated topside island with a new multi-function radar, a new propulsion plant, monitoring improvements, manpower reduction technologies, flight deck enhancements, Electromagnetic Aircraft Launching System (EMALS), and advanced arresting gear.

Mission: The CVN 21 Carrier Replacement ships provide credible, sustainable, independent forward presence during peacetime without access to land bases; operate as the cornerstone of a joint and/or allied maritime expeditionary force in response to crisis; and carry the war to the enemy through joint multi-mission offensive operations.

FY 2010 Program: Funds the third year of incremental funding for the lead ship and advance procurement items for a future ship. The Nuclear Propulsion Equipment is one of the critical long-lead time items.

Prime Contractor: Northrop Grumman Corporation, Newport News, VA

CVN 21 Carrier Replacement

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	85.7	–	147.7	–	173.6	–	–	–	173.6	–
Procurement	3,145.0	–	3,915.6	–	1,223.7	–	–	–	1,223.7	–
Total	3,230.8	–	4,063.3	–	1,397.3	–	–	–	1,397.3	–

DDG 51 AEGIS Destroyer


US Navy Photo

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 that include air, surface, and subsurface threats. The DDG 51 ship is armed with a vertical launching system that accommodates 96 missiles and a five inch gun that provides Naval Surface Fire Support to forces ashore and anti-ship gunnery capability.

Mission: The DDG 51 AEGIS Destroyer ship provides air and maritime dominance and land attack capability with its Aegis Anti-Submarine and Tomahawk Weapon Systems.

FY 2010 Program: Funds one DDG 51 AEGIS Destroyer. The DDG 51 program was restarted to meet ballistic missile defense and open ocean anti-submarine warfare (ASW) requirements.

Prime Contractors: General Dynamics Corporation, Bath, ME
Northrop Grumman Corporation, Pascagoula, MS

DDG 51 AEGIS Destroyer

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		**Total Request**	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	**$M**	**Qty**
Procurement	47.7	–	199.4	–	2,241.3	1	–	–	**2,241.3**	**1**
Total	**47.7**	**–**	**199.4**	**–**	**2,241.3**	**1**	**–**	**–**	**2,241.3**	**1**

DDG 1000 Destroyer


Image Courtesy of Northrop Grumman

The DDG 1000 Zumwalt Class Destroyer (DDG 1000) will be an optimally-crewed, multi-mission surface combatant designed to fulfill volume firepower and precision strike requirements. Armed with an array of weapons, the DDG 1000 ship will provide offensive, distributed, and precision firepower at long ranges in support of forces ashore.

Mission: The DDG 1000 provides striking power, sustainability, survivability, and information dominance

FY 2010 Program: Funds the second year of incremental funding for the FY 2009 ship. The DDG 1000 program will be completed with the third ship in FY 2009.

Prime Contractors: Northrop Grumman Corporation, Pascagoula, MS
General Dynamics Corporation, Bath, ME

DDG 1000 Destroyer

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		**Total Request**	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	**$M**	**Qty**
RDT&E	514.1	–	449.2	–	539.1	–	–	–	**539.1**	**–**
Procurement	2,906.9	–	1,504.3	1	1,084.2	–	–	–	**1,084.2**	**–**
Total	**3,421.0**	**–**	**1,953.5**	**1**	**1,623.2**	**–**	**–**	**–**	**1,623.2**	**–**

Littoral Combat Ship

USN

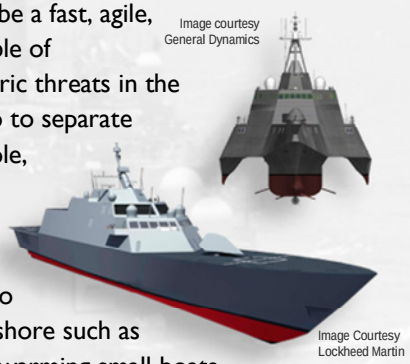


Image courtesy General Dynamics

Image Courtesy Lockheed Martin

The Littoral Combat Ship (LCS) will be a fast, agile, and stealthy surface combatant capable of anti-access missions against asymmetric threats in the littorals. It will be the first Navy ship to separate capability from hull form. For example, LCS will be capable of employing interchangeable mission modules for Mine Warfare, Anti-Submarine Warfare, and Anti-Surface Warfare to counter anti-access threats close to shore such as mines, quiet diesel submarines, and swarming small boats. The LCS mission modules will be exchanged as operational conditions warrant.

