Section 136—Limitation on Retirement of F–117A Aircraft During Fiscal Year 2007

This section would limit the number of F–117A aircraft to be retired by the Secretary of the Air Force in fiscal year 2007 to 10 aircraft, and would require that the Secretary of the Air Force maintain each F–117A aircraft, retired after September 30, 2006, in a condition that would allow recall of that aircraft to future service.

TITLE II—RESEARCH, DEVELOPMENT, TEST, & EVALUATION

OVERVIEW

The budget request contained $73.2 billion for research, development, test, and evaluation (RDT&E). The committee recommends $74.1 billion, an increase of $908.6 million to the budget request.

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION

(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
		DEPARTMENT OF ARMY					
		BASIC RESEARCH	311,931	14,000	14,000		325,931
		APPLIED RESEARCH	685,245	149,300	149,300		834,545
		ADVANCED TECHNOLOGY DEVELOPMENT	721,661	172,650	172,650		894,311
		ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES	441,086	(7,600)	32,400	(40,000)	433,486
		SYSTEM DEVELOPMENT & DEMONSTRATION	6,239,030	(301,000)	39,100	(340,100)	5,938,030
		RDT&E MANAGEMENT SUPPORT	1,163,638	3,500	3,500		1,167,138
		OPERATIONAL SYSTEMS DEVELOPMENT	1,292,968	45,800	45,800		1,338,768
		TOTAL ARMY	10,855,559	76,650	456,750	(380,100)	10,932,209
		DEPARTMENT OF NAVY					
		BASIC RESEARCH	455,887	16,500	16,500		472,387
		APPLIED RESEARCH	638,657	43,200	43,200		681,857
		ADVANCED TECHNOLOGY DEVELOPMENT	504,634	89,099	90,100	(1,001)	593,733
		ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES	2,919,305	287,163	334,163	(47,000)	3,206,468
		SYSTEM DEVELOPMENT & DEMONSTRATION	7,915,414	40,000	119,800	(79,800)	7,955,414
		RDT&E MANAGEMENT SUPPORT	764,947	4,000	4,000		768,947
		OPERATIONAL SYSTEMS DEVELOPMENT	3,713,379	(14,416)	224,750	(239,166)	3,698,963
		TOTAL NAVY	16,912,223	465,546	832,513	(366,967)	17,377,769
		DEPARTMENT OF AIR FORCE					
		BASIC RESEARCH	370,206				370,206
		APPLIED RESEARCH	973,094	54,113	56,400	(2,287)	1,027,207
		ADVANCED TECHNOLOGY DEVELOPMENT	804,836	55,274	61,800	(6,526)	860,110
		ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES	2,741,701	(87,000)	23,000	(110,000)	2,654,701
		SYSTEM DEVELOPMENT & DEMONSTRATION	4,571,330	432,708	435,500	(2,792)	5,004,038

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
		RDT&E MANAGEMENT SUPPORT	1,042,276	20,800	20,800		1,063,076
		OPERATIONAL SYSTEMS DEVELOPMENT	13,893,324	(62,621)	69,787	(132,408)	13,830,703
		TOTAL AIR FORCE	24,396,767	413,274	667,287	(254,013)	24,810,041
		DEFENSE-WIDE					
		BASIC RESEARCH	283,936	10,000	10,000		293,936
		APPLIED RESEARCH	2,180,800	32,000	62,000	(30,000)	2,212,800
		ADVANCED TECHNOLOGY DEVELOPMENT	3,152,232	15,100	87,000	(71,900)	3,167,332
		ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES	9,284,843	(147,800)	73,000	(220,800)	9,137,043
		SYSTEM DEVELOPMENT & DEMONSTRATION	550,998	(46,000)	4,000	(50,000)	504,998
		RDT&E MANAGEMENT SUPPORT	770,229	15,800	15,800		786,029
		OPERATIONAL SYSTEMS DEVELOPMENT	4,586,901	74,000	74,000		4,660,901
		TOTAL DEFENSE WIDE	20,809,939	(46,900)	325,800	(372,700)	20,763,039
		OPERATIONAL TEST & EVALUATION, DEFENSE	181,520				181,520
		TOTAL, RESEARCH AND DEVELOPMENT	73,156,008	908,570	2,282,350	(1,373,780)	74,064,578

ARMY RESEARCH, DEVELOPMENT, TEST, & EVALUATION

Overview

The budget request contained $10.9 billion for Army research, development, test, and evaluation (RDT&E).

The committee recommends $10.9 billion, an increase of $76.7 million to the budget request.

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
		RESEARCH, DEVELOPMENT, TEST & EVALUATION, ARMY					
		BASIC RESEARCH					
0601101A	1	In-House Laboratory Independent Research	19,402				19,402
0601102A	2	Defense Research Sciences	137,568	9,000			146,568
0601102A		Advanced Carbon Nanotechnology			3,000		
0601102A		Chemical Mechanical Planarization			2,000		
0601102A		Functionally Integrated Reactive Surfaces Technology			4,000		
0601103A	3	University Research Initiatives	68,545				68,545
0601104A	4	University and Industry Research Centers	86,416	5,000			91,416
0601104A		Modeling and analysis of response structures			5,000		
0601105A	5	Force Health Protection					
		TOTAL, BASIC RESEARCH	**311,931**	**14,000**	**14,000**		**325,931**
		APPLIED RESEARCH					
0602105A	6	Materials Technology	18,822	11,000			29,822
0602105A		Cutting Tools for Aerospace Materials			3,000		
0602105A		IED Simulation in Different Soils			500		
0601102A		Nano manufacturing of multifunction sensors			3,000		
0601102A		Ultrasonic consolidation for advanced materials fabrication			4,500		
0602120A	7	Sensors and Electronic Survivability	38,428	5,000			43,428
0602120A		Flexible Display Initiative			5,000		
0602122A	8	TRACTOR HIP	8,466				8,466
0602211A	9	Aviation Technology	32,804	10,000			42,804
0602211A		Center for Rotorcraft Innovation			10,000		
0602270A	10	EW Technology	19,218	14,900			34,118

Title II– RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0602270A		See Through-the-Wall Viewer			7,400		
0602270A		Battlelab Technologies for Silver Fox UAS			5,000		
0602270A		Xenon Light Source for Small UAVs			2,500		
0602303A	11	Missile Technology	59,439				59,439
0602307A	12	Advanced Weapons Technology	19,430				19,430
0602308A	13	Advanced Concepts and Simulation	16,181				16,181
0602601A	14	Combat Vehicle and Automotive Technology/FCS	59,304	20,500			79,804
0602601A		Advanced Electric Drive			3,500		
0602601A		Light Utility Vehicle			6,000		
0602601A		Nanofluids for Lubricants and Coolants			3,000		
0602601A		Transportation Energy Research			3,000		
0602601A		Bio-Robotics			5,000		
0602618A	15	Ballistics Technology/FCS	52,221	2,000			54,221
0602601A		Robotic-Based Through the Wall Detector			2,000		
0602622A	16	Chemical, Smoke and Equipment Defeating Technology	2,212				2,212
0602623A	17	Joint Service Small Arms Program	6,247				6,247
0602624A	18	Weapons and Munitions Technology - FCS	35,344	12,400			47,744
0602624A		Active Coatings for Rotorcraft			4,400		
0602624A		Head Aimed Weapons for UGVs			4,000		
0602624A		High Power Electrolytic Supercapacitors			4,000		
0602705A	19	Electronics and Electronic Devices	42,175	17,400			59,575
0602705A		Next Generation Gaseous Diffusion Layer for Direct Methanol Fuel Cells			5,000		
0602705A		Advanced Components for High Power Solid State Lasers			6,900		
0602705A		E Beam Reticle and Lithography Inspection Tool			3,000		
0602705A		Nanofluidic Electronic Biosensors			2,500		
0602709A	20	Night Vision Technology	23,907	6,000			29,907

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0602709A		Mini-sensors for UAVs			6,000		
0602712A	21	Countermine Systems	22,088	2,500			24,588
0602712A		High Gain Ground Penetrating Radar			2,500		
0602716A	22	Human Factors Engineering Technology	18,858	24,000			42,858
0602716A		MANPRINT			4,000		
0602716A		Collaborative Research in Military Consequence Management			20,000		
0602720A	23	Environmental Quality Technology	17,923				17,923
0602782A	24	Command, Control, Communications Technology	21,193	4,000			25,193
0602782A		Integrated Digital Environment Service Model			4,000		
0602783A	25	Computer and Software Technology	3,844				3,844
0602784A	26	Military Engineering Technology	50,098				50,098
0602785A	27	Manpower/Personnel/Training Technology	16,200				16,200
0602786A	28	Warfighter Technology	25,436	5,300			30,736
0602786A		Warfighter Sustainment			5,300		
0602787A	29	Medical Technology	75,407	14,300			89,707
0602787A		Prosthetic Research for Lower Limb Amputations			2,000		
0602787A		Moment of Care Information System			3,000		
0602787A		Protein Hydrogel - Biofoam for Battlefield Trauma			6,300		
0602787A		Tissue Regeneration Technologies			3,000		
		TOTAL, APPLIED RESEARCH	**685,245**	**149,300**	**149,300**		**834,545**
		ADVANCED TECHNOLOGY DEVELOPMENT					
0603001A	30	Warfighter Advanced Technology	45,666	3,000			48,666
0603001A		MRE High Pressure Processing			3,000		
0603002A	31	Medical Advanced Technology	50,757	7,500			58,257

Title II– RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0603002A		Thunderbolt			3,500		
0603002A		Oxygen Diffusion Dressing			1,000		
0603002A		Nightengale			3,000		
0603003A	32	Aviation Advanced Technology/ FCS	64,654	19,500			84,154
0603003A		Polymer Matrix Composites for Rotorcraft Drive Systems			6,000		
0603003A		Lightweight Armored Window Technology			2,500		
0603003A		Vectored Thrust Ducted Propellor			6,500		
0603003A		FADEC			3,000		
0603003A		High Performance Gear for Rotorcraft Transmission			1,500		
0603004A	33	Weapons and Munitions Advanced Technology / FCS	74,717	19,500			94,217
0603004A		High Explosive Airburst Capability			10,000		
0603004A		Mobile Assessment Detection Response System			6,500		
0603004A		Precision Aspheric Optics			3,000		
0603005A	34	Combat Vehicle and Automotive Advanced Technology / FCS	109,952	15,150			125,102
0603005A		Coal to Liquid Fuels			5,000		
0603005A		Fastening and Joining Research			6,900		
0603005A		Liquid Spring Dampeners for HMMWVs			1,250		
0603005A		Segmented Band Track Technology			2,000		
0603006A	35	Command, Control, Communications Advanced Technology - Space	10,851				10,851
0603007A	36	Manpower, Personnel and Training Advanced Technology	6,794	3,500			10,294
0603007A		Adaptive Command Control Team Training Program			3,500		
0603008A	37	Electronic Warfare Advanced Technology - Tactical C4	44,022	15,000			59,022
0603008A		Man Portable Emergency Broadband System			4,000		
0603008A		Advanced Wireless Technologies			4,000		
0603008A		Applied Communications and Information Networking			7,000		
0603009A	38	TRACTOR HIKE	9,324				9,324

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0603015A	39	Next Generation Training & Simulation Systems - ICT	18,296				18,296
0603020A	40	TRACTOR ROSE	5,183				5,183
0603100A	41	IED Defeat Technology Development					
0603103A	42	Explosives Demilitarization Technology	10,376	12,200			22,576
0603103A		Supercritical Water Oxidation Demilitarization			6,200		
0603103A		Missile Recycling Capability			6,000		
0603105A	43	Military HIV Research	7,042				7,042
0603125A	44	Combating Terrorism, Technology Development	7,497	3,000			10,497
0603125A		Mobile Microgrid Fueler			3,000		
0603238A	45	Global Surveillance/Air Defense/Precision Strike Technology Demonstration	12,995				12,995
0603270A	46	EW Technology / FCS	18,612				18,612
0603313A	47	Missile and Rocket Advanced Technology	42,127	16,000			58,127
0603313A		Smart Energetics Architecture			6,000		
0603313A		Compact Kinetic Energy Missile			10,000		
0603322A	48	TRACTOR CAGE	19,192				19,192
0603606A	49	Landmine Warfare and Barrier Advanced Technology	25,554				25,554
0603607A	50	Joint Service Small Arms Ammo	7,202	7,500			14,702
0603607A		Lightweight Small Arms Technologies			7,500		
0603710A	51	Night Vision Advanced Technology	44,307	24,200			68,507
0603710A		Intelligent Surveillance Sensor Suite			6,000		
0603710A		Helo Wire and Obstacle Avoidance System			4,000		
0603710A		Hyper Spectral Imaging			3,000		
0603710A		Personal Miniature Thermal Viewer			5,000		
0603710A		Warfighter Enhanced Vision System			3,200		
0603710A		Soldier Mobility and Rifle Targeting System (SMaRTS)			3,000		
0603728A	52	Environmental Quality Technology Demonstrations	14,089				14,089

Title II– RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0603734A	53	Military Engineering Advanced Technology	7,848	6,000			13,848
0603734A		Gas Engine Air Conditioning Demonstration			6,000		
0603772A	54	Advanced Tactical Computer Science and Sensor Technology	64,604	20,600			85,204
0603772A		Communications Electronics Cost Module			11,000		
0603772A		Digital Array Radars			5,000		
0603772A		Instant Language Translator			4,600		
		TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT	**721,661**	**172,650**	**172,650**		**894,311**
		ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES					
0603024A	55	Unique Item Identification	1,520				1,520
0603305A	56	Army Missile Defense Systems Integration (Non Space)	11,233	18,000			29,233
0603305A		Advanced Hypersonic Weapon Mission Planning			6,000		
0603305A		Next Generation Advanced Materials			6,000		
0603305A		Radiation Hardening Initiative			4,000		
0603305A		Advanced Solid Rocket and Gel Propellants			2,000		
0603308A	57	Army Missile Defense Systems Integration (Space)	11,771				11,771
0603327A	58	Air and Missile Defense Systems Engineering	143,417				143,417
0603619A	59	Landmine Warfare and Barrier - Adv Dev	8,439				8,439
0603627A	60	Smoke, Obscurant and Target Defeating Sys-Adv Dev	10,714				10,714
0603639A	61	Tank and Medium Caliber Ammunition					
0603653A	62	Advanced Tank Armament System (ATAS) / STRYKER	5,415	10,000			15,415
0603653A		Open Architecture Electronic Enhancements			10,000		
0603747A	63	Soldier Support and Survivability	2,778				2,778
0603766A	64	Tactical Electronic Surveillance System - Adv Dev	20,077				20,077
0603774A	65	Night Vision Systems Advanced Development	5,337				5,337

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0603779A	66	Environmental Quality Technology	5,166	4,400			9,566
0603779A		Vanadium Technology Partnership			4,400		
0603782A	67	Warfighter Information Network-Tactical	158,157	(40,000)			118,157
0603782A		Program Decrease				(40,000)	
0603790A	68	NATO Research and Development	4,946				4,946
0603801A	69	Aviation - Adv Dev	6,542				6,542
0603802A	70	Small Arms Improvement (Weapons and Munitions -Adv Dev)					
0603804A	71	Logistics and Engineer Equipment - Adv Dev	13,216				13,216
0603805A	72	Combat Service Support Control System Evaluation and Analysis	8,645				8,645
0603807A	73	Medical Systems - Adv Dev	11,973				11,973
0603827A	74	Soldier Systems - Advanced Development	10,605				10,605
0603850A	75	Integrated Broadcast Service (DISTP)	1,135				1,135
0603856A	76	SCAMP Block II					
0603869A	77	Medium Extended Air Defense System (MEADS) Concepts					
		TOTAL, ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES	**441,086**	**(7,600)**	**32,400**	**(40,000)**	**433,486**
		SYSTEM DEVELOPMENT & DEMONSTRATION					
0604201A	78	Aircraft Avionics	61,946				61,946
0604220A	79	Armed, Deployable OH-58D	132,781				132,781
0604270A	80	EW Development ATIRCM	41,655	5,000			46,655
0604270A		APR-39 Radar Warning Receiver Upgrade			5,000		
0604280A	81	Joint Tactical Radio	832,259				832,259
0604321A	82	All Source Analysis System	7,074				7,074
0604328A	83	TRACTOR CAGE	16,057				16,057
0604329A	84	JT Common Missile					

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0604601A	85	Infantry Support Weapons /OICW	31,748	8,000			39,748
0604601A		Subcompact 5.56mm Personal Defense Weapon			5,000		
0604601A		CROWS Lightning Integration Acoustic Sensor			3,000		
0604604A	86	Medium Tactical Vehicles/FMTV	1,925	400			2,325
0604604A		Future Track Over the Tire System			400		
0604609A	87	Smoke, Obscurant and Target Defeating Sys-SDD	5,297				5,297
0604611A	88	JAVELIN					
0604622A	89	Family of Heavy Tactical Vehicles	3,960				3,960
0604633A	90	Air Traffic Control	4,527				4,527
0604642A	91	Light Tactical Wheeled Vehicles					
0604645A	92	Future Combat Systems	3,310,477	(325,800)			2,984,677
0604646A		Program Decrease				(325,800)	
0604646A	93	Non-Line of Sight Launch System	322,880				322,880
0604647A	94	Non-Line of Sight Cannon	112,237				112,237
0604710A	95	Night Vision Systems	38,821				38,821
0604713A	96	Combat Feeding, Clothing, and Equipment	3,017				3,017
0604715A	97	Non-System Training Devices	121,553				121,553
0604716A	98	Terrain Information					
0604726A	99	Integrated Meteorological Support System					
0604741A	100	Air Defense Command, Control and Intelligence - SDD	21,757				21,757
0604742A	101	Constructive Simulation Systems Development	40,006				40,006
0604746A	102	Automatic Test Equipment Development	8,136				8,136
0604760A	103	Distributive Interactive Simulations (DIS)	19,596				19,596
0604766A	104	Tactical Surveillance Systems					
0604768A	105	Army Tactical Missile System (ATACMS)					
0604778A	106	Positioning Systems Development (SPACE)					

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0604780A	107	Combined Arms Tactical Trainer (CATT) Core	39,901				39,901
0604783A	108	Joint Network Management System	5,187				5,187
0604801A	109	Aviation					
0604802A	110	Weapons and Munitions / APKWS / GAMRAAM	130,581				130,581
0604804A	111	Logistics and Engineer Equipment - SDD	40,301				40,301
0604805A	112	Command, Control, Communications Systems	10,783	2,500			13,283
0604805A		HIMARS			2,500		
0604807A	113	Medical Materiel/Medical Biological Defense Equipment - SDD	14,509	4,700			19,209
0604807A		Leishmania Diagnostic Skin Test			1,700		
0604807A		LSTAT			3,000		
0604808A	114	Landmine Warfare/Barrier - SDD	118,078	3,000			121,078
0604808A		AT4 Confined Space Enhancements			3,000		
0604814A	115	Artillery Munitions	102,554	11,000			113,554
0604814A		Excalibur XM982			11,000		
0604817A	116	Combat Identification	39				39
0604818A	117	Army Tactical Command & Control Hardware & Software	69,172				69,172
0604819A	118	LOSAT					
0604820A	119	Radar Development / Sentinel	2,527				2,527
0604822a	120	General Fund Enterprise Business System (GFEBS)	61,194				61,194
0604823A	121	Firefinder	70,151				70,151
0604827A	122	Soldier Systems -Warrior Dem/Val	27,498				27,498
0604854A	123	Artillery Systems	1,650				1,650
0604865A	124	Patriot PAC-3 Theater Missile Defense Acquisition					
0604869A	125	Patriot/MEADS Combined Aggregate Program (CAP)	329,583				329,583
0604870A	126	Nuclear Arms Control Monitoring Sensor Network	7,428				7,428
0605013A	127	Information Technology Development	70,185	(9,800)			60,385

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0605013A		Future Business System				(14,300)	
0605013A		Automated Shop Floor Work Instructions			4,500		
		TOTAL, SYSTEM DEVELOPMENT & DEMONSTRATION	**6,239,030**	**(301,000)**	**39,100**	**(340,100)**	**5,938,030**
		RDT&E MANAGEMENT SUPPORT					
0604256A	128	Threat Simulator Development	21,180				21,180
0604258A	129	Target Systems Development	10,928				10,928
0604759A	130	Major T&E Investment	64,953				64,953
0605103A	131	Rand Arroyo Center	20,171				20,171
0605301A	132	Army Kwajalein Atoll	178,891				178,891
0605326A	133	Concepts Experimentation Program	21,626	3,500			25,126
0605326A		Auto Language Translation			3,500		
0605502A	134	Small Business Innovative Research					
0605601A	135	Army Test Ranges and Facilities	389,840				389,840
0605602A	136	Army Technical Test Instrumentation and Targets	74,066				74,066
0605604A	137	Survivability/Lethality Analysis	40,780				40,780
0605605A	138	DOD High Energy Laser Test Facility	16,622				16,622
0605606A	139	Aircraft Certification	4,580				4,580
0605702A	140	Meteorological Support to RDT&E Activities	8,571				8,571
0605706A	141	Materiel Systems Analysis	16,526				16,526
0605709A	142	Exploitation of Foreign Items	4,993				4,993
0605712A	143	Support of Operational Testing	80,057				80,057
0605716A	144	Army Evaluation Center	60,129				60,129
0605718A	145	Simulation & Modeling for Acq, Rqts, & Tng (SMART)	5,441				5,441
0605737A	146	Defense Foreign Language Training Research					