Mission: The LCS 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 2010 Program: Funds three LCS ships at a unit cost of $460 million each, which equals the congressional cost cap. Procurements in FY 2009 and FY 2010 will be combined to maximize competitive pressure on pricing as a key element of cost control. Procurement includes LCS mission modules.

Prime Contractor: Lockheed Martin Corporation (Marinette Marine, Marinette, WI)
General Dynamics Corporation (Austal USA, Mobile, AL)

Littoral Combat Ship

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	309.4	–	368.3	–	360.5	–	–	–	360.5	–
Procurement	0.1	–	1,090.6	2	1,517.3	3	–	–	1,517.3	3
Total	309.6	–	1,458.9	2	1,877.8	3	–	–	1,877.8	3

LPD 17 Amphibious Transport Dock Ship

USN

US Navy Photo

The San Antonio Class Amphibious Transport Dock ships (LPD 17) are functional replacements for 41 ships of four classes of amphibious ships. The LPD 17 design includes systems configurations that reduce operating and support costs, besides other operational performance improvements. System engineering and integration efforts have developed further reductions in life cycle costs and integrated performance upgrades in a rapid, affordable manner.

Mission: The LPD 17 San Antonio Class Amphibious Transport Dock ships embark, transport, and land Marines in amphibious assault by helicopters, landing crafts, and amphibious vehicles.

FY 2010 Program: Funds the second year of incremental funding for the tenth ship in FY 2009 and advance procurement for the eleventh ship in FY 2011.

Prime Contractors: Northrop Grumman, Pascagoula, MS and New Orleans, LA

LPD 17 Amphibious Transport Dock Ship

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	4.2	–	1.0	–	5.3	–	–	–	5.3	–
Procurement	1,506.2	1	963.5	1	1,056.9	–	–	–	1,056.9	–
Total	1,510.4	1	964.5	1	1,062.2	–	–	–	1,062.2	–

SSN 774 Virginia Class Submarine


US Navy Photo

The Virginia Class Submarine is an attack submarine that provides the Navy with the capabilities to maintain undersea supremacy in the 21st century.

The Virginia Class Submarine is nuclear-powered and is intended to replace the fleet of 688 class submarines. It is characterized by state-of-the-art stealth and enhanced features for Special Operations Forces. Virginia Class Submarines are able to attack targets ashore with Tomahawk cruise missiles and conduct covert long-term surveillance of land areas, littoral waters, and other sea-based forces.

Mission: The Virginia Class Submarines seek and destroy enemy ships across a wide spectrum of scenarios, working independently and in consort with a battle group and other ships, providing joint commanders with early, accurate knowledge of the battlefield.

FY 2010 Program: Funds one Virginia Class Submarine in a multiyear procurement contract and advance procurement for future ships. Procurement includes funds for Virginia Class Support Equipment.

Prime Contractors: General Dynamics Corporation, Groton, CT
Northrop Grumman Corporation, Newport News, VA

SSN 774 Virginia Class Submarine

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		FY 2010 Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	239.8	–	189.8	–	154.8	–	–	–	154.8	–
Procurement	3,319.7	1	3,674.8	1	4,027.2	1	–	–	4,027.2	1
Total	**3,559.4**	1	**3,864.6**	1	**4,182.0**	1	**–**	–	4,182.0	1

CVN Refueling Complex Overhaul


Photo Courtesy of Northrop Grumman

The CVN Refueling Complex Overhaul (RCOH) life extension program provides for the modernization of nuclear powered fleet aircraft carriers. In the RCOH program, the nuclear fuel is replaced, and major system modernization activities are implemented to extend the useful operational life of the ship.

Mission: The RCOH program refuels and upgrades the Nimitz class aircraft carries at mid-life to ensure reliable operations during the remaining ship life that uses a traditional maintenance cycle.

FY 2010 Program: Funds the second year of incremental funding for the FY 2009 ship and advance procurement for a future ship.

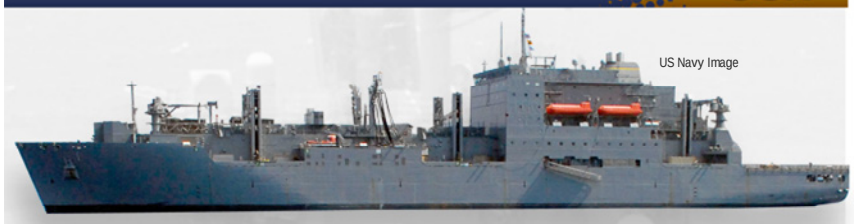
Prime Contractor: Northrop Grumman Corporation, Newport News, VA

CVN Refueling Complex Overhaul

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		FY 2010 Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
Procurement	295.3	–	613.1	1	1,775.4	–	–	–	1,775.4	–
Total	**295.3**	–	**613.1**	1	**1,775.4**	–	**–**	–	1,775.4	–

T–AKE Auxiliary Dry Cargo/Ammunition Ship

USN



The Lewis and Clark Class Auxiliary Dry Cargo and Ammunition Ship (T-AKE) will replace the aging fleet of refrigerated cargo and food storage ships and ammunition ships in the Navy's Combat Logistics Force. The T-AKE will provide logistic lift capability as a shuttle ship from sources of supply for transfer at sea to station ships and other naval warfare forces.

Mission: Lewis and Clark Class Auxiliary Dry Cargo (T-AKE) ships provide ammunition, spare parts and provisions to naval forces at sea in its role as a shuttle ship.

FY 2010 Program: Funds two T-AKE ships in the National Defense Sealift Fund as part of the Maritime Prepositioning Force Future (MPF(F)) mission.

Prime Contractor: General Dynamics Corporation, San Diego, CA

T–AKE Auxiliary Dry Cargo/Ammunition Ship

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		**Total Request**	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	**$M**	**Qty**
Procurement	720.6	–	962.4	2	940.1	2	–	–	**940.1**	**2**
Total	**720.6**	**–**	**962.4**	**2**	**940.1**	**2**	**–**	**–**	**940.1**	**2**

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 will contribute to achieving information superiority and battlespace dominance.

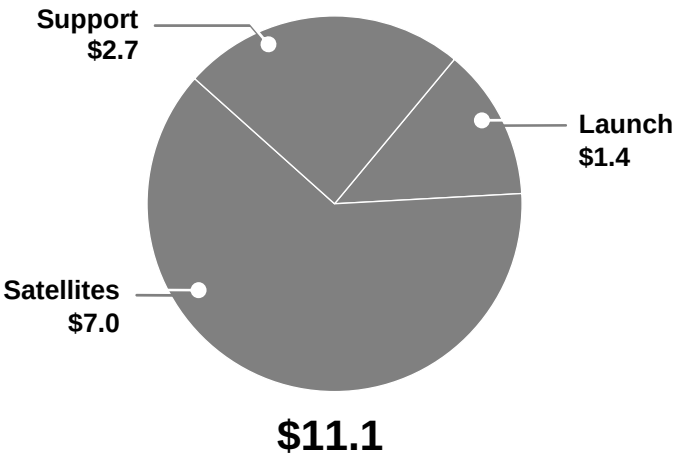
Highlights

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 funding and the remainder of the satellites are purchased with procurement funding. Since FY 2008, the funding for space systems has increased, most notably to develop and procure a new generation of spacecraft that provide a vital contribution to communications, navigation, weather forecasting, tactical warning and attack assessment, and surveillance.

The FY 2010 overall space program request is slightly higher than for FY 2009 (+3%), however there are several significant programmatic shifts from the FY 2009 funding levels; the Advanced Extremely High Frequency (AEHF) satellite program (+$1.8 billion) due to the full funding of one satellite in FY 2010; Space Based Infrared System (SBIRS) (-$1.3 billion) due to funding one less satellite in FY 2010; and the Transformational Satellite Communications System (TSAT) was terminated (-$0.8 billion).

FY 2010 Space Based and Related Systems – Base and OCO

($ in billions)



Source: FY 2009 Procurement Programs (P-1) and RDT&E Programs – Investment Categorization 106-WP
Numbers may not add due to rounding

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)
- The initial launch capability for MUOS is projected for fourth quarter FY 2010

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

FY 2010 Program: Funds continued system development and procurement of satellite #4, long lead items for satellite #5, and the launch vehicle for satellite #2.