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0605801A	147	Programwide Activities	72,214				72,214
0605803A	148	Technical Information Activities	34,834				34,834
0605805A	149	Munitions Standardization, Effectiveness and Safety	18,726				18,726
0605857A	150	Environmental Quality Technology Mgmt Support	4,418				4,418
0605898A	151	Management Headquarters (Research and Development)	14,092				14,092
0909999A	152	Financing for Cancelled Account Adjustments					
		TOTAL, RDT&E MANAGEMENT SUPPORT	**1,163,638**	**3,500**	**3,500**		**1,167,138**
		OPERATIONAL SYSTEMS DEVELOPMENT					
0603778A	153	MLRS Product Improvement Program / HIMARS	74,506				74,506
0603820A	154	Weapons Capability Modifications UAV	16,532				16,532
0102419A	155	JT Land Attack Cruise Missile Defense (Aerostat Joint Program Office)	264,491	2,000			266,491
0102419A		JLENS - Lightweight X-Band Radar MEMS ESA			2,000		
0203726A	156	Adv Field Artillery Tactical Data System	17,394	1,000			18,394
0203726A		Fire Support Technology Improvement			1,000		
0203735A	157	Combat Vehicle Improvement Programs / ABRAMS	12,741				12,741
0203740A	158	Maneuver Control System - Tactical C2	37,976				37,976
0203744A	159	Aircraft Modifications/Product Improvement Programs	301,739				301,739
0203752A	160	Aircraft Engine Component Improvement Program	860				860
0203758A	161	Digitization	13,373				13,373
0203759A	162	Force XXI Battle Command, Brigade and Below (FBCB2)	26,375				26,375
0203801A	163	Patriot Product Improvement (Missile/Air Defense Product Improvement Pro	10,770				10,770
0203802A	164	Other Missile Product Improvement Programs - ATACMS	19,706				19,706
0203806A	165	TRACTOR RUT					
0203808A	166	TRACTOR CARD	7,242				7,242

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0208010A	167	Joint Tactical Communications Program (TRI-TAC)	5,804				5,804
0208053A	168	Joint Tactical Ground System	15,044				15,044
0208058A	169	Joint High Speed Vessel (JHSV)	20,397				20,397
0301359A	170	Special Army Program					
0301555A	171	Classified Programs					
0301556A	172	Special Program					
0303028A	173	Security and Intelligence Activities	3,170				3,170
0303140A	174	Information Systems Security Program	23,828				23,828
0303141A	175	Global Combat Support System	55,272	6,000			61,272
0303141A		Product Lifecycle Management Plus			6,000		
0303142A	176	SATCOM Ground Environment (SPACE)	41,336				41,336
0303142A	177	WWMCCS/Global Command and Control System	12,200				12,200
0303158A	178	Joint Command and Control Program (JC2)	4,057				4,057
0305204A	179	Tactical Unmanned Aerial Vehicles					
0305204A	179a	Tactical Unmanned Aerial Vehicles	12,873	11,400			24,273
0305204A		Heavy Fuel Engine - Shadow UAV			11,400		
03052XXA	179b	Advanced Payload	4,280				4,280
03052XXA	179c	Tactical SIGINT	7,213				7,213
03052XXA	179d	Joint Technology Center	2,438				2,438
03052XXA	179e	Extended Range UAV	87,283				87,283
0305206A	180	Airborne Reconnaissance Systems	12				12
0305208A	181	Distributed Common Ground Systems	120,562	11,000			131,562
0305208A		High Assurance Secure Object Proxy			6,000		
0305208A		Asymmetric Threat Response and Analysis			5,000		
0702239A	182	Avionics Component Improvement Program	1,031				1,031
0708045A	183	End Item Industrial Preparedness Activities / FCS / WIN-T	68,075	4,400			72,475

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0708045A		Vehicle Common Armor Manufacturing Process			4,400		
1001018A	184	NATO Joint STARS	688				688
06070XX	184a	Tactical Wheeled Vehicle Product Improvement Program		10,000	10,000		10,000
XXXXXXX	999	Classified Programs	3,700				3,700
		TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT	**1,292,968**	**45,800**	**45,800**		**1,338,768**
		TOTAL, RDT&E, ARMY	**10,855,559**	**76,650**	**456,750**	**(380,100)**	**10,932,209**

Items of Special Interest

Advanced hypersonic weapon mission planning and control

The budget request contained $11.2 million in PE 63305A for Army missile defense systems integration, but no funds for development of mission planning and control for the advanced hypersonic weapon.

The committee understands that the 2006 Quadrennial Defense Review focuses on the need to provide a prompt global strike capability and the advanced hypersonic weapon (AHW) has the potential to meet this mission with a rapid strike response over long distances. The committee notes that the U.S. Strategic Command and the U.S. Army Space and Missile Defense Command are already exploring the AHW concept. The committee is aware of the need to conduct research into the mission planning and control battle management capability that would integrate the AHW system into future command and control systems.

The committee recommends an increase of $6.0 million in PE 63305A to design, prototype and demonstrate the mission planning and control battle management capability for integration of the AHW into joint warfighting command exercises and simulations.

Applied communications and information networking

The budget request contained $44.0 million in PE 63008A for electronic warfare advanced technology, but included no funds for applied communications and information networking (ACIN).

The committee notes the importance to the Department of Defense (DOD) to integrate state-of-the-art commercial technologies in DOD command, control, communications, computer and intelligences systems. ACIN has supported this objective to enhance high-value military systems with rapidly advancing commercial information technologies and innovative applications of those technologies.

The committee supports the application of state-of-the-art commercial technology to improve military systems and recommends an increase of $7.0 million in PE 63008A for ACIN.

Armored systems modernization

The budget request included $3.3 billion in PE 64645A for armored systems modernization, including $65.5 million for reconnaissance platforms and sensors; $107.7 million for unmanned ground vehicles; $17.7 million for unattended sensors; $146.1 million for sustainment; $570.2 million for manned ground vehicles; and $2.4 billion for system of systems engineering and program management, as part of approximately $3.7 billion requested for the Future Combat Systems (FCS) program.

The committee continues to support a FCS program strategy that is affordable and enables early spin out of FCS technologies into the current force, a top priority of the Chief of Staff of the Army.

The committee continues to have several concerns with the FCS program:

(1) In a prepared statement before the Subcommittee on Tactical Air and Land Forces on April 4, 2006, the Government Accountability Office indicated, "The program remains a long way from having the level of knowledge it should have had be-

fore it started product development . . . FCS has all the markers for risk that would be difficult to accept for any single system, much less a complex multi-system effort."

(2) The FCS Acquisition Decision Memorandum (ADM), approving the programs entry into systems development and demonstration, was signed on May 17, 2003. The ADM directed that there be a milestone B update and independent cost estimate by November 2004. Almost three years later there has been no milestone B update nor an independent cost estimate.

(3) Although firm system-level requirements should have been established at the start of the program, the process of setting and refining FCS system-level requirements may not be complete until the preliminary design review in 2008.

(4) The projected dates for maturing critical technologies have slipped, and some technologies are not expected to mature until well into the design phase of the program and possibly into production.

(5) FCS design and production maturity would not be demonstrated under the current acquisition strategy until after the production decision is made.

(6) The low level of knowledge available today on requirements and technologies makes FCS cost projections very uncertain. FCS program costs are estimated at $160.7 billion, an increase of 76 percent since the program began.

The committee notes that funding for the FCS program represents a significant portion of the Army's modernization budget for the next 20 or more years. According to the Congressional Budget Office (CBO), the Army estimates that total procurement costs for the first 15 brigades' worth of systems is just over $100.0 billion, which translates into an average unit procurement cost of $6.7 billion per brigade at three FCS BCTs per year. In 2005, based on resource constraints, the Army reduced the yearly procurement goal of three FCS brigade combat teams (BCTs) per year to 1.5 per year. With the planned purchase of 1.5 brigades per year to begin in 2015, the FCS program requires $8.0 billion to $10.0 billion annually. CBO notes that based on historical trends, the FCS program costs could grow by 60 percent. CBO estimates that such high rates may push the average annual funding needed for the FCS program from $8.0 billion to 10.0 billion per year to between $14.0 billion to 16.0 billion per year.

The committee is concerned that the spiraling cost growth for Department of Defense (DOD) acquisition programs is at a point where it directly places at risk the ability of the United States to field weapons platforms in sufficient numbers to support U.S. military strategy and national security requirements. The committee notes that the Army's spiraling costs per FCS BCT are forcing the Army into a situation similar to that experienced by the Navy with its next generation destroyer (DD(X)) program. Similar to the DD(X) program, the costs for a FCS BCT is approaching a price where the Army will have to continue to slow down procurement to make the program more affordable, reduce the quantities of FCS BCTs, or attempt to reduce force structure.

The committee believes that as the Department proceeds with its decisions in reference to the FCS program, that it must preserve its ability to change course on acquiring FCS capabilities to guard

against a situation in which FCS would have to be acquired at any cost. The Department must hold the Army accountable for delivering FCS within programmed resources.

Accordingly, the committee recommends a decrease of $325.8 million in PE 64645A for armored systems modernization.

AT4 confined space weapon system enhancements

The budget request contained $118.1 million in PE 64808A for system development and demonstration of landmine warfare and barrier technology, but included no funds for enhancements to the AT4 confined space (CS) weapon.

The AT4CS is a shoulder fired weapon system that employs a warhead that produces high lethality and incendiary effects against armored combat vehicles. The committee notes the AT4CS has been utilized in Operation Iraqi Freedom and Operation Enduring Freedom by dismounted infantrymen and special operation forces to great effect, and is currently the only shoulder-fired weapon in the Department of Defense inventory capable of being fired from inside a room; making this weapon a critical combat multiplier in military operations over urban terrain.

The committee understands an anti-structure tandem warhead is in development for the AT4CS. The committee is aware this warhead would provide military personnel operating within a confined space the capability to penetrate 8-inch reinforced concrete and 12-inch triple brick walls. The committee is supportive of rapidly developing technologies that would promote the survivability of military personnel conducting the global war on terrorism.

The committee recommends $121.1 million in PE 64808A, an increase of $3.0 million to continue the development of an anti-structure tandem warhead for use in the AT4CS.

Center for rotorcraft innovation

The budget request included $32.8 million in PE 62211A for aviation and applied research and technology, but included no funds for the Center for Rotorcraft Innovation (CRI).

The Center for Rotorcraft Innovation is a joint effort between the rotorcraft industry, academic research centers and government partners to increase rotorcraft research in the United States. CRI collaborates to expand rotorcraft research and development already underway between the rotorcraft industry and its government partners in the National Rotorcraft Technology Center. It will focus its new research efforts on dual-use technologies that have national security and homeland defense applications. The committee is aware that the CRI is the only initiative of its kind and seeks to further international competitiveness and long-term growth of the U.S. rotorcraft industry.

Accordingly, the committee recommends an increase of $10.0 million in PE 62211A for the CRI.

Digital array radar

The budget request included $64.6 million in PE 63772A for advanced tactical computer science and sensor technology, but included no funds for digital array radar development.

The committee notes the need for reliable counter-fire radars for protection against short-range mortar attack. Technology advances warrant research and development to demonstrate this technology.

Therefore, the committee recommends an increase of $5.0 million to complete development and test digital array radar prototype antenna technology.

Dominant military operations on urban terrain viewer

The budget request included $19.2 million in PE 62270A, but included no funds for the dominant military operations on urban terrain viewer (DMV).

The committee is aware of an applied research technology that has been successfully demonstrated that provides the capability to detect, locate, and track moving and stationary persons within structures from in excess of 100 meters. Employment of such a capability could provide field commanders with a tactical advantage, improved situational awareness, and save lives. A tactical prototype is necessary to complete field evaluation and testing of this capability.

Therefore, the committee recommends an additional $7.4 million in PE 62270A for the design, development, and testing of a DMV prototype.

Environmental quality technology

The budget request contained $5.2 million in PE 63779A for projects focused on validating the general military utility or cost reduction potential of environmental quality technologies, but included no funds for promising research ongoing at facilities around the United States and in other countries to develop lightweight vanadium micro-alloyed steels. The committee recommends that the Department of Defense proceed with full-scale demonstration projects and the transfer of this technology to the domestic steel industry to increase the potential benefits of vanadium micro-alloyed steels.

The committee recommends $9.6 million in PE 63779A, an increase of $4.4 million for the Vanadium Technology Partnership.

Excalibur precision guided artillery munition

The budget request contained $102.5 million in PE 64814A for the Excalibur XM982 precision guided extended range artillery projectile and lifecycle management cost reduction strategies.

The committee recognizes the potential benefits provided through studies of manufacturing technologies and methodologies to help lower production costs without sacrificing stated performance requirements of a weapon system. The committee notes in fiscal year 2005, Excalibur XM982 lifecycle improvement program efforts were able to reduce the production cost of each projectile by 14.1 percent. The committee also notes the fiscal year 2006 cost reduction efforts built upon previous work and expanded production cost reduction of the canard actuation system, as well as insensitive munitions design improvements for the base and warhead of the projectile identified in the lean design review.

The committee is aware the Excalibur XM982 projectile is proceeding into early production to support an urgent fielding requirement in Operation Iraqi Freedom. The committee understands the

Excalibur XM982 would potentially reduce collateral damage in urban environments and serve as a significant combat multiplier to military personnel.

Therefore, the committee recommends $112.5 million in PE 64814A, an increase of $11.0 million for the rapid fielding of the Excalibur XM982 Block Ia–1 projectile and for the continuation of lifecycle improvement costs.

Flexible display initiative

The budget request contained $38.4 million in PE 62120A for electronics and electronic devices, but included no funds for the flexible display initiative.

The committee is aware that new flexible display technology has the potential to provide the military with technology to fabricate high definition displays on rugged conformable, flexible substrates. The committee notes that the United States Display Consortium coordinates these efforts with over 80 companies, using investments from both the public and private industry to accelerate the development of technologies and products needed by the Army, other military services, and various national security agencies.

Therefore, the committee recommends an increase of $5.0 million in PE 62120A for the flexible display initiative.

Gas-engine driven air conditioning system demonstrations

The budget request contained $7.8 million in PE 63734A for military engineering, but included no funds for unitary gas-engine driven air conditioning (GEDAC) system demonstrations.

The committee is aware that GEDAC use on bases in the southwest has the potential to save significant electric power and reduce water usage.

Therefore, the committee recommends an increase of $6.0 million in PE 63734A for GEDAC system demonstrations.

High assurance secure object proxy

The budget request contained $120.5 million in PE 35208A for distributed common ground/surface systems, but included no funds for high assurance secure object proxy technology development.

The committee notes that high assurance secure object proxy (HASOP) technology could significantly enhance the ability of the Army to synchronize and integrate organic, joint and multinational sensors and collection capabilities.

The committee recommends an increase of $6.0 million in PE 35208A, for HASOP development.

Human systems integration

The budget request contained $18.9 million in PE 62716A for human factors engineering applied research, including $3.1 million for efforts supporting manpower and personnel integration (MANPRINT).

The committee recognizes human systems integration (HSI) initiatives as a means for reducing total ownership costs of weapons programs, and continues to support efforts to more formally consider HSI issues earlier in the acquisition cycle. As previously noted in the committee report accompanying the National Defense Authorization Act for Fiscal Year 2006 (H. Rept. 109–89), the com-

mittee remains concerned about the overall level of coordination and support of HSI efforts throughout the Department of Defense (DOD).

The committee notes the reporting requirement included in H. Rept. 109–89 to assess HSI activity throughout DOD acquisition programs. The committee is in receipt of a preliminary assessment and understands that a more comprehensive review is forthcoming. Concurrent with the recommendations contained in the interim report, the committee urges the department to establish a joint HSI Steering Group, continue the collaborative development of HSI modeling within and across all services, and strive for greater procedural and regulatory HSI uniformity throughout the Department. Further, the committee expects the completion of the comprehensive HSI review in an expeditious manner.

Therefore, the committee recommends an increase of $4.0 million in PE 62716A for MANPRINT.

Integrated digital environment service model

The budget request contained $21.2 million in PE 62782A for command, control, and communications technology, but included no funding for the Integrated Digital Environment Service Model. The committee understands that this program will allow the Army to conduct much needed interoperability analysis of the various communications, command, and control technologies now under development. Most of today's systems were designed for specific needs; such systems must be integrated into the overall Global Information Grid for continued effectiveness.

The committee recommends $25.2 million in PE 62782A for command, control, and communications technology, an increase of $4.0 million for the Integrated Digital Environment Service Model.

Intelligent surveillance sensor suite

The budget request included $44.3 million in PE 63710A for night vision advanced technology, but included no funds for the intelligent surveillance sensor suite.

The intelligence surveillance sensor suite is intended to be used for perimeter security and intrusion detection at high value sites, including chemical storage facilities, securing ammunition caches, and forward operating bases. It employs multiple detection and assessment technologies for a variety of terrain applications.

The committee recommends an additional $6.0 million in PE 63710A for the fabrication and testing of multiple versions of the intelligent surveillance and sensor suite to validate technical data prior to competitive procurement.

Joint land attack cruise missile defense and micro electro mechanical system

The budget request contained $264.5 million in PE 12419A for the Joint Land Attack Cruise Missiles Defense (JLENS) project.

The committee understands the critical role that the JLENS Elevated Netted Sensor program plays in cruise missile defense. The committee further understands that the Micro Electro Mechanical (MEMS) demonstration radar system is an important risk reduction effort in the JLENS acquisition strategy.

The committee recommends an increase of $2.0 million in PE 12419A to complete Phase II development of the Lightweight X-Band Radar MEMS Electronically Steerable Antenna technology demonstration.

Light utility vehicle

The budget request contained $59.3 million in PE 62601A for combat vehicle and automotive technology, but included no funds for the continued development of a light utility vehicle (LUV) demonstrator.

The committee is aware the development of a LUV demonstrator could be accelerated due to previous research in LUV technology by the National Automotive Center. The committee understands the base LUV platform would be improved based on lessons learned through previous development testing. The committee notes improvements to the base platform would include prognostics and diagnostics for systems such as the drive-train, suspension, and steering.

Accordingly, the committee recommends an increase of $6.0 million in PE 62601A to continue the design, development, and delivery of an improved LUV demonstrator.

Lightweight small arms technologies

The budget request contained $7.2 million in PE 63607A for the joint service small arms program, including $6.2 million for lightweight small arms technologies (LSAT). The LSAT program is attempting to reduce the weight of current soldier small arms and small caliber ammunition by 30 to 40 percent.

The committee understands small arms and small caliber ammunition account for two of the four heaviest items an infantryman wears or carries into combat. The committee notes that the basic infantryman entering combat can be required to carry combat configured loads of equipment, that combined, can exceed 90 pounds. The committee is supportive of efforts that would accelerate advanced technologies to reduce the combat carrying equipment load for dismounted infantrymen, as well as notes the benefits lighter combat configured equipment loads would have on soldier performance and mobility.

Therefore, the committee recommends $14.7 million in PE 63607A, an increase of $7.5 million to accelerate the development of caseless small caliber ammunition and to accelerate the early "spin out" of lightweight technology enhancements to existing small arms weapon programs.

Long-term armoring strategy

The committee understands the Army's long-term armoring strategy (LTAS) is a long-term capabilities-based armoring strategy for tactical wheeled vehicles (TWVs) that would provide greater protection to TWVs than the currently fielded add-on-armor kits, as well as provide battlefield commanders with the capability to change protection levels based on the mission, threat, or technology changes by using an A–Kit/B–Kit concept.

The committee understands LTAS is not a program in itself, but rather an armor initiative that would address commonality and standardization of armor-related components across the TWV fleet.

The committee notes the LTAS supports the development of an integral A–Kit composed of hard-to-install components and armor panels with structural attachment points for B–Kit armor panels and components. The committee further notes the B–Kit concept would provide units with the flexibility to remove armor during peacetime operations, as well as improve reliability, maintainability, and fuel economy for TWVs. Finally, the committee notes the LTAS would allow for the upgrade of armor protection as the threat increases or as new armoring technologies are developed.

The committee supports this initiative and commends the Army for pursuing this capabilities based strategy. The committee has concerns over the implementation strategy and whether adequate resources are programmed for the LTAS for all families of TWVs across the Future Years Defense Program (FYDP). The committee strongly encourages the Army to adequately fund LTAS within the FYDP and to continue to pursue light weight vehicle armor technology solutions to maximize ballistic protection and vehicle payload capacity.

Medical advanced technology

The budget request contained $50.8 million in PE 63002A for advanced technology research for healthy, medically protected soldiers, but included no funds for the advancement of smart sensing technologies for remote notification of catastrophic physiological events, for evaluating the effectiveness of oxygen diffusion dressings to accelerate wound healing and reduce infection for soft tissue trauma care, or for advancements of the Propaq monitor.

The committee recommends $58.3 million in PE 63002A medical advanced technology, an increase of $3.0 million for Nightengale, remote on-body sensing technologies; an increase of $1.0 million for evaluation and development of oxygen diffusion dressings for accelerated healing of battlefield and other wounds; and an increase of $3.5 million for Thunderbolt, the advanced Propaq monitor.

Medical materiel/medical biological defense equipment—SDD

The budget request contained $14.5 million in PE 64807A for advanced development of medical materiel within the system demonstration and low rate initial production portions of the acquisition lifecycle, but included no funds for a Leishmania diagnostic skin test phase III clinical trial. The development of a diagnostic skin test for Leishmaniasis shows promise, having successfully been tested in phase I safety trials and with a phase II trial scheduled for 2006. Leishmaniasis is not easily diagnosed, yet U.S. military hospitals have treated over 700 clinical cases of Leishmaniasis in military personnel serving in Iraq and Afghanistan.

The committee recommends an increase of $1.7 million in PE 64807A for development of a Leishmania Diagnostic Skin Test.

Miniaturized sensors for small and tactical unmanned aerial vehicles

The budget request included $23.9 million in PE 62709A for night vision technology, but included no funds for miniaturized sensors for small and tactical unmanned aerial systems (UAVs).

The committee notes that among the major requirements for UAVs are miniaturized and wide bandwidth visible, infrared, and

radar imaging sensors. Emphasis has been on the larger UAVs and sensor development has continued to lag behind vehicle development, which presents significant power, weight, and cooling challenges in adapting sensors for use in small and tactical UAVs.

Therefore, the committee recommends an additional $6.0 million for miniaturized sensor development for small and tactical UAVs.

Missile recycling capability technology

The budget request contained $10.3 million in PE 63103A for explosives demilitarization technology, but contained no funds for missile recycling capability technology.

The committee is aware missile recycling capability technology provides the Army with an environmentally friendly and cost effective means of disposal for tactical missiles. The committee is also aware this capability is transitioning to prototype production capability. The committee notes this capability reduces the usage of open burn/open detonation for disposing of tactical missiles, as well as complies with current environment regulations.