Prime Contractor: Lockheed Martin Corporation, Sunnyvale, CA

Mobile User Objective System

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	593.4	–	515.3	–	387.5	–	–	–	387.5	–
Procurement	214.4	–	342.9	1	516.1	1	–	–	516.1	1
Total	807.8	–	858.2	1	903.6	1	–	–	903.6	1

Advanced Extremely High Frequency

The Advanced Extremely High Frequency (AEHF) satellite will be a 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 high 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 antennas @ 75 bps to 2.048 Mbps data rate
- 2 crosslink antennas per satellite (10 Mbps)
- Up to 160 cellular coverages (75 bps to 8.192 Mbps)
- X-band frequency data rate capable

The AEHF is a collaborative program that includes resources for Canada, the United Kingdom, and the Netherlands.

Mission: The AEHF constellation will provide survivable, anti-jam, worldwide secure communications for strategic and tactical users.

FY 2010 Program: Funds the launch of the first satellite due to launch the fourth quarter of FY 2010; continues assembly, integration and testing of the second and third satellites; and fully funds the procurement of the fourth satellite.

Prime Contractor: Lockheed Martin Corporation, Sunnyvale, CA

Advanced Extremely High Frequency

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	612.3	–	386.4	–	464.3	–	–	–	464.3	–
Procurement	149.9	–	165.6	–	1,843.5	1	–	–	1,843.5	1
Total	762.2	–	552.0	–	2,307.8	1	–	–	2,307.8	1

Evolved Expendable Launch Vehicle

The Evolved Expendable Launch Vehicle (EELV) replaces the current families of Delta, Atlas, and Titan launch vehicles with a new, lower cost program for the acquisition of space launch services. The EELV significantly reduces launch costs over current systems by redesigning launch hardware and ground processing facilities and by introducing commercial business practices. The EELV provides the DoD, the National Reconnaissance Office, 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.

Mission: The EELV launches DoD satellites.

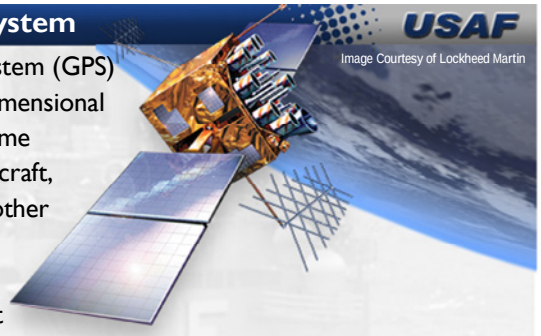
FY 2010 Program: Funds the procurement of five launch vehicles and associated launch services and support activities. The figures below do not include EELVs for the Navy or NRO. These are funded in the specific satellite program budgets.

Prime Contractor: United Launch Alliance, Decatur, AL

Evolved Expendable Launch Vehicle

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	6.5	–	33.6	2	26.5	–	–	–	26.5	–
Procurement	1,091.8	4	1,350.3	2	1,295.3	5	–	–	1,295.3	5
Total	1,098.3	4	1,383.9	2	1,321.8	5	–	–	1,321.8	5

Global Positioning System



The Global Positioning System (GPS) provides a global, three-dimensional positioning, velocity and time information system for aircraft, artillery, ships, tanks and other weapons delivery systems. The fully operational GPS constellation consists of at least 24 satellites on orbit at all times.

The GPS IIIA with advanced anti-jam and higher quality data is planned for initial launch in 2014.

Mission: The GPS constellation provides worldwide positioning, navigation, and precise time to military and civilian users.

FY 2010 Program: Funds satellite launch, integration of replenishment satellites and continued development of the GPS constellation. Also funds the GPS III satellite variant, which is the next generation in precision satellite navigation, as well as the ground control system (OCX).