The committee recommends an increase of $6.0 million in PE 63103A to accelerate the transition of missile recycling capability technology.

Mobile assessment detection and response system

The budget request included $74.7 million in PE 63004A for weapons and munitions advanced technology, but included no funds for the mobile assessment detection and rapid response system (MDARS).

The MDARS unmanned ground vehicle currently provides the capability to patrol, detect intruders, and remotely determine inventory status. The committee is aware of requirements to increase vehicle speed, incorporate operator-controlled non-lethal weapons, and incorporate on-the-move intruder detection.

The committee recommends an additional $6.5 million in PE 63004A to integrate additional capabilities into MDARS.

Next-generation advanced materials research

The budget request contained $11.2 million in PE 63305A for Army missile defense systems integration.

The committee understands that the development of advanced composite materials can enhance the performance of both current and next generation weapons systems. The committee notes that lighter composite materials can significantly improve the design, manufacturing, and performance of future Army conventional missile launchers.

The committee recommends an increase of $6.0 million in PE 63305A to fabricate an integrated missile canister/multi-round pack using state-of-the-art lightweight high strength carbon composites.

Polymer matrix composites for rotorcraft drive systems

The budget request included $64.7 million in PE 63003A for aviation advanced technology, but included no funds for the demonstration of polymer matrix composite drive trains.

The committee notes the low level of funding for technology development for rotorcraft. Improving the capability of rotorcraft drive systems and reducing the operational cost of rotorcraft oper-

ation is fundamental to programs like the Joint Heavy Lift Program. These improvements may be achieved through the introduction of non-metallic structures as critical drive system components. Advancements in composite materials and process technologies offer significant improvements over their metallic counterparts and provide for the elimination of corrosion, less fatigue, significant reductions in weight, and lower acquisition and ownership costs.

The committee recommends an increase of $6.0 million in PE 63003A to demonstrate full scale polymer matrix composite drive train test articles under the rotorcraft drive system–21 program.

Portable and mobile emergency broadband system

The budget request contained $44.0 million in PE 63008A for electronic warfare advanced technology, but included no funds for the portable and mobile emergency broadband system.

The committee is aware the portable and mobile emergency broadband system, based on emerging commercial technology, would allow for the rapid establishment of emergency communications networks.

The committee recommends an increase of $4.0 million in PE 63008A to complete the critical development of the portable and mobile emergency broadband system.

Product lifecycle management plus

The budget request contained $55.3 million in PE 33141A for the global combat support system, but contained no funding to accelerate the Product Lifecycle Management Plus system.

The committee believes that the Army's legacy logistics business systems are outmoded and supports the creation of an integrated Army logistics environment. The committee believes the Product Lifecycle Management Plus system is an essential part of future Army logistics systems and supports its rapid deployment.

The committee recommends $61.3 million in PE 33141A for the global combat support system, an increase of $6.0 million to accelerated deployment of the Product Lifecycle Management Plus system.

Radiation hardening initiative

The budget request contained $11.2 million in PE 63305A for Army missile defense systems integration.

The committee is aware of the military requirement to protect our space assets from the effects of high-altitude nuclear weapons and the resulting electro-magnetic pulse. The committee supports efforts to enhance the ability of the developers of space technology to leverage the use of existing radiation hardened (RadHard) technology initiatives resident in the Missile Defense Agency's Space-based Infrared Phase II Radiation-Hardening Catalog effort and other space programs.

The committee recommends an increase of $4.0 million in PE 63305A for the radiation hardening initiative to collect RadHard technology and component information into one central database.

Smart energetics architecture

The budget request included $42.1 million in PE 63313A for missile and rocket advanced technology, but included no funds for the smart energetics architecture project.

The committee is aware that the smart energetics architecture project offers the potential to reduce traditional tactical missile launch system weight by 60 percent, significantly lower system power requirements, and provide savings in lifecycle costs by simplifying assembly, installation and use.

Therefore, the committee recommends an additional $6.0 million in PE 63313A for the smart energetics architecture project.

Stryker vehicle open architecture electronic enhancements

The budget request contained $5.4 million in PE 63653A for the advanced tank armament system, but included no funds for Stryker vehicle open architecture electronic enhancements.

The committee understands the Army's modernization strategy has identified capability gaps in current forces that require the integration of network-centric capabilities into the current Stryker brigade combat teams. The committee notes that the incorporation of open systems electronics architecture into the Stryker vehicles would support block upgrades and the early adoption of emerging network-centric warfare capabilities into the Stryker brigade combat teams.

The committee recommends an increase of $10.0 million in PE 63653A for Stryker vehicle open architecture electronic enhancements in support of the Army's modernization strategy.

Tactical wheeled vehicle product improvement program

The budget request contained no funds for the tactical wheeled vehicle (TWV) product improvement program (PIP).

The committee understands the Army is faced with the difficult challenge of implementing its TWV modernization strategy and must leverage three competing factors in support of current operations and fleets, transforming TWVs to attain future fleet capabilities and achieving modularity requirements. The committee notes the Army requires the flexibility to rapidly evaluate and integrate readily available technology into TWV platforms as part of this TWV modernization strategy.

The committee has concerns over the lack of funding programmed for the TWV PIP initiative in the President's request. The committee believes TWV PIP technologies would have a real-time impact and effect on existing TWVs and would provide increased capability in the areas of performance and survivability. Consistent with committee views as expressed in the committee report (H. Rept. 109–89) accompanying the National Defense Authorization Act for Fiscal Year 2006, the committee continues to support a TWV PIP initiative, as well as strongly encourages the Secretary of the Army to adequately fund this initiative in the Future Years Defense Program.

The committee recommends an additional $10.0 million to continue the TWV PIP initiative.

Training-based collaborative research in military consequence management

The budget request contained $18.9 million in PE 62716A for human factors engineering applied research, but contained no funding for training-based collaborative research in military consequence management efforts.

The committee recognizes the need for innovative approaches to improve military consequence management initiatives, especially in complex and dynamic threat environments. The committee understands advanced capabilities are necessary in the fields of military law enforcement, engineering, chemical-biological management and training, mines and unexploded ordnance, and non-lethal weapons. The committee believes a commitment to technology transfer initiatives, coupled with efforts to establish well-defined training performance measurements, offers the greatest potential for advances in training effectiveness.

Therefore, the committee recommends an increase of $20.0 million in PE 62716A for training-based collaborative research.

Transparent armor

The budget request contained $64.7 million in PE 63003A for aviation advanced technology, but contained no funding for advanced lightweight armored window technology.

The committee recognizes the unique threat confronting air crews operating rotary aircraft in forward deployed areas. The committee is supportive of efforts to rapidly field advanced technologies to enhance the protection of military personnel. The committee understands that significant opportunities exist to facilitate the transition of technologies from research and development to testing and fielding, particularly in the area of self-protection. The effort to develop transparent, lightweight armor is one such opportunity, as it offers the promise of improving rotary aircraft survivability.

The committee, therefore, recommends an increase of $2.5 million in PE 63003A for lightweight armored window technology.

Warfighter sustainment

The budget request included $25.4 million for warfighter technology in PE 62786A, but included no funds for improved packaging and content of combat rations.

The committee is aware of technology that offers to improve nutrition of combat rations, as well as reduce the cost and bulk of associated packaging. The committee is also aware that while combat rations meet the military recommended daily allowances for nutrients, but improved nutraceutical content could improve battlefield acuity and readiness.

Therefore, the committee recommends an increase of $5.3 million in PE 62786A for warfighter sustainment.

NAVY RESEARCH, DEVELOPMENT, TEST, AND EVALUATION

Overview

The budget request contained $16.9 billion for Navy research, development, test, and evaluation (RDT&E).

The committee recommends $17.4 billion, an increase of $465.5 million to the budget request.

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
		RESEARCH, DEVELOPMENT, TEST & EVALUATION, NAVY					
		BASIC RESEARCH					
0601103N	1	University Research Initiatives	73,322				73,322
0601152N	2	In-House Laboratory Independent Research	15,916				15,916
0601153N	3	Defense Research Sciences	366,649	16,500			383,149
0601153N		Carbon Nanotube Based Hard Non-Volatile RAM			9,000		
0601153N		N-STEP			7,500		
		TOTAL, BASIC RESEARCH	**455,887**	**16,500**	**16,500**		**472,387**
		APPLIED RESEARCH					
0602114N	4	Power Projection Applied Research	84,914	15,700			100,614
0602114N		High Performance FM Fiber Optic Link			2,000		
0602114N		Retroreflecting Optical Communications for Special Operations			4,000		
0602114N		Boost to Cruise Hypersonic Technology			4,000		
0602114N		Marine Mammal Research			2,200		
0602114N		FireLidar			3,500		
0602123N	5	Force Protection Applied Research	123,443	4,200			127,643
0602123N		Advanced Material Techniques for Lithium Ion Large Cell Manufacturing			4,200		
0602131M	6	Marine Corps Landing Force Technology	37,741				37,741
0602233N	7	Human Systems Technology					
0602234N	8	Materials, Electronics and Computer Technology					
0602235N	9	Common Picture Applied Research	68,352	3,500			71,852
0602235N		Fiber Optic Remote Amplifier			3,500		
0602236N	10	Warfighter Sustainment Applied Research	89,964	19,800			109,764

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0602236N		POSS Biofilm Packaging			2,000		
0602236N		Partnership Simulation Lab - PULSE			4,000		
0602236N		Virtual Clinical Learning Lab			6,000		
0602236N		Phase One Clinical Trials for Infusible Hemostatic Agent			6,300		
0602236N		New Materials for Aircraft Tires			1,500		
0602271N	11	RF Systems Applied Research	42,619				42,619
0602435N	12	Ocean Warfighting Environment Applied Research	48,718				48,718
0602651M	13	Joint Non-Lethal Weapons Applied Research	6,036				6,036
0602747N	14	Undersea Warfare Applied Research	83,435				83,435
0602782N	15	Mine and Expeditionary Warfare Applied Research	53,435				53,435
		TOTAL, APPLIED RESEARCH	**638,657**	**43,200**	**43,200**		**681,857**
		ADVANCED TECHNOLOGY DEVELOPMENT					
0603114N	16	Power Projection Advanced Technology	76,806	16,000			92,806
0603114N		DP-2 Vectored Thrust Aircraft			8,000		
0603114N		Fly By Wire for High Speed Watercraft			2,000		
0603114N		Laser Radar			6,000		
0603123N	17	Force Protection Advanced Technology/ XCRAFT	61,504	48,700			110,204
0603123N		DockShock Ship Shock System			8,000		
0603123N		Sea Fighter (X Craft)			25,700		
0603123N		High Temperature Superconducting Generator Study			3,000		
0603123N		Pure Hydrogen Supply from Logistics Fuels			3,000		
0603123N		Secure Infrastructure Technology Laboratory			8,000		
0603123N		HM&E Data Integration Firewall			1,000		
0603235N	18	Common Picture Advanced Technology	61,725	4,800			66,525

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0603235N		MIST Phased Array Radar			4,800		
0603236N	19	Warfighter Sustainment Advanced Technology	82,035	10,500			92,535
0603236N		SEAPRINT			3,000		
0603236N		Virtual At Sea Training Technologies			5,000		
0603236N		Validation of Prognostic of Health Management Systems			2,500		
0603271N	20	RF Systems Advanced Technology	45,317	2,000			47,317
0603271N		Advanced Radar Module Cooling System			2,000		
0603640M	21	Marine Corps Advanced Technology Demonstration (ATD)	59,170				59,170
0603651M	22	Joint Non-Lethal Weapons Technology Development	1,405				1,405
0603727N	23	Joint Experimentation (Navy Technical Information Presentation System in P					
0603729N	24	Warfighter Protection Advanced Technology	17,982	2,500			20,482
0603729N		Special Warfare Performance and Injury Prevention Program			2,500		
0603747N	25	Undersea Warfare Advanced Technology	35,055	3,000			38,055
0603747N		HE Lithium Ion Battery Technology			3,000		
0603757N	26	Joint Warfare Experiments					
0603758N	27	Navy Warfighting Experiments and Demonstrations	41,308				41,308
0603782N	28	Mine and Expeditionary Warfare Advanced Technology	21,326				21,326
0603782N	28a	Mine and Expeditionary Warfare Advanced Technology		2,600			2,600
0603782N		Countermine LIDAR for UAVs			2,600		
0303158M	29	Joint Command and Control Program (JC2) (To line 197a)	1,001	(1,001)		(1,001)	
		TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT	**504,634**	**89,099**	**90,100**	**(1,001)**	**593,733**
		ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES					
0603207N	30	Air/Ocean Tactical Applications	31,778				31,778
0603216N	31	Aviation Survivability	6,177	5,000			11,177

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0603216N		Air Sentinel UAV			5,000		
0603237N	32	Deployable Joint Command and Control	16,383				16,383
0603254N	33	ASW Systems Development	16,782	10,000			26,782
0603254N		Tactical E-Field Buoy Development			6,000		
0603254N		Electro-Optical Passive ASW System			4,000		
0603261N	34	Tactical Airborne Reconnaissance / UAV CONOPS	3,959				3,959
0603382N	35	Advanced Combat Systems Technology	12,398				12,398
0603502N	36	Surface and Shallow Water Mine Countermeasures	130,265				130,265
0603506N	37	Surface Ship Torpedo Defense	40,627	10,000			50,627
0603506N		Detection, Classification, and Localization Demo			10,000		
0603512N	38	Carrier Systems Development (CVN-21)	153,894				153,894
0603513N	39	Shipboard System Component Development	14,135	9,000			23,135
0603513N		Shipboard Wireless Maintenance Assistant			3,000		
0603513N		Smart Valve			2,000		
0603513N		HTS AC Synchronous Motor			4,000		
0603525N	40	PILOT FISH	134,550				134,550
0603527N	41	RETRACT LARCH	87,180				87,180
0603536N	42	RETRACT JUNIPER	38,462				38,462
0603542N	43	Radiological Controls	1,901				1,901
0603553N	44	Surface ASW	38,696				38,696
0603559N	45	SSGN Design (SSGN Conversion in PB)	25,953				25,953
0603561N	46	Advanced Submarine System Development	140,432	6,000			146,432
0603561N		LD-UUV At-sea Launch and Recovery System			6,000		
0603562N	47	Submarine Tactical Warfare Systems	10,357				10,357
0603563N	48	Ship Concept Advanced Design	21,549	3,000			24,549
0603123N		Machinery Analytics for Control and Monitoring System			3,000		

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0603564N	49	Ship Preliminary Design & Feasibility Studies	21,314				21,314
0603570N	50	Advanced Nuclear Power Systems (CVN-21)	174,648				174,648
0603573N	51	Advanced Surface Machinery Systems					
0603576N	52	CHALK EAGLE	139,017				139,017
0603581N	53	Littoral Combat Ship (LCS)	319,671				319,671
0603582N	54	Combat Systems Integration	62,095				62,095
0603609N	55	Conventional Munitions	22,385				22,385
0603611M	56	Expeditionary Fighting Vehicle (EFV/AAAV)	188,306				188,306
0603612M	57	Marine Corps Mine/Countermeasures Systems - Adv Dev: Mine Detector	3,777				3,777
0603635M	58	Marine Corps Ground Combat/Support System	503	3,000			3,503
0603635M		Marine Expeditionary Rifle Squad			3,000		
0604402N	58a	UCAV (from line 164)		239,163	239,163		239,163
0603654N	59	Joint Service Explosive Ordnance Development	24,467				24,467
0603658N	60	Cooperative Engagement	53,406				53,406
0603713N	61	Ocean Engineering Technology Development	16,324	10,000			26,324
0603713N		Advanced Composite Riverine Craft			10,000		
0603721N	62	Environmental Protection	20,271				20,271
0603724N	63	Navy Energy Program	1,600				1,600
0603725N	64	Facilities Improvement	4,194				4,194
0603734N	65	CHALK CORAL	28,578				28,578
0603739N	66	Navy Logistic Productivity	6,306				6,306
0603746N	67	RETRACT MAPLE	344,912				344,912
0603748N	68	LINK PLUMERIA	80,662				80,662
0603751N	69	RETRACT ELM	64,133				64,133
0603755N	70	Ship Self Defense	8,897				8,897
0603764N	71	LINK EVERGREEN	55,051				55,051

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0603787N	72	Special Processes	47,180				47,180
0603790N	73	NATO Research and Development	9,784				9,784
0603795N	74	Land Attack Technology / AWS	18,571	39,000			57,571
0603795N		Affordable Weapon System			27,000		
0603795N		BTERM			10,000		
0603795N		76mm Gun System Explosives Safety Review			2,000		
0603851M	75	Nonlethal Weapons	44,815				44,815
0603857N	76	Joint Combat ID Evaluation Team					
0603860N	77	Joint Precision Approach and Landing Systems	41,242				41,242
0603879N	78	Single Integrated Air Picture (SIAP) System Engineer (SE)	50,282				50,282
0603889N	79	Counterdrug RDT&E Projects					
0604272N	80	Tactical Air Directional Infrared Countermeasures (TADIRCM)	20,527				20,527
0604327N	81	Conventional TRIDENT	77,000	(47,000)			30,000
0604327N		Program Decrease				(47,000)	
0604707N	82	Space and Electronic Warfare (SEW) Architecture/Engineering Support	43,909				43,909
0604787N	83	Joint Warfare Transformation Programs					
		TOTAL, ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES	**2,919,305**	**287,163**	**334,163**	**(47,000)**	**3,206,468**
		SYSTEM DEVELOPMENT & DEMONSTRATION					
0604212N	84	Other Helo Development	86,197				86,197
0604214N	85	AV-8B Aircraft - Eng Dev	13,878				13,878
0604215N	86	Standards Development	112,257	8,700			120,957
0604215N		Metrological Standards and Systems			8,700		
0604216N	87	Multi-Mission Helicopter Upgrade Development	19,259				19,259
0604218N	88	Air/Ocean Equipment Engineering	5,578				5,578

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0604221N	89	P-3 Modernization Program	16,139				16,139
0604230N	90	Naval Coastal Warfare (Warfare Support System)	2,203				2,203
0604231N	91	Tactical Command System	74,225				74,225
0604234N	92	Advanced Hawkeye	497,842	7,200			505,042
0604234N		IFF Technology Development			7,200		
0604245N	93	H-1 Upgrades	7,844				7,844
0604261N	94	Acoustic Search Sensors	36,764	2,500			39,264
0604261N		Acoustic Environmental Sensor System			2,500		
0604262N	95	V-22A	268,461				268,461
0604264N	96	Air Crew Systems Development	12,434				12,434
0604269N	97	EA-18G	372,363				372,363
0604270N	98	EW Development	39,842	8,000			47,842
0604270N		Next Generation Electronic Warfare Simulator			8,000		
0604273N	99	VH-71 Executive Helo Development	682,597	(39,000)			643,597
0604273N		Program Decrease				(39,000)	
0604280N	100	Joint Tactical Radio System - Navy (JTRS-Navy)	1,153				1,153
0604300N	101	DD(X) Systems Engineering (SC-21 Total Sip System Engineering)	817,528	25,000			842,528
0604300N		Permanent Magnet Motor			15,000		
0604300N		Wireless Maritime Inspection System			5,000		
0604300N		Integrated Shipboard Intelligent Surveillance			5,000		
0604307N	102	Aegis Combat System Engineering	190,059				190,059
0604311N	103	LPD-17 Class System Integration	5,960				5,960
0604312N	104	JASSM					
0604329N	105	Small Diameter Bomb (SDB)	10,021				10,021
0604366N	106	Standard Missile Improvements	186,144				186,144
0604373N	107	Airborne MCM	56,145				56,145

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0604378N	108	Naval Integrated Fire Control - Counter Air Systems Engineering	14,792				14,792
0604503N	109	SSN-688 and Trident Mods (Submarine Systems Development)	94,839	9,000			103,839
0604503N		Affordable Towed Array Construction			4,500		
0604503N		Common Submarine Radio Room			4,500		
0604504N	110	Air Control	4,603				4,603
0604507N	111	Enhanced Modular Signal Processor					
0604512N	112	Shipboard Aviation Systems	33,392	1,000			34,392
0604512N		Aircraft Carrier Launch, Recovery and Support Equipment			1,000		
0604518N	113	Combat Information Center Conversion	6,708				6,708
0604558N	114	New Design SSN	169,580	45,000			214,580
0604558N		Flexible Payload Module			25,000		
0604558N		Large Aperture Bow Array			20,000		
0604561N	115	SSN-21 Developments	3,260				3,260
0604562N	116	Submarine Tactical Warfare System	51,656				51,656
0604567N	117	Ship Contract Design/ Live Fire T&E (CVN-21)	72,055				72,055
0604574N	118	Navy Tactical Computer Resources					
0604601N	119	Mine Development	5,631				5,631
0604603N	120	SLAM-ER					
0604610N	121	Lightweight Torpedo Development	40,540				40,540
0604654N	122	Joint Service Explosive Ordnance Development	10,026				10,026
0604703N	123	Personnel, Training, Simulation, and Human Factors	8,754	1,000			9,754
0604703N		SEAPRINT			1,000		
0604721N	124	Battle Group Passive Horizon Extension System					
0604727N	125	Joint Standoff Weapon Systems	27,524				27,524
0604755N	126	Ship Self Defense (Detect & Control)	10,050				10,050
0604756N	127	Ship Self Defense (Engage: Hard Kill)	46,390	9,000			55,390