Prime Contractor:
GPS IIIA: Lockheed Martin Corporation, King of Prussia, PA
GPS OCX Phase A: Raytheon Company, Aurora, CO
Northrop Grumman Corporation, Fairfax, VA

Global Positioning System

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	556.4	–	789.5	–	867.1	–	–	–	867.1	–
Procurement	248.9	–	134.9	–	60.7	–	–	–	60.7	–
Total	805.3	–	924.4	–	927.8	–	–	–	927.8	–

NPOESS

The National Polar-orbiting Operational Environmental Satellite System (NPOESS) is a joint civil-military polar environmental satellite. The four satellite constellation will replace the Defense Meteorological Space Program (DMSP) satellites and NOAA's Polar-orbiting Operational Environmental Satellite (POES) providing timely, high-quality environmental data on weather and atmospheric conditions, covering the oceans, land, and near-space environments.

Initial launch capability is planned for the second quarter of FY 2014.

The NPOESS is a joint effort with the Department of Commerce (DOC), the National Aeronautics and Space Administration, and the U.S. Air Force, with a 50/50 funding split between DoD and DOC.

Mission: The NPOESS will collect worldwide environmental data to support weather forecasting.

FY 2010 Program: Funds continued system development and design for risk reduction missions involving both ground and space systems.

Prime Contractor: Northrop Grumman Corporation, Redondo Beach, CA

NPOESS	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	331.0	–	287.5	–	396.6	–	–	–	396.6	–
Procurement	–	–	–	–	3.9	–	–	–	3.9	–
Total	331.0	–	287.5	–	400.5	–	–	–	400.5	–

Space Based Infrared System

Space Based Infrared System (SBIRS) will field a constellation of satellites in Geosynchronous Earth Orbit (GEO) and hosted payloads 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 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

The first HEO payload was operational December 2008.

The initial launch capability for GEO is planned for the fourth quarter of FY 2010.

Mission: The SBIRS will provide initial warning of ballistic missile launches.

FY 2010 Program: Funds the procurement of the HEO-4 payload. Funds the host vehicle integration for the HEO-3 & 4 payloads. Funds advance procurement for the GEO-4 satellite and continues development of the ground segment.

Prime Contractor: Lockheed Martin Corporation, Sunnyvale, CA

Space Based Infrared System	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		Total Request	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	$M	Qty
RDT&E	583.3	–	542.4	–	512.6	–	–	–	512.6	–
Procurement	399.3	–	1,793.1	2	500.9	1	–	–	500.9	1
Total	982.6	–	2,335.5	2	1,013.5	1	–	–	1,013.5	1

Wideband Global SATCOM System

USAF

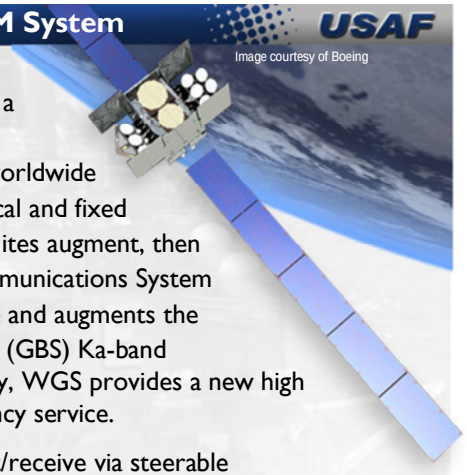


Image courtesy of Boeing

The Wideband Global Satellite communications system (WGS) is a constellation of satellites 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, WGS provides a new high capacity two-way Ka-band frequency service.

- X-band: 8 spot-beam transmit/receive via steerable phased-array antennas
- Ka-band: 10 gimbaled dish antennas
- 39 x 125 MHz channels

The second WGS satellite launched in April 2009.

Mission: The WGS constellation will provide wideband communications and point-to-point service on Ka-band and X-band frequencies.

FY 2010 Program: Funds on-orbit testing of the second and third satellites, continues production of the fourth, fifth and sixth satellites.

Prime Contractor: The Boeing Company, El Segundo, CA

Wideband Global SATCOM System

	FY 2008		FY 2009		FY 2010 Base Budget		FY 2010 OCO Budget		**Total Request**	
	$M	Qty	$M	Qty	$M	Qty	$M	Qty	**$M**	**Qty**
RDT&E	21.0	–	52.1	–	71.0	–	–	–	**71.0**	–
Procurement	312.3	1	21.6	–	264.1	–	–	–	**264.1**	–
Total	**333.3**	**1**	**73.7**	–	**335.1**	–	–	–	**335.1**	–