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0604756N		Next Generation Phalanx			9,000		
0604757N	128	Ship Self Defense (Engage: Soft Kill/EW)	11,513				11,513
0604761N	129	Intelligence Engineering	4,865				4,865
0604771N	130	Medical Development	7,663				7,663
0604777N	131	Navigation/ID System	47,070				47,070
0604784N	132	Distributed Surveillance System	58,273	3,400			61,673
0604784N		Wet End Installation System Element			3,400		
0604800N	133	Joint Strike Fighter (JSF)	2,030,979				2,030,979
0604910N	134	Smart Card Program					
0605013M	135	USMC Information Technology Development	13,326				13,326
0605013N	136	Information Technology Development	88,323	(40,800)			47,523
0605013N		Navy Enterprise Resource Planning (ERP)				(40,800)	
0605172N	137	Multinational Information Sharing (MNIS)	20,856				20,856
0605212N	138	CH-53X	362,672				362,672
0605500N	139	Multi-mission Maritime Aircraft (MMA)	1,131,655				1,131,655
0304785N	140	Tactical Cryptologic Systems	23,526				23,526
		TOTAL, SYSTEM DEVELOPMENT & DEMONSTRATION	**7,915,414**	**40,000**	**119,800**	**(79,800)**	**7,955,414**
		RDT&E MANAGEMENT SUPPORT					
0604256N	141	Threat Simulator Development	23,668				23,668
0604258N	142	Target Systems Development	45,666				45,666
0604759N	143	Major T&E Investment	39,750				39,750
0605152N	144	Studies and Analysis Support - Navy	7,093				7,093
0605154N	145	Center for Naval Analyses	48,900				48,900
0605155N	146	Fleet Tactical Development	2,595				2,595

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0605502N	147	Small Business Innovative Research					
0605804N	148	Technical Information Services	670				670
0605853N	149	Management, Technical & International Support	47,213				47,213
0605856N	150	Strategic Technical Support	3,347				3,347
0605861N	151	RDT&E Science and Technology Management	67,328				67,328
0605862N	152	RDT&E Instrumentation Modernization	1,243				1,243
0605863N	153	RDT&E Ship and Aircraft Support	83,140				83,140
0605864N	154	Test and Evaluation Support	328,276				328,276
0605865N	155	Operational Test and Evaluation Capability	11,532				11,532
0605866N	156	Navy Space and Electronic Warfare (SEW) Support	2,904				2,904
0605867N	157	SEW Surveillance/Reconnaissance Support	20,073				20,073
0605873M	158	Marine Corps Program Wide Support	25,343	4,000			29,343
0605873M		Detection and Recovery of Unexploded Ordnance			4,000		
0305885N	159	Tactical Cryptologic Activities	1,004				1,004
0804758N	160	Service Support to JFCOM, JNTC	5,202				5,202
0909999N	161	Financing for Cancelled Account Adjustments					
		TOTAL, RDT&E MANAGEMENT SUPPORT	**764,947**	**4,000**	**4,000**		**768,947**
		OPERATIONAL SYSTEMS DEVELOPMENT					
0604227N	163	HARPOON Modifications	36,284				36,284
0604402N	164	UCAV Advanced Component A (to line 58a)	239,163	(239,163)		(239,163)	
0101221N	165	Strategic Sub & Weapons System Support	124,522	2,500			127,022
0101221N		Lithium Battery Technology			2,500		
0101224N	166	SSBN Security Technology Program	42,869				42,869
0101226N	167	Submarine Defensive Warfare Systems	2,131				2,131

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0101402N	168	Navy Strategic Communications/E-6B	37,464				37,464
0203761N	169	Rapid Technology Transition (RTT)	39,285				39,285
0204136N	170	F/A-18 Squadrons	31,098	17,100			48,198
0204136N		Composite Missile Launcher Improvement			2,000		
0204136N		Digital Electronic Warfare System			10,000		
0204136N		Digital Heads-up Display Upgrade			5,100		
0204152N	171	E-2 Squadrons	1,540				1,540
0204163N	172	Fleet Telecommunications (Tactical)	27,189				27,189
0204229N	173	Tomahawk Weapons System	18,635				18,635
0204311N	174	Integrated Surveillance System	30,740				30,740
0204413N	175	Amphibious Tactical Support Units	1,812				1,812
0204571N	176	Consolidated Training Systems Development	17,857				17,857
0204574N	177	Cryptologic Direct Support	1,425				1,425
0204575N	178	Electronic Warfare (EW) Readiness Support	20,673				20,673
0205601N	179	HARM Improvement / AARGM	99,208				99,208
0205604N	180	Tactical Data Links	41,967				41,967
0205620N	181	Surface ASW Combat System Integration	9,417	4,000			13,417
0205620N		Advanced Materials for Acoustic Windows			4,000		
0205632N	182	MK-48 ADCAP	24,988				24,988
0205633N	183	Aviation Improvements	71,612				71,612
0205658N	184	Navy Science Assistance Program	3,376				3,376
0205675N	185	Operational Nuclear Power Systems	69,350				69,350
0206313M	186	Marine Corps Communications Systems	218,460	10,300			228,760
0206313M		Battlefield Management System - AS2			5,000		
0206313M		Dismounted Soldier Training Test Instrumentation			1,000		
0206313M		Network Communication System for Extreme Environments			4,300		

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0206623M	187	Marine Corps Ground Combat/Supporting Arms Systems	47,592	7,100			54,692
0206623M		Lightweight Multi-Threat Body and Appendage Armor			2,000		
0206623M		Small Arms and Crew Served Weapon Shot Counter			3,300		
0206623M		Tunable Camouflage Netting			1,800		
0206624M	188	Marine Corps Combat Services Support	17,524				17,524
0207161N	189	Tactical Air Intercept Missiles	7,946				7,946
0207163N	190	Advanced Medium Range Air-to-Air Missile (AMRAAM)	6,705				6,705
0208058N	191	Joint High Speed Vessel (JHSV)	14,163	(3)		(3)	14,160
0301303N	192	Maritime Intelligence					
0301323N	193	Collection Management					
0301327N	194	Technical Reconnaissance and Surveillance					
0303109N	195	Satellite Communications (SPACE)	748,662	6,000			754,662
0303109N		Joint Integrated Systems for Advanced Digital Networking			6,000		
0303140N	196	Information Systems Security Program	23,037				23,037
0303158N	197	Joint Command and Control Program (JC2)	5,073				5,073
0303158N	197a	Joint Command and Control Program (JC2) From Line 29		1,000	1,000		1,000
0305149N	198	COBRA JUDY	135,372				135,372
0305160N	199	Defense Meteorological Satellite Program	7,307				7,307
0305188N	200	Joint C4ISR Battle Center (JBC)					
0305192N	201	Joint Military Intelligence Programs	6,793				6,793
0305204N	202	Tactical Unmanned Aerial Vehicles	115,950				115,950
0305205N	203	Endurance Unmanned Aerial Vehicles	26,357				26,357
0305206N	204	Airborne Reconnaissance Systems	35,038	5,000			40,038
0305206N		Passive Collision Avoidance and Reconnaissance			5,000		
0305207N	205	Manned Reconnaissance Systems	22,815	51,000			73,815
0708011N		Classified Program			51,000		

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0305208N	206	Distributed Common Ground Systems	16,587				16,587
0307207N	207	Aerial Common Sensor (ACS)	17,182				17,182
0308601N	208	Modeling and Simulation Support	7,503				7,503
0702207N	209	Depot Maintenance (Non-IF)	2,960				2,960
0702239N	210	Avionics Component Improvement Program	1,375				1,375
0708011N	211	Industrial Preparedness	55,048	750			55,798
0708011N		Gas Turbine Diagnostic System			750		
0708730N	212	Maritime Technology (National Shipbuilding Research Program)		120,000			120,000
0708730N		National Shipbuilding Research Program			20,000		
0708730N		Shipbuilding Industrial Base Grants			50,000		
0708730N		Shipbuilding Industry Loan Guarantees			50,000		
XXXXXXX	999	Classified Programs	1,181,325				1,181,325
		TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT	**3,713,379**	**(14,416)**	**224,750**	**(239,166)**	**3,698,963**
		TOTAL, RESEARCH, DEVELOPMENT, TEST & EVALUATION, NAVY	**16,912,223**	**465,546**	**832,513**	**(366,967)**	**17,377,769**

Items of Special Interest

Advanced composite riverine craft

The budget request contained $16.3 million in PE 63713N for ocean engineering technology development, but included no funds for advanced composite riverine craft.

The committee remains concerned with the maturity of the operational concept for the Navy Expeditionary Combat Command (NECC) and has reservations about the rapid pace with which the Navy is moving ahead with its development. The committee encourages the Navy to fully develop its operational requirements for the NECC mission. However, the committee does believe that the Navy should investigate options for advanced composite hulls for the specialized missions the NECC might be required to perform. Advanced composite hulls are expected to provide the Navy with the technology for critical capabilities in speed, weight, draft, stability, wake and g-force reduction.

Accordingly, the committee recommends an increase of $10.0 million in PE 63713N for development and construction of advanced composite riverine craft.

Advanced materials for acoustic window applications

The budget request contained $9.4 million in PE 25620N for surface anti-submarine warfare combat system integration, but included no funds for advanced materials for acoustic window applications.

The committee is aware that advanced materials for acoustic window applications have the potential to reduce signature and improve survivability of naval sonar dome windows at a reduced cost. Current materials used to minimize turbulence and hydrodynamic drag, and protect the sonar system from impacts with debris use a non-corroding sandwich dome concept constructed using fiber reinforced polymer composite skins with a layered elastomeric core. Although this technology meets current mission requirements, the committee understands there is a need for lower-cost, structurally robust materials for acoustic window applications.

Therefore, the committee recommends an increase of $4.0 million in PE 25620N for a development program on lower cost advanced materials for warship design concepts.

Affordable towed array construction/fiber optic towed array construction

The budget request contained $94.8 million in PE 64503N for submarine systems equipment development, including $5.7 million to continue the development of affordable towed array technology.

The affordable towed array construction program utilizes fiber optic thin line arrays to provide increased operational capabilities and reliability improvements over existing submarine thin line towed systems. The committee believes that the development and fielding of fiber optic towed array technology is important to maintain clear acoustical, tactical and operational undersea dominance in the littorals.

Consequently, the committee recommends an increase of $4.5 million in PE 64503N to accelerate reliability testing and introduction into the fleet of fiber optic towed arrays.

Affordable weapon system

The budget request contained $18.6 million in PE 63795N for land attack technology, but included no funding for affordable weapon system (AWS).

AWS is a low cost surface launched cruise missile based on commercial-off-the-shelf technology that is designed to carry a 200 pound payload to a range of over 600 miles. AWS is a global positioning system/inertial navigation system guided weapon with both line-of-sight and satellite data links to allow reprogramming in flight. Designed with the capability to loiter, the weapon can be commanded by a forward observer to attack precise targets on the ground in support of expeditionary operations.

The committee continues to support the concept of a loitering missile and is encouraged that the Navy is reviewing a capabilities development document for a multipurpose loitering missile. The committee supports the restructuring of this program to implement a more disciplined approach to system engineering and quality assurance, which the committee believes is achievable without substantially altering the cost objectives of the program.

The committee recommends an increase of $27.0 million for PE 63795N to complete system design and demonstration, to support live-fire testing aboard an amphibious warfare vessel subsequent to successful testing from the Self Defense Test Ship, and for limited rate initial production (LRIP) of an additional 40 missiles. However, the committee expects that no funds shall be available for LRIP prior to successful completion of an operational evaluation with production representative missiles.

Airborne reconnaissance systems

The budget request contained $35.0 million in PE 35206N for airborne reconnaissance systems, but included no funding for passive collision avoidance and reconnaissance (PCAR).

The committee is aware that unmanned aerial vehicles (UAV) must fly in regions that make them a potential hazard to commercial and other manned aircraft. The committee notes that PCAR will sense an impending collision and allow the UAV to safely avoid approaching aircraft.

Therefore, the committee recommends $40.0 million, an increase of $5.0 million in PE 35206N for PCAR to improve the safety of UAV operations.

Aircraft carrier launch and recovery and support equipment modernization

The budget request contained $33.4 million in PE 64512N for shipboard aviation systems development, but included no funds to continue development of the aircraft carrier launch and recovery (ALRE) and support equipment (SE) modernization program.

The committee understands that the ALRE/SE modernization program would develop modernization strategies for existing ALRE/SE systems to reduce human error and operating costs while improving safety and reliability. The committee also understands that ALRE/SE technologies and design tools are being developed for the CVN–21 future carrier, and believes that application of these technologies to the Navy's existing aircraft carrier fleet could

substantially reduce operating costs for the remainder of their useful life.

Accordingly, the committee recommends an increase of $1.0 million in PE 64512N to continue the ALRE/SE modernization program.

Ballistic trajectory extended range munition

The budget request contained $18.6 million in PE 63795N for land attack technology, but included no funds to continue the ballistic trajectory extended range munition (BTERM) demonstration program.

The committee notes that the Navy's current effort to field the extended range guided munition (ERGM) faces significant technological, cost and schedule performance challenges to meet the Navy's requirement for precision targeting. The committee understands that the BTERM program provides the Navy with an alternative to the ERGM global positioning system/inertial navigational system long-range, precise fire capability. The committee further notes that until recently, the Navy intended to re-compete the system design and development contract, but later decided to reverse course and continue with ERGM development. The committee remains greatly concerned with the Navy's ability to provide naval surface fire support for expeditionary forces ashore and strongly recommends that the Navy re-compete this requirement.

Accordingly, the committee recommends an increase of $10.0 million in PE 63795N, to continue the development of the BTERM demonstration program.

Bio-film packaging applied research

The budget request contained $90.0 million for PE 62236N for warfighter sustainment applied research, but included no funds for bio-film packaging applied research.

The committee notes that environmental quality technologies enable sustained world-wide Navy operations in compliance with all local, State, regional, national and international laws, regulations and agreements. The committee understands that bio-film packaging offers an environmentally friendly alternative to solve the plastic waste disposal issue aboard Navy ships. Unlike plastic packaging that cannot be thrown overboard and disposed of because it is derived from hydrocarbons, bio-film packaging waste can be disposed of at sea because it will break down into bio-compatible components in ocean water.

The committee recommends an increase of $2.0 million in PE 62236N for development of durable bio-pallet wrap and packaging.

Cobra Judy ship replacement

The budget request contained $135.4 million in PE 35149N for the Cobra Judy ship replacement program.

The Cobra Judy program is a single ship-based radar suite for world-wide technical data collection against ballistic missiles in flight. The current Cobra Judy ship, the USNS Observation Island, is unsustainable and is scheduled to go out of service in 2012. The radar data and imaging from the Cobra Judy platform supports a range of activities including Department of State treaty monitoring and verification, and ballistic missile defense development and test-

ing. Failure to replace the Cobra Judy ship by 2011 will result in a potential gap in coverage.

The committee fully supports the Cobra Judy ship replacement program and recommends $135.4 million in PE 35149N, the amount of the budget request.

Common submarine radio room

The budget request contained $94.8 million in PE 64503N for SSN–688 and Trident modernization, but included no funds for the common submarine radio room.

The committee is aware that the common submarine radio room provides a modern, automated, high capacity, interoperable communications system across submarine classes. It employs an open system architecture that maximizes the use of commercial-off-the-shelf hardware and software. The committee recommends funds to accelerate the development and deployment of the common submarine radio room.

The committee recommends an increase of $4.5 million in PE 64503N to be used for the common submarine radio room.

Conventional Trident modification

The budget request contained $77.0 million in PE 64327N for development of an advanced strike capability which will demonstrate the feasibility of modifying the Trident II (D5) strategic weapon system to carry conventional payloads.

The Navy is undertaking this effort to develop the conventional precision global strike capability called for in the 2001 Nuclear Posture Review. The committee understands that the existing Trident weapons system provides an opportunity to develop this long-range conventional strike capability by leveraging existing technology at relatively low cost.

The committee, however, is concerned that the development of this conventional capability on a submarine platform that has historically carried nuclear armed ballistic missiles may present concerns relating to the misinterpretation of the launch of a missile carrying a conventional warhead for one carrying a nuclear warhead. The committee is aware that the Department of Defense is beginning to engage members of the international community to discuss the U.S. intent behind the conventional strike capability, as well as measures to preclude misinterpretation of a conventional launch. The committee directs the Secretary of Defense to continue this important policy dialog with others in the international community.

The committee is also concerned with the costs associated with the expenditure of a conventional warhead carried on a Trident missile. While there may be high-value targets worth the price of a conventionally equipped Trident missile, it is not clear what scenarios would call for employment of the conventional Trident missile.

The committee directs the Secretary to submit to the congressional defense committees by February 1, 2007, a report on the following:

(1) The status of discussions with other countries on the concern of misinterpretation of a conventional Trident missile strike for a nuclear attack;

(2) The proposed concept of operations detailing the sequence of events for employing this weapon; and

(3) An assessment of the cost-effectiveness of using this weapon against selected targets.

The committee recommends $30.0 million in PE 64327N to explore the feasibility of modifying the Trident II strategic weapon system to carry conventional payloads, a decrease of $47.0 million.

Defense research sciences

The budget request contained $366.6 million in PE 61153N for defense research sciences, but included no funds for investigations of carbon nanotube-based radiation hard non-volatile random access memory (RAM) or for expanding the naval science and educational pipeline pilot program.

The committee recognizes the need to protect essential electronic systems and applications during critical operations from the harsh effects of natural and man-made radiation. Therefore, the committee believes there is a need to ensure the continual improvement of radiation-hardened memory, with particular emphasis on a new generation of radiation hardened devices constructed with single-walled carbon nanotube materials.

The committee also recognizes the need to reverse the trend of fewer U.S. students entering college programs to pursue science, technology, engineering, and math degrees. The naval science and educational pipeline (N–STEP) pilot program in Virginia has provided science-related curriculum enhancements at the K–12 level, in partnership with the Naval Surface Warfare Center—Dahlgren Division.

The committee recommends $383.1 million in PE 61153N, an increase of $9.0 million for development of carbon nanotube-based radiation hard non-volatile RAM and an increase of $7.5 million to expand the N–STEP pilot program to other states with naval warfare center laboratories, such as California, Maryland, and Rhode Island.

Detection and recovery of unexploded ordnance

The budget request contained $25.3 million in PE 65873M for Marine Corps program wide support, but included no funds to provide technology that would advance the detection and recovery of unexploded ordnance (UXO).

The committee is aware that many former and current military training sites pose a high safety risk because of the presence of UXO that could sometimes include 1,000 pound bombs. The committee understands that no single sensor is capable of providing the complete solution for detection, recovery, and removal of UXO. The committee encourages the continued development of a system of systems approach that would utilize existing and near-term technology to identify, recover, and remove UXO at military training sites.

The committee recommends $29.3 million in PE 65873M, an increase of $4.0 million to advance the development of a sensor suite and platform that would rapidly detect, recover, and remove UXO at military training sites.

Dismounted soldier training test instrumentation

The budget request contained $218.5 million in PE 26313M for Marine Corps communications systems development, but included no funds for dismounted soldier or marine training test instrumentation.

The committee understands this system provides advanced training capabilities for marines conducting individual and small unit operations through the use of commercially available communication system and movement tracking technology. The committee recognizes this project develops an instrumentation capability that allows real-time tracking of individual dismounted infantrymen or marines conducting training on military training ranges as well as allows for rapid post-operation reconstruction and feedback to soldiers and marines. The committee notes this particular capability augments the training readiness of soldiers and marines preparing for combat deployment in the global war on terrorism.

The committee recommends an increase of $1.0 million in PE 26313M for dismounted soldier or marine training test instrumentation.

Distributed common ground system

The budget request included $16.6 million in PE 35208N for the Distributed Common Ground System-Navy (DCGS–N), as well as $78.3 million in Common Imagery Ground Surface Systems for the DCGS–N.

The committee recognizes the potential benefits of a fully capable, completely interoperable DCGS–N system for service, joint, and interagency connectivity in support of combatant command priorities. The committee understands that the acquisition plan includes funding for the procurement and fielding of 34 DCGS–N 1.1 systems, with an eventual transition to a more advanced 1.2 configuration. The committee understands the DCGS–N 1.2 version represents a greater level of capability in terms of enterprise interoperability with other service, joint, and interagency connections.

The committee is concerned about the DCGS–N program delay since submission of the fiscal year 2006 budget request. The committee understands that the fiscal year 2007 budget request included funding for the procurement of as many as six 1.1 DCGS–N systems prior to completion of the program's operational evaluation (OPEVAL) milestone, and notes that OPEVAL is not expected to occur until the latter part of the fiscal year. The committee notes that a typical low to moderate risk acquisition schedule completes OPEVAL prior to low-rate initial production (LRIP) activities.

The committee strongly recommends that the Department of the Navy further accelerate technology development for a more robust and interoperable DCGS–N system. The committee further urges the Department to reduce programmatic risk resulting from a lack of concurrency between research and development and LRIP activities.

DockShock ship shock test system

The budget request contained $61.5 million for PE 63123N for force protection advanced technology, but included no funds for DockShock ship shock test system.

The committee is aware that DockShock is a proposed replacement system for the current practice of conducting ship shock testing using large explosives in the open ocean. The DockShock concept employs non-explosive, electro-chemical or electro-mechanical pressure source arrays that can be used at shore side or near shore locations. The committee understands that the DockShock system would provide the Navy with a more accurate, environmentally friendly, less costly process for testing the survivability of Navy ships.

The committee recommends an increase of $8.0 million in PE 63123N to continue development and testing of the DockShock ship shock test system.

DP–2 vectored thrust aircraft

The budget request contained $76.8 million in PE 63114N for power projection advanced technology, but included no funding for the DP–2 vectored thrust aircraft program.

The committee understands that the DP–2 is a twin engine, thrust vectored, high-speed combat transport aircraft capable of hover, as well as vertical take-off and landing. DP–2 has the potential to provide leap-ahead capabilities to special operations forces and other forces. The Office of Naval Research set a series of milestones for unmanned tethered and untethered hover testing, leading to manned, untethered testing in ground effect at Yuma Proving Ground.

The committee recommends an increase of $8.0 million for PE 63114N to continue execution of the current DP–2 program test plan.

E–2 advanced hawkeye identification friend or foe technology development

The budget request contained $497.8 million in PE 64234N for the development, demonstration and testing of the E–2 advanced hawkeye (AHE) aircraft, but included no funds to accelerate the development of identification friend or foe (IFF) systems.

The E–2 AHE program is developing a replacement for the existing radar and other system components to modernize the E–2C weapon system to maintain open ocean mission capability while providing an effective littoral surveillance, battle management and theater air and missile defense capability. The committee understands that one of the key technologies in the E–2 AHE program is the development of Mode 5 and Mode S IFF systems which will provide improved identification of friendly or civilian aircraft. The committee is aware that accelerating the development of this technology in fiscal year 2007 would reduce program risk and ensure that Mode 5 and Mode S IFF capabilities are integrated into the first E–2 AHE prior to delivery.

Therefore, the committee recommends $505.0 million in PE 64234N for the E–2 AHE development program, an increase of $7.2 million for acceleration of Mode 5 and Mode S development.

Electro-optic passive antisubmarine warfare system

The budget request contained $16.8 million in PE 63254N for antisubmarine warfare (ASW) systems development, including $9.9 million for the electro-optic passive ASW system (EPAS).

The committee is concerned by the proliferation and expansion of submarine forces worldwide, and views as a high priority the development of ASW capabilities for acoustically challenging littoral environments. The committee understands that EPAS will incorporate a variety of optical and infrared sensors into fieldable prototype systems to improve airborne ASW capability.

The committee recommends an increase of $4.0 million in PE 63254N for EPAS to accelerate development, fielding, and testing of prototype systems.

F/A–18 squadrons

The budget request contained $31.1 million in PE 24136N for F/A–18 squadron development, but included no funds for an aircraft composite missile launcher improvement program, for accelerated development of a digital electronic warfare (EW) system for F/A–18C/D and AV–8B aircraft, or for an F/A–18 digital heads-up display (HUD) upgrade.

The committee understands that existing aluminum aircraft missile launch suspension equipment may have limited life and may not support the next generation of guided missiles. The committee further understands that new technologies have emerged that may have the potential to increase missile launch suspension equipment service life and reduce lifecycle costs. Consequently, the committee recommends an increase of $2.0 million to develop, design, and demonstrate technologies that would improve missile launcher suspension equipment. The demonstration should include a side-by-side test of the improved missile launcher with an existing system to evaluate the advantages of new technologies.

The committee understands that EW technologies developed for the future F–35 and F–22 aircraft can be applied to address deficiencies in the Navy and Marine Corps' existing ALQ–126B defensive countermeasures system, the ALQ–164 jamming pod, and the ALR–67(V)2 radar warning receiver. The committee also understands that development of a digital EW system for the Navy's F/A–18C/D and the Marine Corps' AV–8B aircraft would provide improved capabilities against future electronic threats and improve commonality across the F/A–18C/D and AV–8B aircraft fleets, thereby reducing future operations and support costs. Accordingly, the committee recommends an increase of $10.0 to accelerate the development of a digital EW system for F/A–18C/D and AV–8B aircraft.

The F/A–18 HUD, which serves as the pilot's primary targeting system, currently uses a cathode ray tube (CRT) and is characterized as an analog solution to display targeting information to the pilot. The committee understands that the F/A–18's CRTs are becoming unreliable and that procurement sources for CRTs are diminishing. To address this supportability problem, the committee believes that migration to a digital HUD solution will lower lifecycle costs, improve reliability and performance, and provide higher accuracy with a capability to process and display more information to the pilot. Therefore, the committee recommends an increase of $5.1 million to begin the development of an F/A–18 digital HUD upgrade.

In total, the committee recommends $48.2 million in PE 24136N for F/A–18 squadron development, an increase of $17.1 million.

Flexible payload module and payload interface module development

The budget request contained $169.6 million in PE 64558N for the new design SSN, but included no funds for flexible payload module and payload interface module development.

The committee understands the flexible payload module will allow payloads, such as Tomahawk missiles, to be located outside of the submarine's pressure hull, resulting in significant cost savings. The flexible payload module will house the new or existing payloads in a pressure proof or free-flooded environment. The payload interface module is the shipboard structure and standardized interface linking the submarine's combat system with the payload.

The committee recommends an increase of $25.0 million in PE 64558N to be used for the flexible payload module and payload interface module development.

High performance FM fiber-optic link

The budget request contained $84.9 million in PE 62114N for power projection applied research, but included no funding for high performance FM fiber-optic links.

The committee understands that FM fiber optic links could be used for high bandwidth transmission of microwave and millimeter wave signals, and have potential military applications for remoting of communication and radar antennae.

The committee recommends an increase of $2.0 million for PE 62114N for applied research leading to development of high performance FM fiber-optic links.

Human systems integration

The budget request included $82.0 million in PE 63236N for warfighter sustainment advanced technology and $8.8 million in PE 64703N for personnel, training, simulation, and human factors, but contained no funding for Navy manpower and personnel integration (SEAPRINT).

The committee supports further development of SEAPRINT in conjunction with other Department of Defense human systems integration efforts, and urges additional resources in this area.

Therefore, the committee recommends an increase of $3.0 million in PE 63236N and $1.0 million in PE 64703N for SEAPRINT, in an effort to further develop human systems integration modeling throughout the Department.

Integrated shipboard intelligent surveillance

The budget request contained $817.5 million for total ship system engineering, but included no funding for integrated shipboard intelligent surveillance (ISIS).

The committee places a particularly high priority on force protection. The committee believes that commercial-off-the-shelf surveillance and monitoring technologies offer opportunities to improve shipboard security, with respect to both the exterior environment and critical interior engineering and control spaces. From an engineering and cost perspective, the best point to integrate those technologies is early in the design process.

The committee recommends an increase of $5.0 million for PE 64300N for integration of ISIS on future Navy combatants.

Joint integrated systems for advanced digital networking

The budget request contained $748.7 million in PE 33109N for satellite communications, but included no funding for joint integrated systems for advanced digital networking (JIST–NET).

JIST–NET has shown great promise in providing integrated communications systems situational awareness to combatant commanders by identifying satellite communications systems gaps and performance issues. The committee is encouraged by JIST–NET progress to date and believes further funding to complete integration of the network will provide important communications capability for the warfighting commander.

The committee recommends $754.7 million in PE 33109N, an increase of $6.0 million for JIST–NET.

Large aperture bow array

The budget request contained $169.6 million in PE 64558N for the new design SSN, but included no funds for the development of the large aperture bow (LAB) array sonar for the *Virginia* class attack submarine.

The committee is aware that the LAB array is a water-backed replacement for the air-backed spherical array in the bow of *Virginia* class submarines. The LAB uses longer-lived, lower cost sensors and commercial-off-the-shelf electronics, yielding a cost savings of about $15.0 million per ship and additional lifecycle cost savings. The committee is also aware that with a larger aperture and expanded frequency coverage, there will be a significant improvement to the anti-submarine warfare capabilities of the *Virginia* class submarine. Importantly, the LAB also allows additional payload by providing bow dome arrangement flexibility and allows for rapid insertion of future sensor technologies, and is a transformational approach to outboard sonar array design. The committee understands the preliminary design will be completed in 2006 and if inserted in the 2009 *Virginia* class hull, would provide $300.0 million in savings for the remainder of the *Virginia* class submarine construction program.

The committee recommends an increase of $20.0 million in PE 64558N to be used for the development of the LAB array sonar for the *Virginia* class attack submarine.

Large displacement unmanned undersea vehicle at-sea launch and recovery system

The budget request contained $140.4 million in PE 63561N for advanced submarine system development, but included no funds to develop an at-sea launch and recovery system for the large displacement unmanned undersea vehicle (LD–UUV).

The committee understands that the LD–UUV provides the Navy with next-generation capability to detect, track, mitigate and defeat enemy threats. The committee notes that the LD–UUV is to be compatible with the SSGN platform, serving as a force multiplier with its improved payload capabilities and enhanced long-range endurance for intelligence, surveillance and reconnaissance missions. The committee strongly encourages the Navy to devote adequate resources within the Future Years Defense Program to continue concept design, development and integration of the LD–UUV into

the SSGN platform, including its requisite stowage, launch and recovery systems.

The committee recommends an increase of $6.0 million in PE 63561N to develop and demonstrate the LD–UUV at-sea launch and recovery hardware for the SSGN.

Lightweight multi-threat encapsulated ceramic body armor

The budget request contained $47.6 million in PE 26623M for Marine Corps ground combat and supporting arms systems, but included no funds to advance the development of encapsulated ceramic body armor.

The committee recognizes encapsulating ceramic tiles through enhanced bonding and residual compression could potentially improve the ballistic performance and durability of enhanced small arms protective inserts used in outer tactical vests that constitute the Interceptor Body Armor (IBA) system. The committee understands the Army and the Marine Corps are continuously upgrading and modifying existing IBA components.

The committee recommends an increase of $2.0 million in PE 26623M to refine and test encapsulated ceramic protective inserts. Further, should these tests prove to generate a more effective solution than existing IBA ceramic inserts, the committee encourages the Secretary of the Navy to use portions of funds provided in title XV of this report to begin initial procurement of these inserts.

Lithium battery technology

The budget request contained $124.5 million in PE 11221N for strategic submarine and weapons system support, but included no funds for superior lithium polymer battery development.

The committee understands that the Navy and the Naval Surface Warfare Center, Crane, Indiana are moving away from traditional lead acid, nickel cadmium and silver zinc batteries and toward newer lithium secondary batteries.

The committee also understands that a new technology known as the superior lithium polymer battery offers improved power densities, higher continuous discharge and recharge capabilities and wider operating temperatures, with potential military application to submersibles and other vehicles.

The committee recommends an increase of $2.5 million in PE 11221N for superior lithium polymer battery development.

Marine expeditionary rifle squad

The budget request contained $0.5 million in PE 63635M for Marine Corps ground combat support systems, but included no funds for the development of the Marine Expeditionary Rifle Squad (MERS) program.

The MERS program focuses on the holistic, system level integration of all items worn, consumed or carried by the marine infantry rifle squad and is integral to the Marine Corps concept of distributed operations (DO). The committee understands MERS, in the near-term would address integration issues resulting from the rapid fielding of urgently needed weapons and equipment to infantry squads currently operating in Operation Iraqi Freedom. The committee understands MERS's long-term objective strategy would provide marine infantry rifle squads with fully integrated future

equipment systems that would be integral to the effectiveness of conducting DO.

The committee recommends $3.5 million in PE 63635A, an increase of $3.0 million to continue the phase development strategy of the MERS program.

Maritime identification surveillance technology phased array radar

The budget request contained $61.7 million in PE 63235N for common picture advanced technology, but included no funds for the maritime identification surveillance technology (MIST) phased array radar system.

The development of the MIST phased array radar system is expected to provide continuous surveillance, identification and tracking of all surface ships around naval platforms at sea, or in coastal waters and harbors. In addition, the committee is aware that this radar system will provide the Navy with an advanced phased array radar technology test bed to support future radar system technology development and validation.

The committee recommends an increase of $4.8 million in PE 63235N for the development and demonstration of a prototype phased array radar system for integration into a MIST sensor and networking technology test bed.

Maritime technology

The budget request contained no funds in PE 78730N for the maritime technology program.

The committee understands that the purpose of the maritime technology (MARITECH) program is to reduce the cost of naval ship construction, modification, and repair by enhancing the efficiency and competitiveness of the U.S. shipbuilding and ship repair industries. The committee understands that since the late 1970s the Navy has considered capital for facility investments to be an allowable cost on contracts that are not firm fixed price. The committee is also aware that in the past three years, the Navy and industry have agreed to specific recapitalization contract incentives in the *Virginia* class submarine and the CVN–21 programs. These incentive clauses have allowed the Navy and the contractors to identify improvements in sequencing and build processes to lower construction costs. The committee encourages the expansion of these efforts to all ship procurements, including the *Lewis and Clark* (T–AKE) class program.

The committee includes a provision (section 1014) that creates a shipbuilding industrial base improvement program through which the Secretary of the Navy shall award grants and loan guarantees to qualified shipyards to improve their productivity and cost effectiveness. These authorities will allow the Navy to work to an even greater extent with shipbuilders to identify and finance process changes, equipment investments, and facilities improvements to lower the cost of Navy ship procurement. The committee expects that these authorities will allow the Navy to achieve savings in the construction of the T–AKE class ships, in addition to other ship classes, and improve the competitiveness of U.S. shipyards. Consequently, the committee recommends providing funds for the shipbuilding industrial base improvement program and for the enhancement of the U.S. shipbuilding and ship repair industrial base.

The committee recommends $120.0 million in PE 78730N for the maritime technology program.

National shipbuilding research program

The budget request contained no funds in PE 78730N for the national shipbuilding research program.

The committee understands that the national shipbuilding research program (NSRP) provides a unique collaborative environment where shipbuilders and government agencies examine processes, tooling and management techniques to improve the efficiency of the United States shipbuilding industry. The committee understands that NSRP operates on a 50–50 cost share between government and industry, all results are shared with all members, and a conservative estimate for NSRP's return on investment is five to one.

The committee recommends $20.0 million in PE 78730N for the national shipbuilding research program.

Shipbuilding industrial base improvement grants

The budget request contained no funds in PE 78730N for shipbuilding industrial base improvement grants.

The committee understands the national security importance of sustaining viable and efficient shipbuilding and ship repair industries in the United States. Accordingly, the committee recommends providing grants to U.S. shipyards to facilitate the development of innovative design and production technologies and processes for naval vessel construction, and the development of modernized shipbuilding infrastructure.

The committee recommends $50.0 million in PE 78730N for shipbuilding industrial base improvement grants.

Shipbuilding industrial base improvement loan guarantees

The budget request contained no funds in PE 78730N for shipbuilding industrial base improvement loan guarantees.

The committee understands the national security importance of sustaining viable and efficient shipbuilding and ship repair industries in the United States. Accordingly, the committee recommends providing loan guarantees to U.S. shipyards to facilitate the acquisition of technologies, processes and infrastructure to enhance the efficiency and competitiveness of the U.S. shipbuilding and ship repair industries.

The committee recommends $50.0 million in PE 78730N for shipbuilding industrial base improvement loan guarantees.

Naval surface fire support

The committee remains deeply concerned by Navy shortfalls in providing naval surface fire in support of expeditionary warfare.

At the Navy's request, in the National Defense Authorization Act for Fiscal Year 2006 (Public Law 109–163) Congress authorized the Secretary of the Navy to strike from the Naval Vessel Register the battleships USS *Wisconsin* and USS *Iowa*. With these retirements, the Navy loses the longest range guns in its fleet, 16-inch 50-caliber guns capable of ranging 24 nautical miles. In the meantime, Navy efforts to improve upon, much less replace, this capability have been highly problematic.

The near-term effort involves extending the range of 5-inch 62-caliber guns on existing *Arleigh Burke* class destroyers from 13 nautical miles to more than 40 nautical miles with a rocket assisted projectile. The 5-inch extended range guided munition (ERGM) contains only 7.2 pounds of high explosive, but incorporates global positioning system/inertial navigation system guidance to provide precision targeting.

The ERGM program was initiated in 1996 with a planned research and development cost of $78.6 million, which has now grown more than 400 percent. Schedule performance has been similarly disappointing, with initial operational capability slipping a decade from fiscal year 2001 to fiscal year 2011. As late as the submission of the President's budget request for fiscal year 2007, the Navy planned to recompete the system demonstration and development (SDD) contract in the third quarter of fiscal year 2006, but recently reversed course and elected to continue the current contract. The committee questions the advisability of this decision. Notwithstanding the not insignificant technical challenges, the committee believes that program performance has been wanting. The committee further notes the existence of other responsible sources for the capabilities provided by ERGM, specifically the ballistic trajectory extended range munition (BTERM) program and a five-inch variant of the long-range land attack projectile (LRLAP). The committee strongly believes that fair and open competition would best serve the near-term naval surface fire support objectives of the Navy.

The Navy plans to meet its mid-term precision strike requirement of greater than 63 nautical miles with the 6-inch LRLAP projectile in combination with the advanced gun system (AGS), both of which are under development as part of the Navy's next generation destroyer (DD(X)) program. The committee is encouraged by the progress demonstrated in both the LRLAP and AGS engineering development models. The committee notes, however, that the first DD(X) will not become operational until 2012, assuming current timelines hold. Further, the committee does not expect that DD(X) will be procured in the quantity determined by the Marine Corps as necessary to support major combat operations within desired timeframes. In fact, the Navy's current long-range shipbuilding plan calls for procurement of only seven DD(X)s. Accordingly, the committee has strong reservations regarding the Navy's ability to meet mid-term fire support requirements.

In summary, the committee is concerned that the Navy has foregone the long-range fire support capability of the battleship, has given little cause for optimism with respect to meeting near-term developmental objectives, and appears unrealistic in planning to support expeditionary warfare in the mid-term. The committee views the Navy's strategy for providing naval surface fire support as "high risk," and will continue to monitor progress accordingly.

Network communication system technology for extreme environments

The budget request contained $218.5 million in PE 26313M for Marine Corps communication systems, but included no funds to demonstrate network communication system technology for extreme environments.

The committee understands this technology would use digital signal processing software that would enable military personnel to rapidly transmit and receive networked services such as voice, video, and data, while operating in dense urban or heavily forested areas. The committee notes this technology would provide capability to transmit services with greater bandwidth and more flexibility than provided by current systems. The committee also notes this technology could improve command decision times and enhance situational awareness at the tactical level in both non-line-of-sight and beyond-line-of-sight conditions.

The committee recommends an increase of $4.3 million in PE 26313M for Marine Corps communication systems to allow for further research and engineering support for network communication system technology for extreme environments.

Next-generation electronic warfare simulator

The budget request contained $372.4 million in PE 64269N for the development, demonstration and testing of the EA–18G electronic attack aircraft, but included no funds to develop, configure and install next-generation electronic warfare simulators in the Advanced Weapons Laboratory (AWL) at Naval Air Station (NAS) China Lake, California.

The EA–18G electronic attack aircraft program is developing a replacement for the currently used and aging EA–6B aircraft to provide a capability to detect, identify, locate, and suppress hostile emitters. The committee understands that the Department of the Navy has used the F–18 AWL for integration and development testing of previous F–18 variants, and believes that EA–18G development, test, and evaluation will require next-generation electronic warfare simulators to maximize laboratory testing, avoid additional flight testing, and reduce cost and schedule risk.

Accordingly, the committee recommends $380.4 million in PE 64269N for the EA–18G development program, an increase of $8.0 million to develop, configure and install next-generation electronic warfare simulators in the AWL at NAS China Lake.

Next-generation Phalanx

The budget request contained $46.4 million in PE 64756N for ship self defense (hard kill), but included no funding for next-generation Phalanx.

Phalanx has been a mainstay of close-in ship self defense against anti-ship cruise missiles. The committee believes that the Phalanx weapon system has evolutionary potential for improved performance, broader capability, and lower lifecycle cost. This capability could be applied to the detection, tracking, and engagement of small water craft in swarm attacks. The committee particularly notes the rapid fielding and recent operational success of a land-based Phalanx system for defeating indirect fire in Operation Iraqi Freedom, a mission for which the system was not originally intended.

The committee recommends an increase of $9.0 million for PE 64756N for development of a next-generation Phalanx weapon system.

Permanent magnet motor

The budget request contained $817.5 million in PE 64300N for next generation destroyer (DD(X)) total ship systems engineering, but included no funds to continue development and testing of the permanent magnet motor (PMM).

The committee is aware that the Navy originally intended to integrate the PMM propulsion and power support technology into the DD(X) due to its enhanced power density, acoustic performance and weight reduction advantages over competing motors. The committee understands that the PMM technology experienced a stator insulator failure during the factory testing phase; consequently, the Navy decided to forgo this technology in favor of the backup advanced induction motor (AIM) technology. Since then, the committee understands that the stator insulator failure problem encountered with the PMM technology has been rectified by substituting a conventional insulation material and that the motor has repeatedly passed successful tests at full power. The committee recognizes that the PMM technology offers significant power efficiency and weight reduction advantages over the AIM technology and encourages the Navy to consider incorporating this technology into future Navy ships.

Accordingly, the committee recommends an increase of $15.0 million in PE 64300N to continue land-based testing of the PMM.

Retroreflecting optical communications for special operations

The budget request contained $84.9 million in PE 62114N for power projection applied research, but included no funding for retroreflecting optical communications for special operations.

The committee understands that free space optical communications provide advantages over longer wavelength techniques in terms of bandwidth, spectrum congestion, resistance to jamming, and probability of detection and interception. A compact modulating retroreflector with a special operations team on the ground would secure a tactical data link to an airborne platform without requirement for precise pointing.

The committee recommends an increase of $4.0 million for PE 62114N to continue development of retroreflecting optical communications and to fabricate prototype hardware for a tactical data link.

Sea Fighter (X–Craft)

The budget request contained $61.5 million in PE 63123N for force protection advanced technology, but included no funding for Sea Fighter.

Sea Fighter, formerly known as X–Craft, is a high speed, shallow draft demonstration vessel for littoral warfare. The vessel as currently configured has limitations with respect to its deployability. The committee believes that deployment of Sea Fighter can demonstrate and validate many of the Navy's operational concepts for littoral warfare, and more specifically reduce risk in the Littoral Combat Ship program.

The committee recommends an increase of $25.7 million for PE 63123N for modifications to survivability, command and control, armament, and other ship systems to make Sea Fighter an operationally deployable asset.

Secure infrastructure technology laboratory

The budget request contained $61.5 million in PE 63123N for force protection advanced technology, but included no funding for Secure Infrastructure Technology Laboratory (SINTEL). SINTEL has developed a suite of sensing technologies and complementary computer analysis that shows great potential to reliably detect hostile, underwater threats in both domestic and foreign ports, a critical force protection requirement for the Navy.

The committee recommends an increase of $8.0 million in PE 63729N for the Secure Infrastructure Technology Laboratory.

Shipboard wireless maintenance assistant

The budget request contained $14.1 million in PE 63513N for shipboard system component development, but included no funding for the shipboard wireless maintenance assistant (SWMA).

The committee believes that advances in information technology can help to dramatically improve productivity and reduce manning for shipboard maintenance. The committee understands that SWMA allows maintenance data, text, and associated drawings and imagery to be shared wirelessly in the shipboard environment, and provides real-time "reach back" to remote experts.

The committee recommends an increase of $3.0 million for PE 63513N for SWMA prototype shipboard testing and development of pre-production models.

Small arms and crew served weapons shot counter

The budget request contained $47.6 million in PE 26623M for Marine Corps ground combat and supporting arms systems, but included no funds for the test and evaluation of weapon shot counters for Marine Corps small arms and crew-served weapons.

The committee understands the Marine Corps has a requirement to track service life and wear rates of small arms and crew-served weapon systems. The committee notes a lightweight, easily manageable weapons shot counter that could readily fit into the stock or grip of existing small arms and crew-served weapon systems would potentially address this requirement. The committee recognizes the additional funds would be used to initiate a lightweight weapons shot counter program.

The committee recommends an increase of $3.3 million in PE 26623M for the initiation, demonstration and evaluation of weapon shot counters for Marine Corps small arms and crew-served weapon systems.

Smart valve

The budget request contained $14.1 million in PE 63513N for shipboard system component development, but included no funding for smart valve.

The committee understands that in a shipboard environment with plentiful power and robust networking, linear electromechanical actuator technology presents some interesting opportunities to eliminate high pressure hydraulic and pneumatic systems. The committee believes that technologies like smart valve can offer reduced size and weight, lower maintenance, and a self diagnostic capability that would warn of impending malfunction.

The committee recommends an increase of $2.0 million for PE 63513N for development of smart valve technology.

Tactical electric field buoy development program

The budget request contained $16.8 million in PE 63254N for anti-submarine warfare systems development, but included no funding for the tactical electric (E) field buoy development program.

The committee supports the Navy's efforts to develop enhanced anti-submarine warfare capabilities using networked sensor systems. Countering emerging threats in the acoustically problematic littorals may require the exploitation of phenomenology that has previously received little attention. The tactical E-field buoy development program designs and tests air deployable sensors capable of detecting the electric field signature of a threat submarine.

The committee recommends an increase of $6.0 million for PE 63254N to design, build and test 10 engineering development model E-field buoys for evaluation at sea.

Validation of prognostic and health management systems

The budget request contained $82.0 million in PE 63236N for warfighter sustainment advanced technology, but included no funds for a program to validate prognostic and health management systems.

The committee understands that advanced modeling and simulation software has been developed for determining the remaining life of critical joint strike fighter engine components. However, the committee further understands that a program to certify the key models used in the software are required to validate prognostic and health management systems, and that such a program would enable engine life assessment modeling tools to be verified for fleet management purposes.

Consequently, the committee recommends an increase of $2.5 million in PE 63236N for a program to validate prognostic and health management systems.

VH–71

The budget request included $682.6 million in PE 64273N for the VH–71 helicopter program.

The committee understands that the VH–71 will replace the current fleet of VH–3 and VH–60 helicopters which provide transportation to the President. Section 220 of the National Defense Authorization Act for Fiscal Year 2006 (Public Law 109–163) limited the expenditure of funds on VH–71 until the Secretary of the Navy delivered to Congress an event driven acquisition strategy that incorporates no more than moderate risk for increment two of the program. Section 220 also required an operational evaluation using production representative test vehicles. Further, section 220 directed that the Director, Operational Test and Evaluation (DOT&E) provide an evaluation of the acquisition strategy.

The committee received the Navy's report on the new acquisition strategy for the VH–71 program along with comments from the Director, Operational Test and Evaluation on March 14, 2006. Although some beneficial changes have been made to the program including the creation of a Senior Leadership Council (SLC), the

schedule for the program remains high risk and the test and evaluation planned to occur prior to production of increment two aircraft will not include production representative test vehicles. Further, the DOT&E recommends the addition of readiness reviews prior to award of contracts for production of low rate initial production (LRIP) lots two and three. The current program plan would approve all three lots of LRIP at the same time. The committee directs that the Secretary of the Navy include the readiness reviews recommended by the DOT&E in the VH–71 program schedule. The committee further directs that these additional reviews should occur with the participation of the SLC, and that approval be given for LRIP contract award only with the consensus of all members of the SLC.

The committee notes that the budget request included $39.0 million to procure long lead materials for three LRIP aircraft in the increment two configuration, known as the VH–71B. The committee understands that the first contractor-provided test article for the VH–71B will not be delivered to the Navy until 2008, and that the modification of VH–71A test articles into the VH–71B configuration will not start until the later half of fiscal year 2008 and will not be completed until the later half of fiscal year 2009. The committee believes that the obligation of funds to begin long lead procurement of materials for VH–71B aircraft in fiscal year 2007 is premature.

The committee recommends $643.6 million, a decrease of $39.0 million in PE 64273N for the VH–71 helicopter program.

Virtual-at-sea training technologies

The budget request contained $82.0 million in PE 63236N for warfighter sustainment advanced technology, but included no funding for leveraging virtual-at-sea training (VAST) technologies in support of qualification and readiness training for the Littoral Combat Ship (LCS).

The committee understands that training in a simulated environment can provide valuable crew experience in a cost effective manner, and provides in some cases the only means to train for certain contingencies. The committee notes that the Navy's "Report to Congress on Annual Long-Range Plan for Construction of Naval Vessels for FY 2007" describes a future force structure that includes 55 LCSs, although none have been commissioned to date. Given the large number of ships in this class planned for procurement, the committee believes investment in training technologies is particularly prudent.

The committee recommends an increase of $5.0 million for PE 63236N for extension of VAST technologies to support crew training for LCS.

Warfare protection advanced technology

The budget request contained $18.0 million in PE 63729N for warfare protection advanced technology, but included no funds for the Naval Special Warfare Performance and Injury Prevention Program. The committee is aware that the Performance and Injury Prevention Program would implement intervention models that will permit Navy special operations forces to mitigate the risk of musculoskeletal injury and optimize physical performance.

The committee recommends $20.5 million in PE 63729N, an increase of $2.5 million for the Naval Special Warfare Performance and Injury Prevention Program.

Wet end installation system element

The budget request contained $58.3 million in PE 64784N for distributed surveillance system, but included no funding for the wet end installation system element (WISE).

The committee supports the Navy's efforts to enhance anti-submarine warfare (ASW) capability by shifting the focus from expensive platforms to relatively inexpensive networked sensors. The Navy's current program, the advanced deployable system, is a passive acoustic surveillance system that will be deployed from a littoral combat ship equipped with the ASW mission package. The committee believes the value of such systems is further enhanced by covert deployment. WISE will employ submarine based expendable unmanned underwater vehicles to install fixed sensor fields, with a goal of reducing system cost by 50 percent.

The committee recommends an increase of $3.4 million for PE 64784N for continued development of WISE and the expendable array installation vehicle.

Wireless maritime inspection system

The budget request contained $817.5 million in PE 64300N for SC–21 total ship engineering, but included no funds for the wireless maritime inspection system.

The wireless maritime inspection system will establish an operational capability that reduces the risk associated with military interception operations. The committee recognizes that this system will allow Navy personnel to board ships, as needed, to effectively inspect personnel, cargo and other items on the suspect ship while being connected in near real-time to critical Navy organizations. Specifically, it will enable boarding teams to transmit intelligence such as photos of crew, passports and evidence to the operational commander and national agencies in near-real time. The committee notes this will allow senior personnel to remotely make decisions without having to recall a portion of the interdiction team. This capability will provide improved force protection, as well as enable real-time correlation with other interdiction operations to ensure broader effectiveness.

The committee recommends an increase of $5.0 million in PE 64300N to be used for the wireless maritime inspection system.

AIR FORCE RESEARCH, DEVELOPMENT, TEST, AND EVALUATION

Overview

The budget request contained $24.4 billion for Air Force research, development, test, and evaluation (RDT&E).

The committee recommends $24.8 billion, an increase of $413.3 million to the budget request.

Title II– RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
		RESEARCH, DEVELOPMENT, TEST & EVALUATION, AIR FORCE					
		BASIC RESEARCH					
0601102F	1	Defense Research Sciences	250,232				250,232
0601103F	2	University Research Initiatives	107,571				107,571
0601108F	3	High Energy Laser Research Initiatives	12,403				12,403
		TOTAL, BASIC RESEARCH	**370,206**				**370,206**
		APPLIED RESEARCH					
0602015F	4	Medical Development					
0602102F	5	Materials	111,073	15,300			126,373
0602102F		High Modulus PAN Fiber			3,000		
0602102F		Nanocrystaline Diamond Coating			2,900		
0602102F		Electronic Type-Specific Buckytubes			9,400		
0602201F	6	Aerospace Vehicle Technologies	112,751	3,000			115,751
0602201F		Active Feedback Flow Control			3,000		
0602202F	7	Human Effectiveness Applied Research	92,991	3,000			95,991
0602202F		AIRPRINT			3,000		
0602203F	8	Aerospace Propulsion	170,885	6,700			177,585
0602203F		Advanced Engine Starter/Generator			3,500		
0602203F		Affordable Lightweight Power Supply			3,200		
0602204F	9	Aerospace Sensors	117,553	8,200			125,753
0602204F		Compact Optical Reciever for Loitering Weapons			3,000		
0602204F		Wavelength Agile Spectral Harmonic Oxygen Sensor			2,700		
0602204F		Cell Level Battery Controller			2,500		
0602500F	10	Multi-disciplinary Space Technology		3,000			3,000

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0602204F		Engineering Tool Improvement			3,000		
0602601F	11	Space Technology	85,594	8,200			93,794
0602601F		Deployable Space Structures			3,000		
0602601F		Elastic Memory Composites			3,000		
0602601F		Multicontinuum Technology for Space Structures			2,200		
0602602F	12	Conventional Munitions	62,105	3,000			65,105
0602602F		Advanced Carbon Nanotube Research			3,000		
0602605F	13	Directed Energy Technology	48,422				48,422
0602702F	14	Command Control and Communications	119,267	6,000			125,267
0602702F		MASINT Visualization Tools			6,000		
0602805F	15	Dual Use Science and Technology Program					
0602890F	16	High Energy Laser Research	50,166				50,166
0207170F	17	Joint Helmet Mounted Cueing System (JHMCS) To line 136a	2,287	(2,287)		(2,287)	
		TOTAL, APPLIED RESEARCH	**973,094**	**54,113**	**56,400**	**(2,287)**	**1,027,207**
		ADVANCED TECHNOLOGY DEVELOPMENT					
0603112F	18	Advanced Materials for Weapon Systems	48,901	15,300			64,201
0603112F		Metals Affordability Initiative			11,300		
0603112F		Large Panel Sapphire Window Producibility (F-35)			4,000		
0603203F	19	Advanced Aerospace Sensors	55,150				55,150
0603211F	20	Aerospace Technology Dev/Demo	27,424	5,000			32,424
0603211F		Advanced Aerospace Titanium Structures			5,000		
0603216F	21	Aerospace Propulsion and Power Technology	115,546	3,000			118,546
0603216F		Versatile Affordable Advanced Turbine Engines			3,000		
0603231F	22	Crew Systems and Personnel Protection Technology	32,156	7,000			39,156

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0603231F		Mobile Collaborative Air Traffic Control System			4,000		
0603231F		Variable Transmittal Visor			3,000		
0603270F	23	Electronic Combat Technology	24,436				24,436
0603311F	24	Ballistic Missile Technology					
0603400F	25	Joint Unmanned Combat Air Systems (J-UCAS)					
0603401F	26	Advanced Spacecraft Technology	68,026	16,000			84,026
0603401F		PINPOINT			5,000		
0603401F		Low Cost Reconnaissance Spacecraft			4,000		
0603401F		Intelligent Free Space Optical Satellite Communications Node			7,000		
0603444F	27	Maui Space Surveillance System (MSSS)	6,074	5,000			11,074
0603444F		High Accuracy Network Determination System			5,000		
0603500F	28	Multi-disciplinary Advanced Development Space Technology					
0603601F	29	Conventional Weapons Technology	19,658				19,658
0603605F	30	Advanced Weapons Technology	51,336	(800)			50,536
0603605F		Mid-Infrared Semiconductor Laser for Aircraft Protection			5,700		
0603605F		Advanced Optics and Laser Space Technology				(6,500)	
0603723F	31	Environmental Engineering Technology					
0603789F	32	C3I Advanced Development	35,785	4,800			40,585
0603789F		Massively Parallel Optical Interconnects for Battlespace Information Exchange			4,800		
0603801F	33	Special Programs	316,605				316,605
0603850F	34	Integrated Broadcast Service					
0603924F	35	High Energy Laser Advanced Technology Program	3,713				3,713
0207418F	36	Tactical Airborne Control Systems	26	(26)		(26)	
0207423F	37	Advanced Communications Systems					
0401840F	38	AMC Command and Control System					
0804757F	39	Joint National Training Center					

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
		TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT	**804,836**	**55,274**	**61,800**	**(6,526)**	**860,110**
		ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES					
0603260F	40	Intelligence Advanced Development	4,776				4,776
0603287F	41	Physical Security Equipment	298	3,000			3,298
0603287F		Tactical Automated Security System			3,000		
0603421F	42	NAVSTAR Global Positioning System III	315,314				315,314
0603430F	43	Advanced EHF MILSATCOM (SPACE)	633,258				633,258
0603432F	44	Polar MILSATCOM (SPACE)	35,685				35,685
0603438F	45	Space Control Technology	27,076				27,076
0603742F	46	Combat Identification Technology	26,517				26,517
0603790F	47	NATO Research and Development	4,095				4,095
0603791F	48	International Space Cooperative R&D	593				593
0603845F	49	Transformational SATCOM (TSAT)	867,102	(80,000)			787,102
0603845F		Program Decrease				(80,000)	
0603850F	50	Integrated Broadcast Service	20,592				20,592
0603851F	51	Intercontinental Ballistic Missile	45,538				45,538
0603854F	52	Wideband Gapfiller System RDT&E (Space)	37,672				37,672
0603858F	53	Space-Based Radar	266,401	(30,000)			236,401
0603858F		Program Decrease				(30,000)	
0603859F	54	Pollution Prevention	2,853				2,853
0603860F	55	Joint Precision Approach and Landing Systems	10,011				10,011
0604015F	56	Next Generation Long Range Strike	25,598				25,598
0604327F	57	Hard and Deeply Buried Target Defeat System (HDBTDS) Program					
0604400F	58	Joint Unmanned Combat Air Systems (J-UCAS)					

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION
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Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0604855F	59	Operationally Responsive Launch					
0604856F	60	Common Aero Vehicle (CAV)	33,386				33,386
0604857F	61	Operationally Responsive Space	35,625	20,000			55,625
0604857F		Program Increase			20,000		
0207423F	62	Advanced Communications Systems					
0305178F	63	National Polar-Orbiting Operational Environmental Satellite System (NPOES	349,311				349,311
		TOTAL, ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES	**2,741,701**	**(87,000)**	**23,000**	**(110,000)**	**2,654,701**
		SYSTEM DEVELOPMENT & DEMONSTRATION					
0603840F	64	Global Broadcast Service (GBS)	23,599				23,599
0604012F	65	Joint Helmet Mounted Cueing System (JHMCS)	2,792	(2,792)		(2,792)	
0604222F	66	Nuclear Weapons Support	14,895				14,895
0604226F	67	B-1B	130,546				130,546
0604233F	68	Specialized Undergraduate Flight Training	3,703				3,703
0604239F	69	F-22					
0604240F	70	B-2 Advanced Technology Bomber	224,177	16,000			240,177
0604240F		SDB Integration			16,000		
0604261F	71	Personnel Recovery System	254,310				254,310
0604270F	72	EW Development	87,784				87,784
0604280F	73	Joint Tactical Radio					
0604287F	74	Physical Security Equipment	93				93
0604329F	75	Small Diameter Bomb (SDB)	104,080				104,080
0604421F	76	Counterspace Systems	47,292	5,000			52,292
0604421F		Space Control Test Capabilities			5,000		
0604425F	77	Space Situation Awareness Systems	121,157				121,157

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Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0604429F	78	Airborne Electronic Attack	12,421				12,421
0604441F	79	Space Based Infrared System (SBIRS) High EMD	668,902				668,902
0604443F	80	Alternative Infrared Space System (AIRSS)	102,962				102,962
0604479F	81	Milstar LDR/MDR Satellite Communications (SPACE) (H)					
0604600F	82	Munitions Dispenser Development					
0604602F	83	Armament/Ordnance Development	5,039				5,039
0604604F	84	Submunitions	5,759				5,759
0604617F	85	Agile Combat Support	10,095				10,095
0604618F	86	Joint Direct Attack Munition	15,450				15,450
0604706F	87	Life Support Systems	12,370				12,370
0604735F	88	Combat Training Ranges	14,363				14,363
0604740F	89	Integrated Command & Control Applications (IC2A)	167	5,000			5,167
0604740F		Distributed Mission Interoperability Tool Kit			5,000		
0604750F	90	Intelligence Equipment	1,426				1,426
0604762F	91	Common Low Observables Verification System (CLOVerS)					
0604800F	92	Joint Strike Fighter (JSF)	1,999,068	409,500			2,408,568
0604800F		Second Source Tire Research			1,500		
0604800F		Alternate Engine			408,000		
0604851F	93	Intercontinental Ballistic Missile					
0604853F	94	Evolved Expendable Launch Vehicle Program	18,513				18,513
0605011F	95	RDT&E for Aging Aircraft	25,490				25,490
0605807F	96	Test and Evaluation Support	2,388				2,388
0207434F	97	Link-16 Support and Sustainment	172,625				172,625
0207443F	98	Family of Interoperable Operational Pictures (FIOP)					
0207450F	99	E-10 Squadrons	390,896				390,896
0207451F	100	Single Integrated Air Picture (SIAP)	40,124				40,124

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION

(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0207701F	101	Full Combat Mission Training	32,243				32,243
0305176F	102	Combat Survivor Evader Locator					
0401318F	103	CV-22	26,601				26,601
		TOTAL, SYSTEM DEVELOPMENT & DEMONSTRATION	**4,571,330**	**432,708**	**435,500**	**(2,792)**	**5,004,038**
		RDT&E MANAGEMENT SUPPORT					
0604256F	104	Threat Simulator Development	38,131				38,131
0604759F	105	Major T&E Investment	58,506	8,800			67,306
0604759F		Enterprise Test Data Management			5,800		
0604759F		Eglin Air Armament Center			3,000		
0605101F	106	RAND Project Air Force	25,211				25,211
0605306F	107	Ranch Hand II Epidemiology Study					
0605502F	108	Small Business Innovation Research					
0605712F	109	Initial Operational Test & Evaluation	34,802				34,802
0605807F	110	Test and Evaluation Support / Eglin AFB Range	740,134				740,134
0605860F	111	Rocket Systems Launch Program (SPACE)	14,704	12,000			26,704
0605860F		Joint Advanced Global Strike Demo			12,000		
0605864F	112	Space Test Program (STP)	46,310				46,310
0605976F	113	Facilities Restoration and Modernization - Test and Evaluation Support	54,683				54,683
0605978F	114	Facilities Sustainment - Test and Evaluation Support	25,579				25,579
0804731F	115	Computer Forensic Analysis	305				305
0909900F	116	Financing for Expired Account Adjustments					
0909980F	117	Judgement Fund Reimbursement					
1001004F	118	International Activities	3,911				3,911

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
		TOTAL, RDT&E MANAGEMENT SUPPORT	**1,042,276**	**20,800**	**20,800**		**1,063,076**
		OPERATIONAL SYSTEMS DEVELOPMENT					
0605024F	119	Anti-Tamper Technology Executive Agency	8,014				8,014
0605798F	120	Analysis Support Group					
0101113F	121	B-52 Squadrons	71,379	6,000			77,379
0101113F		MIL-STD-1760			6,000		
0101120F	122	Advanced Cruise Missile	6,983				6,983
0101122F	123	Air-Launched Cruise Missile (ALCM)	3,736				3,736
0101313F	124	Strat War Planning System - USSTRATCOM	27,285				27,285
0101314F	125	Night Fist - USSTRATCOM	5,162				5,162
0101815F	126	Advanced Strategic Programs	22,423				22,423
0102326F	127	Region/Sector Operation Control Center Modernization Program	14,853				14,853
0203761F	128	Warfighter Rapid Acquisition	30,584				30,584
0207131F	129	A-10 Squadrons	80,771				80,771
0207133F	130	F-16 Squadrons	148,373				148,373
0207134F	131	F-15E Squadrons	125,062				125,062
0207136F	132	Manned Destructive Suppression	515				515
0207138F	133	F-22 Squadrons	584,290				584,290
0207141F	134	F-117A Squadrons	14,093				14,093
0207161F	135	Tactical AIM Missles	8,850				8,850
0207163F	136	Advanced Medium Range Air-to-Air Missile (AMRAAM)	43,417				43,417
0207163F	136a	Joint Helmet Mounted Cueing System (JHMCS)		2,287	2,287		2,287
0207224F	137	Combat Rescue and Recovery					
0207247F	138	AF TENCAP	11,202				11,202
0207248F	139	Special Evaluation Program	530,038				530,038

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0207253F	140	Compass Call	4,469				4,469
0207268F	141	Aircraft Engine Component Improvement Program	154,319				154,319
0207277F	142	EAGLE VISION	1,612				1,612
0207325F	143	Joint Air-to-Surface Standoff Missile (JASSM)	40,881				40,881
0207410F	144	Air and Space Ops Center	87,483				87,483
0207412F	145	Theater Air Control	8,798				8,798
0207417F	146	Airborne Warning and Control System (AWACS)	165,820				165,820
0207418F	147	JT Terminal Controller Training	2,286				2,286
0207423F	148	Advanced Communications Systems	53,093				53,093
0207424F	149	Evaluation and Analysis Program					
0207433F	150	Advanced Program Technology	313,251				313,251
0207438F	151	Theater Battle Management (TBM) C4I	31,835				31,835
0207445F	152	Fighter Tactical Data Link	113,388				113,388
0207446F	153	Bomber Tactical Data Link	168,168				168,168
0207448F	154	C2ISR Tactical Data Link	4,338				4,338
0207449F	155	Command and Control (C2) Constellation	44,027				44,027
0207581F	156	Joint Surveillance and Target Attack Radar System (Joint STARS)	152,696				152,696
0207590F	157	Seek Eagle	16,426				16,426
0207591F	158	Advanced Program Evaluation	437,057				437,057
0207601F	159	USAF Modeling and Simulation	23,470				23,470
0207605F	160	Wargaming and Simulation Centers	6,595				6,595
0207697F	161	Distributed Training and Exercises	6,138				6,138
0208006F	162	Mission Planning Systems	146,396				146,396
0208021F	163	Information Warfare Support	24,758				24,758
0301310F	164	National Air Intelligence Center					
0301314F	165	COBRA BALL					

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0301315F	166	Missile and Space Technical Collection					
0301324F	167	FOREST GREEN					
0301396F	168	GDIP Collection Management					
0302015F	169	E-4B National Airborne Operations Center (NAOC)	283				283
0303131F	170	Minimum Essential Emergency Communications Network (MEECN)	64,109				64,109
0303140F	171	Information Systems Security Program	183,523				183,523
0303141F	172	Global Combat Support System	19,895				19,895
0303150F	173	Global Command and Control System	3,348	10,000			13,348
0303150F		Command and Control Service Level Management			10,000		
0303158F	174	Joint Command and Control Program (JC2)	5,818				5,818
0303601F	175	MILSATCOM Terminals	271,562				271,562
0304111F	176	Special Activities					
0304260F	177	Airborne SIGINT Enterprise	117,834				117,834
0304311F	178	Selected Activities					
0304346F	179	Imagery Derived MASINT					
0304347F	180	Overhead Non-Imaging Infrared					
0305099F	181	Global Air Traffic Management (GATM)	6,620				6,620
0305110F	182	Satellite Control Network (SPACE)	19,907				19,907
0305111F	183	Weather Service	34,899				34,899
0305114F	184	Air Traffic Control, Approach, and Landing System (ATCALS)					
0305116F	185	Aerial Targets	5,203				5,203
0305124F	186	Aerial Targets					
0305128F	187	Security and Investigative Activities	509				509
0305142F	188	Applied Technology and Integration					
0305148F	189	Air Force Tactical Measurement and Signature Intelligence (MASINT) Systems/Program					
0305159F	190	Defense Reconnaissance Support Activities (SPACE)					

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0305160F	191	Defense Meteorological Satellite Program (SPACE)	969				969
0305164F	192	NAVSTAR Global Positioning System (User Equipment) (SPACE)	131,083				131,083
0305165F	193	NAVSTAR Global Positioning System (Space and Control Segments) / OCS	177,792				177,792
0305172F	194	Combined Advanced Applications					
0305173F	195	Space and Missile Test and Evaluation Center	4,675				4,675
0305174F	196	Space Warfare Center	726				726
0305182F	197	Spacelift Range System (SPACE)	38,044				38,044
0305193F	198	Intelligence Support to Information Operations (IO)	3,813				3,813
0305202F	199	Dragon U-2					
0305206F	200	Airborne Reconnaissance Systems	52,824				52,824
0305207F	201	Manned Reconnaissance Systems / COBRA BALL	10,132				10,132
0305208F	202	Distributed Common Ground Systems / RAS-1R	120,777	4,000			124,777
0305208F		Formal Training Unit			4,000		
0305219F	203	Predator UAV	61,466				61,466
0305220F	204	Global Hawk UAV	247,665				247,665
0305221F	205	Network-Centric Collaborative Target	8,499	7,000			15,499
0305221F		Project Suter			7,000		
0305887F	206	Intelligence Support to Information Warfare	5,163				5,163
0305906F	207	NCMC - TW/AA System	50,908	(50,908)			
0305906F		CCIC2S				(50,908)	
0305910F	208	SPACETRACK (SPACE)					
0305913F	209	NUDET Detection System (SPACE)	60,281				60,281
0305917F	210	Space Architect					
0305924F	211	National Security Space Office	13,437				13,437
0305940F	212	Space Situation Awareness Operations	31,401				31,401
0307141F	213	NASS, IO Technology Integration & Tool Dev	15,449				15,449

Title II– RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0308699F	214	Shared Early Warning (SEW)	2,999				2,999
0401115F	215	C-130 Airlift Squadron	248,283	7,100			255,383
0401115F		Automated Maintenance			7,100		
0401119F	216	C-5 Airlift Squadrons	150,209				150,209
0401130F	217	C-17 Aircraft	173,781				173,781
0401132F	218	C-130J Program	40,542				40,542
0401133F	219	Aeromedical Evacuation					
0401134F	220	Large Aircraft IR Countermeasures (LAIRCM)	34,916	15,000			49,916
0401134F		AC-130U			15,000		
0401218F	221	KC-135s	1,126				1,126
0401219F	222	KC-10s	4,781				4,781
0401221F	223	KC-135 Tanker Replacement	203,932	(51,500)			152,432
0401221F		Program Decrease				(51,500)	
0401839F	224	Air Mobility Tactical Data Link	32,099				32,099
0408011F	225	Special Tactics/Combat Control	1,024	2,900			3,924
0408011F		Biostatic Protective Clothing			2,900		
0702207F	226	Depot Maintenance (Non-IF)	1,457				1,457
0702239F	227	Avionics Component Improvement Program		2,000			2,000
0702239F		Interactive Avionics Roadmap			2,000		
0702806F	228	Acquisition and Management Support	17,706				17,706
0708011F	229	Industrial Preparedness	36,673	10,500			47,173
0708011F		Laser Peening Fatigue Life Extension			3,000		
0708011F		Nanocomposites for Aerospace Applications			4,500		
0708011F		Radio Frequency Identification Tag			3,000		
0708012F	230	Logistics Support Activities					
0708610F	231	Logistics Information Technology (LOGINT)	166,338	(30,000)			136,338

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0708610F		Expeditionary Combat Support System				(30,000)	
0708611F	232	Support Systems Development	10,596	3000			13,596
0708611F		Heavy Duty Hybrid Electric Engine Propulsion			3,000		
0804757F	233	Joint National Training Center	3,073				3,073
0808716F	234	Other Personnel Activities	113				113
0901202F	235	Joint Personnel Recovery Agency	992				992
0901218F	236	Civilian Compensation Program	7,779				7,779
0901220F	237	Personnel Administration	18,262				18,262
0901538F	238	Financial Management Information Systems Development	27,541				27,541
XXXXXXX	999	Classified Programs	7,196,154				7,196,154
		TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT	**13,893,324**	**(62,621)**	**69,787**	**(132,408)**	**13,830,703**
		TOTAL. RDT&E, AIR FORCE	**24,396,767**	**413,274**	**667,287**	**(254,013)**	**24,810,041**

Items of Special Interest

Active feedback flow control technology

The budget request contained $112.8 million in PE 62201F for aerospace vehicle technologies, including $2.0 million for advancement of intelligent aerospace systems (AIAS).

The committee understands that AIAS focuses on the concept and development of valuable simulation tools for Air Force engineers and scientists for assessment of proposed future Air Force weapons systems. AIAS incorporates active feedback flow control (AFFC) technology for simulation and modeling tools in the evaluations of unsteady aerodynamic, turbulence, thermal and noise studies. Currently, there are no universal, validated tools available for the new weapon systems development program designer interested in using AFFC concepts at the beginning stages of design. The committee also understands AFFC tools are highly relevant for a broad spectrum of designs and development such as onboard intelligence for maneuvering missiles and projectiles, and onboard intelligence for unmanned air vehicles, and micro-unmanned air vehicles utilizing neurobiological inspired computational processes.

Therefore, the committee recommends an increase of $3.0 million in PE 62201F for AIAS in the development of AFFC.

Advanced engine starter/generator system prototype

The budget request contained $170.9 million in PE 62203F for aerospace propulsion, but included no funds for the development of an advanced engine starter/generator (AESG) system for future aircraft.

The committee notes that existing engine starter/generator systems on current and future designed aircraft are physically heavy and expensive to procure and sustain. The AESG contains design and technology advancements in power-electronics and high-speed-machinery. Subsequently, the AESG has the potential to provide future aircraft with a high-powered, engine starter/generator system that is 30 percent less in weight and 28 percent lower in lifecycle cost.

Therefore, the committee recommends an increase of $3.5 million for development of an advanced engine starter/generator system.

Advanced optics and laser space technology

The budget request contained $51.3 million in PE 63605F for advanced weapons technology, including $21.4 million for advanced optics and laser space technology.

The committee believes that characterization of laser propagation through atmospheric turbulence and demonstration of advanced adaptive optical and tracking technologies are critical enabling technologies for applications such as high-resolution satellite imaging, space object illumination and tracking, and satellite diagnostics testing. However, the committee is concerned by the potential applicability of this technology development for anti-satellite and advanced space weapons capabilities. Therefore, the committee directs that none of the funds authorized for this program element shall be used for development or demonstration of laser space technologies with anti-satellite weapons purposes.

The committee recommends $44.8 million in PE 63605F, a decrease of $6.5 million for advanced optics and laser space technology.

Advanced spacecraft technology

The budget request contained $68.0 million in PE 63401F for advanced spacecraft technology, but included no funds for precision integrated navigation and position-intelligent networking technology (PINPOINT), small, low-cost reconnaissance spacecraft, or intelligent free space optical satellite communications nodes.

The committee is aware that PINPOINT operates through cooperative navigation, which enables an array of satellites to form a more accurate, integrated navigation solution through the fusion of all global positioning satellite system information available within the array. With this approach, a satellite that cannot form a complete navigation solution on its own, due to poor geometry plasma effects, jamming or interference, can now accurately determine its position through interaction with other array members. The committee believes that this technology directly improves warfighter capabilities by enabling improved situational awareness and relative position accuracies.

The committee recognizes that small reconnaissance spacecraft that cost less than $4.0 million each could fulfill a variety of military and intelligence applications. The committee believes that a program focused on integrating low-mass, low-cost components into a single purpose imaging satellite, while maintaining 80 percent of the performance specifications of other larger imaging spacecraft currently in development could be of great value to the Department of Defense and the Intelligence Community.

Further, the committee is aware that on-going military operations require dramatic increases in space communications bandwidth through secure communications networks. The committee feels that lightweight, low-cost spacecraft laser communications hardware technology can reduce the development risk of the transformation communication architecture program by providing the capability for low-cost, adaptive, multi-access laser and radio frequency communications.

The committee recommends $84.0 million in PE 63401F, an increase of $16.0 million, including $5.0 million for PINPOINT, $4.0 million for small, low-cost reconnaissance spacecraft, and $7.0 million for intelligent free space optical satellite communications nodes.

Affordable lightweight power supply development

The budget request contained $170.9 million in PE 62203F for applied research in aerospace propulsion, but included no funds for lightweight proton exchange membrane fuel cells.

The committee notes the need of U.S. armed forces for efficient and robust power sources. Fuel cells, which are lighter than conventional batteries or generator power supplies, offer a high potential for reducing vehicle fuel consumption, the weight of the subsistence and combat load carried by individual soldiers, marines, sailors, and airmen in the field, environmental pollution, and an enemy's ability to detect combat vehicles. The committee further notes advances in technology and the potential for development of

durable and cost-effective high temperature proton exchange membrane fuel cells that would address these operational requirements.

The committee recommends an increase of $3.2 million in PE 62203F for applied research in lightweight proton exchange membrane fuel cells.

B–52 internal weapons bay upgrade

The budget request contained $71.4 million in PE 11113F for B–52 squadrons, but contained no funds for the military-standard-1760 (MIL–STD–1760) integration for the B–52 internal weapons bay upgrade.

The committee understands modernization and upgrade efforts are underway for the B–52 aircraft to enable employment of precision guided weapons from both the internal weapons bay and the external wing pylons. These upgrades will allow the aircraft to employ advanced precision guided weapons such as the joint direct attack munition, the joint air-to-surface stand- off missile, and the joint stand-off weapon. The committee understands that the MIL–STD–1760 provides a common interface between the weapons and the aircraft, and is used to transfer guidance information to the weapons located in the internal bay racks and on the external wing pylons.

Therefore, the committee recommends $77.4 million in PE 11113F, an increase of $6.0 million for accelerated integration of the MIL-STD–1760 into the internal weapons bay of the B–52.

B–52 stand-off jammer program

The budget request contained no funds in PE 64429F for the B–52 stand-off jammer (SOJ) program. The budget request also terminated the B–52 SOJ program in order to fund Air Force transformational activities in the remaining Future Years Defense Program (FYDP).

The committee notes that in PE 64429F, Congress appropriated $107.1 million in fiscal year 2006 for the B–52 SOJ program. The committee notes that current Air Force electronic attack requirements are being fulfilled by Marine Corps EA–6B platforms scheduled to be completely retired in 2012. Further, the committee understands the B–52 SOJ program was originally developed to fulfill future Air Force electronic attack requirements beginning in 2012 to mitigate the capability gap created by the retirement of the EA–6B.

Consequently, the committee is deeply concerned that the Air Force will not have a replacement electronic attack capability once the Marine Corps EA–6B platform is retired, and strongly encourages the Secretary of the Air Force to reexamine the decision to cancel the B–52 SOJ program in light of this capability gap.

Biostatic protective clothing

The budget request contained $1.0 million in PE 48011F for agile combat support, but included no funds for development of biostatic protective clothing.

The committee understands that the capabilities of biostatic protective clothing include a thermally efficient wicking concept made with an extruded continuous filament yarn which has the potential for superior moisture management. The committee is aware that

early biostatic protective clothing prototypes have been tested and found to resolve some shortcomings associated with clothing used by those military personnel currently deployed to combat theaters of operation.

Consequently, the committee recommends $3.9 million in PE 48011F, an increase of $2.9 million for biostatic protective clothing.

C–130 airlift squadrons

The budget request contained $248.3 million in PE 41115F for C–130 development programs, but included no funds for development of the automated inspection, repair, corrosion and aircraft tracking (AIRCAT) system.

The AIRCAT system develops tools for collection and analysis of data for the purpose of instituting a condition-based maintenance (CBM) program on the C–130 aircraft. The committee understands CBM techniques are used in many aviation activities because they improve fleet maintenance planning and management, improve safety through a better awareness of flight worthiness, and reduce total ownership costs. The committee notes that Congress appropriated $2.5 million for the AIRCAT system for fiscal year 2006, and believes that this program should be continued.

Accordingly, the committee recommends $255.4 million in PE 41115F for C–130 development programs, an increase of $7.1 million for the AIRCAT system.

Combatant commanders' integrated command and control system

The budget request contained $50.9 million in PE 35906F for the combatant commanders' integrated command and control system (CCIC2S).

The committee believes that the modernization and integration of the command and control systems at Cheyenne Mountain, Colorado is critical to adequately support the North American Aerospace Defense Command, U.S. Northern Command, and U.S. Strategic Command. However, the committee is aware of management deficiencies in the program that are resulting in a significant cost overrun and an undefined delivery schedule.

Therefore, the committee directs the Secretary of Defense to maintain essential operation and maintenance activities, and limit future investment to only the developmental activities deemed essential to national security needs. Prior to proceeding with further development, the committee directs the Secretary of Defense to ensure that the Department of Defense (DOD) approves an acquisition approach that designates the program as a major automated information system. In addition, the committee directs the Secretary of Defense to submit a report by March 1, 2007, to the congressional defense committees that includes an affordability assessment to demonstrate that the program's resource estimates will be available and realistic in terms of DOD's overall long-range modernization priorities and investment plans, an economic analysis that assesses the lifecycle costs and benefits of the program, and an independent estimate of program lifecycle cost.

The committee recommends no funding in PE 35906F for CCIC2S, a decrease of $50.9 million.

Distributed mission interoperability toolkit program

The budget request contained $0.2 million in PE 64740F for development of integrated command and control applications, but included no funds for the distributed mission interoperability toolkit (DMIT) program.

The DMIT is a suite of software tools that enables on-demand, trusted, interoperability among and between air mission command, control, communication, computer and intelligence (C4I) systems and mission simulator models. The committee understands that the DMIT program leverages best practices from the commercial sector including the use of open architectures, existing and emerging web standards, and state-of-the-art technologies to provide a more efficient translation of air mission tasks from C4I systems into a format compatible with mission simulator formats. The committee notes that Congress appropriated an increase of $5.0 million in fiscal year 2006 for this purpose, and believes that the DMIT program should be continued in fiscal year 2007.

Accordingly, the committee recommends $5.2 million in PE 64740F, an increase of $5.0 million for continuation of the DMIT program.

Engineering tool improvement program

The budget request contained $106.1 million in PE 62500F for multi-disciplinary space technology, but included no funding for the engineering tool improvement program (ETIP).

The committee notes Congress has appropriated funding for the ETIP since fiscal year 2003. The ETIP effort provides the Air Force Research Laboratory with the ability to rapidly assess system viability and mission suitability by performing design and analysis of aerospace vehicles and propulsion technologies during the design phase.

The committee recommends an increase of $3.0 million in PE 62500F for ETIP.

High accuracy network determination system

The budget request contained $6.0 million in PE 63444F Maui space surveillance system, but included no funds for the high accuracy network determination system (HANDS).

The committee believes that low cost, innovative technologies are needed to address critical space situational awareness needs and notes that HANDS research is leading to a networked, operationally secure, multi-sensor system, which could obtain highly accurate observations of space objects and reduce the potential for collisions of space objects by reducing errors in the current space-object maintenance catalog.

The committee recommends $11.0 million for PE 63444F, an increase of $5.0 million for HANDS.

High modulus polyacrylonitrile carbon fiber

The budget request contained $111.1 million in PE 62102F for materials, but included no funds for high modulus polyacrylonitrile (PAN) carbon fiber.

The committee notes that high modulus PAN carbon fiber research and development is in line with and supportive of the Air Force's initiatives for advanced composite parts development and

carbon fiber sourcing. High modulus PAN carbon fiber is in demand by composite manufacturers for the production of military aircraft, as well as components of missiles and satellites where there is a need for material stiffness at a relatively low weight. Currently only one manufacturer of high modulus PAN carbon fiber exists and is located overseas. The committee urges the Department of Defense to secure a domestic-based manufacturer of high modulus PAN carbon fiber.

Therefore, the committee recommends an increase of $3.0 million in PE 62102F for the development and certification of a domestic-based manufacturer of high modulus PAN carbon fiber.

Human systems integration

The budget request included $92.9 million in PE 62202F for human effectiveness applied research, but contained no funding for improved performance research integration (IMPRINT).

The committee supports further development of IMPRINT in support of the airman performance integration (AIRPRINT) program and in conjunction with other Department of Defense human systems integration efforts.

Therefore, the committee recommends an increase of $3.0 million in PE 62202F for IMPRINT to further develop human systems integration modeling throughout the Department.

Interactive avionics roadmap

The budget request contained no funds in PE 72239F for avionics component improvement programs, and other program elements included no funds for development of the interactive avionics roadmap.

The interactive avionics roadmap is a tool that provides program managers with real-time, internet web-based data that is used to continually monitor and forecast program requirements. The interactive avionics roadmap would enable program managers to monitor changes as they occur and implement mitigation alternatives as required on a real-time basis. The committee understands that existing roadmap documents are heavily manpower dependent, and are subject to degradation as changes in program requirements are encountered; and the committee believes that the use of interactive avionics roadmaps would automate data feeds, reduce costs for avionics systems, and enhance the ability of program managers to more proactively manage and prioritize budgets based on more up-to-date system requirements.

Therefore, the committee recommends $2.0 million in PE 72239F, an increase of $2.0 million for development of the interactive avionics roadmap.

Joint advanced global strike demonstration

The budget request contained $14.7 million in PE 65860F for the Rocket Systems Launch program, but included no funds for prompt global strike development.

The committee notes that the 2006 Quadrennial Defense Review called for improved capability for prompt, conventional global strike. The committee is aware that U.S. Strategic Command has approved the concept of a joint advanced global strike (JAGS) demonstration that would use ballistic missile boosters currently in the

inventory, as vehicles for a new land-based prompt global strike capability. The committee notes that the Rocket Systems Launch program can use its excess ballistic missile assets to develop a land-based prompt conventional global strike capability.

The committee recommends $26.7 million in PE 65860F, an increase of $12.0 million for the JAGS demonstration program.

Joint strike fighter development

The budget request contained $2.0 billion in PE 64800F for the Department of the Air Force's development of the joint strike fighter (JSF), also known as the F–35, but included no funds for research and development of a second aircraft tire source for the JSF and other existing combat aircraft, or for development of an alternate JSF engine. The committee notes that the budget request also includes $2.0 billion in PE 64800N for the Department of the Navy's development of JSF.

The committee understands that aircraft tires are a high-demand, critical component needed to sustain high military operational tempos, and believes that a second JSF tire source should be established in the United States to ensure that a reliable and sustainable source of aircraft tires are available to meet requirements for the JSF and other aircraft. Consequently, the committee recommends an increase of $1.5 million for research and development of a second tire source for the JSF and other existing combat aircraft. The committee expects that these funds will be used for the development of advanced reinforced materials and new materials for combat aircraft tires.

The JSF alternate engine program is developing the F136 engine which would provide an alternative to the currently-planned F135 engine. In the committee report (H. Rept. 109–89) accompanying the National Defense Authorization Report for Fiscal Year 2006, the committee expressed its belief that a two-engine source for the single-engine JSF would be the most cost effective and operationally effective engine solution during the JSF's service life, and is disappointed that the budget request did not include funds for development of an alternate JSF engine beyond fiscal year 2006. During a hearing held by the Subcommittee on Tactical Air and Land Forces on March 16, 2006, the Under Secretary of Defense for Acquisition, Technology, and Logistics testified, "While the benefits of a second supplier are undeniable, our judgment is that those benefits are not worth the substantial financial cost of a second supplier." To confirm those judgments, the committee requested that the Government Accountability Office (GAO) witness at the hearing review and report on the Department of Defense's analysis that resulted in the judgment to terminate the JSF alternate engine program. On April 12, 2006, the GAO witness reported to the committee that the "Department of Defense's quantitative analysis focuses only on potential savings for engine acquisition and does not appear to fully examine potential savings that may be possible when competition exists for providing support for maintenance and operations over the lifecycle of the engine." The committee concurs with GAO's observation, and believes that the JSF alternate engine program should continue until the Department of Defense fully analyzes potential costs and savings resulting from competition over the JSF engine's lifecycle.

Accordingly, the committee recommends an increase of $408.0 million to continue the JSF alternate engine program for fiscal year 2007. Additionally, the committee recommends a provision (section 211) that would require that the Department of the Navy and the Department of the Air Force obligate not less than $408.0 million, of the funds authorized to be appropriated for the system development and demonstration program for the Joint Strike Fighter, for continued development of an alternate engine for the Joint Strike Fighter. The committee also recommends a provision (section 215) that would require both the Secretary of Defense, acting through the Department of Defense Cost Analysis Improvement Group, and the Comptroller General to conduct independent analyses of the JSF alternate engine program and provide a report to the congressional defense committees by March 15, 2007.

In total, the committee recommends $2.4 billion in PE 64800F for the Department of the Air Force's portion of JSF development, an increase of $409.5 million.

KC–135 aerial refueling aircraft recapitalization program

The budget request contained $203.9 million in PE 41221F for the KC–135 aerial refueling aircraft recapitalization program (KC–X).

The committee fully supports recapitalization of the KC–135 aerial refueling fleet. The committee notes that a system development and design (SDD) contract would not likely be awarded until the end of fiscal year 2007, in accordance with the estimated acquisition schedule of the Air Force. Further, Congress appropriated $100.0 million in fiscal year 2005 for the Tanker Replacement Transfer Fund, and $97.8 million in fiscal year 2006 for the KC–X program, of which only $10.2 million has been obligated thus far. The committee understands that approximately $70.0 million is required to execute an SDD contract in fiscal year 2007. The committee believes the unobligated balance of $187.6 million should be sufficient to support funding requirements for the KC–X program in fiscal year 2007.

Therefore, the committee recommends $152.4 million in PE 41221F, a decrease of $51.5 million for the KC–X program.

Large aircraft countermeasures system for AC–130U aircraft

The budget request contained $34.9 million in PE 41134F for development and integration of the large aircraft countermeasures (LAIRCM) system on various airlift and tanker aircraft, but included no funds to integrate the LAIRCM system on the AC–130U aircraft.

The AC–130U is a heavily-armed aircraft which uses side-firing weapons integrated with sensor, navigation, and fire control systems to provide precise firepower for close air support, air interdiction and force protection missions. The LAIRCM system, which is planned for integration on various airlift and tanker aircraft, provides a capability to detect, track, jam and counter incoming surface-to-air, infra-red guided missiles. The committee notes that the Air Force Chief of Staff has included the integration of the LAIRCM system on the Air Force Special Operations Command's (AFSOC) HC–130 and MC–130 aircraft among his top unfunded

priorities for fiscal year 2007, and believes that the LAIRCM system should be integrated into AFSOC's AC–130U fleet.

Accordingly, the committee recommends $49.9 million in PE 41134F, an increase of $15.0 million to integrate the LAIRCM system on the AC–130U aircraft.

Laser peening fatigue life extension

The budget request contained $36.7 million in PE 78011F for various manufacturing technology programs, but included no funds for testing, demonstration, and evaluation of laser peening technology for military aircraft landing gear.

The committee understands that the laser peening process has the potential to strengthen metals thereby extending the life and improving the fatigue strength, while also providing increased resistance to corrosion and cracking. The committee further understands that the laser peening process is used in the commercial aviation industry and has shown promise in improving the fatigue strength of commercial aircraft landing gear. Based on commercial experience, the committee believes that the laser peening process also has the potential to improve fatigue strength for military landing gear systems.

Consequently, the committee recommends an increase of $3.0 million in PE 78011F for the testing, demonstration and evaluation of laser peening technology as a metal fatigue prevention tool to extend the life of military aircraft landing gear.

Low emission hybrid electric engine propulsion

The budget request contained $10.6 million in PE 78611F for support systems development, but included no funds for the testing of low emission and fuel efficient hybrid electric engine propulsion systems for Air Force heavy tactical wheeled vehicles such as aviation refueling trucks.

The committee is aware that existing Air Force aviation refueling trucks operate over short distances in a manner that causes high fuel use, high emissions and decreased engine life. The committee notes that a first generation hybrid electric vehicle has been delivered to the Air Force for testing and understands this technology would potentially deliver a better than 40 percent improvement in fuel efficiency.

The committee recommends $13.6 million in PE 78611F, an increase of $3.0 million for the continued refinement in system development and demonstration of low emission and fuel efficient hybrid electric engine propulsion for use by aviation refueling trucks.

Major test and evaluation investment

The budget request contained $58.5 million in PE 64759F for major test and evaluation investment, but included limited funds for acquisition of hardware and software for data management and archiving systems for the effective collection, management, distribution, and long-term availability of flight test data.

The committee recommends an increase of $5.8 million in PE 64759F for an enterprise test data management system at the Air Force Flight Test Center, Edwards Air Force Base, California, and an additional increase of $3.0 million in PE 64759F for hardware

and software to improve the flight test ground infrastructure and tools at the Air Armament Center, Eglin Air Force Base, Florida.

Materials

The budget request contained $111.1 million in PE 62102F for materials applied research, but included no funds for research for electronic type-specific buckytubes.

The committee recognizes the national need for electronic type-specific buckytubes for military, intelligence, and homeland security applications. Therefore, the committee believes there is a need to ensure the continual improvements of capabilities in these areas.

The committee recommends an increase of $9.4 million in PE 62102F for development of electronic type-specific buckytubes.

Measurement and signature intelligence (MASINT) visualization tools program

The budget request contained $119.2 million in PE 62702F for command, control and communications, but included no funds for the measurement and signature intelligence (MASINT) visualization tools program.

The committee notes that the (MASINT) visualization tools program would integrate measurement and signature intelligence into existing and future information processing architectures so that information could be managed and displayed in real-time without processing delays.

The committee recommends $125.2 million in PE 62702F, an increase of $6.0 million for the accelerated development of the MASINT visualization tools program.

Metals affordability initiative

The budget request included $48.9 million in PE 63112F for advanced materials for weapon systems.

The committee supports the continued government-industry collaboration provided through the Metals Affordability Initiative, providing significant improvements in the manufacturing of specialty metals for aerospace applications for the private and government sectors of the aerospace industry.

The committee recommends an additional $11.3 million in PE 63112F for the Metals Affordability Initiative.

Nanocrystalline diamond coatings

The budget request included $111.1 million in PE 62102F for materials applied research and $64.7 million in PE 63003A for aviation advanced technology, but included no funds for nanocrystalline diamond coatings.

The committee understands that a nanocrystalline diamond coating has been developed with characteristics that offer increased durability, transparency, and protective characteristics to include anti-icing and abrasion protection for aircraft surfaces.

The committee recommends an additional $2.9 million in PE 62102F and $2.9 million in PE 63003A for development and application of nanocrystalline coatings on radome and high wear aircraft components for testing.

Operationally responsive space

The budget request contained $35.6 million in PE 64857F for operationally responsive space.

The committee recognizes that the Department of Defense recently began developing an affordable, rapid reaction combination of spacelift, launch control, and satellites in an effort to provide responsive tactical satellite capabilities to the warfighter. The committee commends this effort and believes that continued pursuit of low-cost, responsive tactical capabilities can fill a niche capability requested by the warfighter and lead to long-term benefits by advancing technology, enhancing the skills of the space cadre, and broadening the space industrial base.

The committee recommends $55.6 million in PE 64857F, an increase of $20.0 million for operationally responsive space.

Radio frequency identification tag rapid adoption initiative, phase 2

The budget request contained $36.7 million in PE 78011F for industrial preparedness, but contained no funding for the Frequency Identification Tag Rapid Adoption Initiative, Phase 2.

The committee believes that great efficiencies can be gained, and more importantly, capability delivered rapidly to the front line troops, through a systemic adoption of radio frequency identification tagging within the Department of Defense's logistics enterprise. Given the disparate logistics systems throughout the Department, no single entity is focused on the system wide adoption of this promising technology.

The committee recommends an increase of $3.0 million in PE 78011F for the Radio Frequency Identification Tag Rapid Adoption Initiative, Phase 2.

Small diameter bomb

The budget request included $224.2 million in PE 64240F for the B–2 advanced technology bomber, but contained no funds for the integration of the small diameter bomb.

The committee recognizes the unique attributes of the B–2 bomber as a stealthy, long-range delivery platform and supports further development of the fleet as a means to address the evolving nature of potential threats.

The committee recognizes the potential benefit of maintaining a long-range delivery system with the capacity to carry heavy and medium, as well as relatively lightweight munitions. The committee is encouraged with the potential capabilities of the 250-pound small diameter bomb and intrigued with the possibility of coupling this technology with the B–2 program.

Therefore, the committee recommends an increase of $16.0 million in PE 64240F to integrate the small diameter bombs aboard the B–2 bomber.

Space-based radar

The budget request contained $266.4 million in PE 63858F for space-based radar.

The committee is aware that the Executive Agent for Space of the Department of Defense is taking steps to restructure the space-based radar program in order to address concerns about the afford-

ability of space-based radar, and is evaluating the potential to develop on-orbit demonstration satellites to validate technology maturity and costs. The committee commends the Department for this effort and encourages continued progress towards an effective and affordable space radar capability. However, the committee believes that a 171 percent increase over fiscal year 2006 funded level is unwarranted as the space radar program does not have a finalized development approach or a concept of operations.

The committee recommends $236.4 million in PE 63858F, a decrease of $30.0 million for space-based radar.

Space control test capabilities

The budget request contained $47.3 million in PE 64421F for counterspace systems, but contained no funds for space control test capabilities (SCTC).

The committee is aware that the integration of new space control systems and requirements into the existing command and control architecture requires significant objective analysis in order to optimize systems effectiveness and prevent degradation or failure of the command and control infrastructure. The committee believes that SCTC provides a method of assessing the effects of loading data from newly developed systems into the existing command and control infrastructure, thereby providing a test capability prior to development of system requirements.

The committee recommends $52.3 million in PE 64421F, an increase of $5.0 million for space control test capabilities.

Space technology

The budget request contained $85.6 million in PE 62601F for space technology, but contained no funds for elastic memory composites or for deployable structures for space.

The committee notes space-qualified elastic memory composite materials can significantly improve the reliability of on-orbit spacecraft deployment mechanisms and may enable composite tank structures for spacecraft applications.

The committee believes that continued improvement in spacecraft deployment systems is necessary to achieve the large apertures needed to support enhanced imaging and improved space situational awareness requirements.

The committee recommends $91.6 million for PE 62601F, an increase of $6.0 million, to include $3.0 million for elastic memory composites and $3.0 million for deployable space structures.

Tactical automated security system advanced communications module

The budget request contained $0.2 million in PE 63287F for physical security equipment, but included no funds for the tactical automated security system (TASS) advanced communications module.

TASS systems are widely deployed by the U.S. Air Force and other services supporting current operations and provide both physical security and force protection. The committee is aware the current communications element of TASS has limited bandwidth capability and is subject to obsolescence due to age.

The committee recommends $3.2 million in PE 63287F, an increase of $3.0 million to complete the development of the TASS advanced communications module.

Transformational satellite communications system

The budget request contained $867.1 million in PE 63845F for the transformational satellite communications systems (TSAT).

The committee is aware that the TSAT program has been restructured into a block-build approach that will reduce the complexity and capacity of the first block of satellites in an effort to reduce development and integration risk and increase schedule confidence. While the committee believes this restructuring, along with budgeting TSAT to 80/20 cost confidence, is appropriate based on historical performance of the TSAT program, the committee is concerned that the two-fold increase in the TSAT budget can not be prudently executed.

The committee recommends $787.1 million in PE 63845F, a decrease of $80.0 million for TSAT.

Winglets for in-service aircraft

The committee commends the Air Force in its efforts to increase aircraft fuel efficiency and decrease fuel consumption. The committee notes that initiatives such as re-engining aircraft, modifying in-flight profiles, and revising aircraft ground operations contribute to decreased fuel consumption and increased life-cycle savings.

The committee is aware that winglet technology exists for aircraft to increase fuel efficiency, improve take-off performance, increase cruise altitudes, and increase payload and range capability. The committee notes that winglets are currently used on commercial aircraft and result in a five to seven percent increase in fuel efficiency. On September 16, 1981, the National Aeronautics and Space Administration released the KC–135 Winglet Program Review on the incorporation of winglets for KC–135 aerial refueling aircraft. However, the Air Force concluded that the cost of adding winglets to the KC–135 did not provide sufficient payback in fuel savings or increased range to justify modification. Although the Air Force did conclude that modifying aircraft with winglets could increase fuel efficiency, the Air Force determined that re-engining the KC–135 aircraft produced a greater return on investment. The committee believes that incorporating winglets on military aircraft could increase fuel efficiency on certain platforms and that the Air Force should reexamine incorporating this technology onto its platforms.

Therefore, the committee directs the Secretary of the Air Force to provide a report to the congressional defense committees by March 1, 2007, examining the feasibility of modifying Air Force aircraft with winglets. The report shall include a cost comparison analysis of the cost of winglet modification compared to the return on investment realized over time for each airlift, aerial refueling, and intelligence, surveillance, and reconnaissance aircraft in the Air Force inventory; the market price of aviation fuel at which incorporating winglets would be beneficial for each Air Force platform; all positive and negative impacts to aircraft maintenance and flight operations; and investment strategies the Air Force could im-

plement with commercial partners to minimize Air Force capital investment and maximize investment return.

DEFENSE-WIDE RESEARCH, DEVELOPMENT, TEST, AND EVALUATION

Overview

The budget request contained $20.8 billion for Defense-wide research, development, test, and evaluation (RDT&E).

The committee recommends $20.8 billion, a decrease of $46.9 million to the budget request.

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
		RESEARCH, DEVELOPMENT, TEST & EVAL, DEFENSEWIDE					
		BASIC RESEARCH					
06011010BR	1	Defense Research Sciences	5,000				5,000
0601101E	2	Defense Research Sciences	150,690				150,690
0601111D8Z	3	Government/Industry Cosponsorship of University Research					
0601114D8Z	4	Defense Experimental Program to Stimulate Competitive Research	9,532				9,532
0601120D8Z	5	National Defense Education Program	19,532				19,532
0601384BP	6	Chemical and Biological Defense Program	99,182	10,000			109,182
0601384BP		Basic Research Initiative			10,000		
		TOTAL, BASIC RESEARCH	**283,936**	**10,000**	**10,000**		**293,936**
		APPLIED RESEARCH					
0602000D8Z	7	Insensitive Munitions-Exploratory Development	10,447				10,447
0602227D8Z	8	Medical Free Electron Laser	10,255	5,000			15,255
0602227D8Z		Program Increase			5,000		
0602228D8Z	9	Historically Black Colleges and Universities (HBCU) Science	14,423				14,423
0602234D8Z	10	Lincoln Laboratory Research Program	28,975				28,975
0602301E	11	Information & Communications Technology	242,852				242,852
0602304E	12	Cognitive Computing Systems	220,085				220,085
0602383E	13	Biological Warfare Defense	112,242	12,000			124,242
0602383E		Asymmetrical Protocols for Biological Defense Enhancement			12,000		
0602384BP	14	Chemical and Biological Defense Program	280,422	(5,000)			275,422
0602384BP		Low Cost Collective Protection Shelters			5,000		
0602384BP		Transformational Medical Technology Initiative				(30,000)	

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(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0602384BP		Applied Research Initiative			20,000		
0602702E	15	Tactical Technology	383,680				383,680
0602715E	16	Materials and Biological Technology	297,277				297,277
0602716BR	17	WMD Defeat Technology	213,152				213,152
0602716E	18	Electronics Technology	246,978				246,978
0602717BR	19	WMD Defense Technologies	105,021				105,021
0602787D8Z	20	Medical Technology					
1160401BB	21	Special Operations Technology Development	12,698	20,000			32,698
1160401BB		Global Observer			10,000		
1160401BB		Angel Fire			10,000		
1160407BB	22	SOF Medical Technology Development	2,293				2,293
		TOTAL, APPLIED RESEARCH	**2,180,800**	**32,000**	**62,000**	**(30,000)**	**2,212,800**
		ADVANCED TECHNOLOGY DEVELOPMENT					
0603002D8Z	23	Medical Advanced Technology					
0603121D8Z	24	SO/LIC Advanced Development	30,575				30,575
0603122D8Z	25	Combating Terrorism Technology Support	65,768	24,000			89,768
0603122D8Z		Cooperative Prototyping			18,000		
0603122D8Z		UAS Avionics Upgrades			4,000		
0603122D8Z		Portable Armor Wall System			2,000		
0603160BR	26	Counterproliferation Initiatives - Proliferation Prevention and Defense	104,582				104,582
0603175C	27	Ballistic Missile Defense Technology	206,676	(32,700)			173,976
0603175C		High Altitude Airship				(40,700)	
0603175C		Net Centric Airborne Defense Equipment			8,000		
0603225D8Z	28	Joint DoD-DoE Munitions Technology Development	16,862				16,862

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(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0603286E	29	Advanced Aerospace Systems	115,829	(11,200)			104,629
0603286E		Program Decrease				(11,200)	
0603287E	30	Space Programs and Technology	254,913	5,000			259,913
0603605F		Improved Suborbital Space Operations			5,000		
0603384BP	31	Chemical and Biological Defense Program	207,114	(10,000)			197,114
0603384BP		Transformational Medical Technology Initiative				(20,000)	
0603384BP		Advanced Technology Development Initiative			10,000		
0603400D8Z	32	J-UCAS					
0603648D8Z	33	Joint Electronic Advanced Technology	9,400				9,400
0603648D8Z	34	Joint Capability Technology Demonstrations	35,553				35,553
0603711D8Z	35	Joint Robotics Program/Autonomous Systems	7,700				7,700
0603712S	36	Logistics R&D Technology Demonstrations	23,437	11,000			34,437
0603712S		Emerging Critical Interconnection Technology			10,000		
0603712S		Connectory Expansion for Rapid ID of Technology Sources			1,000		
0603713S	37	Distribution Process Owner Technology Development and Implementation	15,215				15,215
0603716D8Z	38	Strategic Environmental Research Program	67,149				67,149
0603720S	39	Microelectronic Technology Development and Support		14,000			14,000
0603720S		Super Lattice Nanotechnology			6,000		
0603720S		Surface Radar Technology			8,000		
0603727D8Z	40	Joint Warfighting Program	10,641				10,641
0603739E	41	Advanced Electronics Technologies	248,627				248,627
0603750D8Z	42	Advanced Concept Technology Demonstrations	158,334				158,334
0603755D8Z	43	High Performance Computing Modernization Program	175,313				175,313
0603760E	44	Command, Control and Communications Systems	232,489				232,489
0603764E	45	Land Warfare Technology / FCS	48,975				48,975
0603765E	46	Classified DARPA Programs	151,598				151,598

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Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0603766E	47	Network-Centric Warfare Technology	174,276				174,276
0603767E	48	Sensor Technology	205,519				205,519
0603768E	49	Guidance Technology	157,367				157,367
0603769DSE	50	Distributed Learning Advanced Technology Development	14,918				14,918
0603781D8Z	51	Software Engineering Institute	26,594				26,594
0603805S	52	Dual Use Technology					
0603826D8Z	53	Quick Reaction Special Projects/Challenge Program (IFF)	107,782				107,782
0603828D8Z	54	Joint Experimentation	115,684				115,684
0603832D8Z	55	Joint Wargaming Simulation Management Office	36,179				36,179
0603941D8Z	56	Test & Evaluation Science & Technology	39,939				39,939
0603942D8Z	57	Technology Link	6,822	2,500			9,322
0603942D8Z		Homeland Defense Technology Transfer			2,500		
0605160D8Z	58	Counterproliferation Support					
1160402BB	59	Special Operations Advanced Technology Development	80,402	12,500			92,902
1160402BB		Foxhound Arabic Software			4,000		
1160402BB		Modular Computing			5,000		
1160402BB		Surveillance Augmentation Vehicle - SAVIOR			3,500		
		TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT	**3,152,232**	**15,100**	**87,000**	**(71,900)**	**3,167,332**
		ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES					
0603161D8Z	60	Nuclear and Conventional Physical Security Equipment RDT&E	33,890				33,890
0603228D8Z	61	Physical Security Equipment					
0603527D8Z	62	RETRACT LARCH	22,383				22,383
0603709D8Z	63	Joint Robotics Program	12,210	3,000			15,210
0603709D8Z		Machine Vision and Mapping Software for Autonomous Movement			3,000		

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(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0603714D8Z	64	Advanced Sensor Applications Program	18,820				18,820
0603851D8Z	65	Environmental Security Technical Certification Program	28,841				28,841
0603879C	66	Advanced Concepts, Evaluations And Systems					
0603881C	67	Ballistic Missile Defense Terminal Defense Segment	1,038,310				1,038,310
0603882C	68	Ballistic Missile Defense Midcourse Defense Segment	2,876,972	(35,800)			2,841,172
0603882C		Midcourse Concurrent Test and Operations			20,000		
0603882C		Block 2010 Third Site				(55,800)	
0603883C	69	Ballistic Missile Defense Boost Defense Segment	631,616				631,616
0603884BP	70	Chemical and Biological Defense Program	73,111				73,111
0603884C	71	Ballistic Missile Defense Sensors	514,510				514,510
0603886C	72	Ballistic Missile Defense System Interceptor	405,508	(100,000)			305,508
0603886C		Program Decrease				(100,000)	
0603888C	73	Ballistic Missile Defense Test & Targets	591,911				591,911
0603889C	74	Ballistic Missile Defense Products	506,840				506,840
0603890C	75	Ballistic Missile Defense Systems Core	473,077	10,000			483,077
0603890C		Aegis Information Assurance and Systems Integration			10,000		
0603891C	76	Special Programs - MDA	374,532				374,532
0603892C	77	AEGIS BMD	1,031,874	40,000			1,071,874
0603892C		SM-3 Interceptors			20,000		
0603892C		S Band Radar Development			10,000		
0603892C		Open Architecture Program Acceleration			10,000		
0603893C	78	Space Tracking & Surveillance System	390,585				390,585
0603894C	79	Multiple Kill Vehicle	164,975	(65,000)			99,975
0603894C		Program Decrease				(65,000)	
0603920D8Z	80	Humanitarian Demining	14,489				14,489
0603923D8Z	81	Coalition Warfare	5,878				5,878

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0604016D8Z	82	Department of Defense Corrosion Program	4,966				4,966
0604400D8Z	83	J-UCAS					
0604648D8Z	84	Joint Capability Technology Demonstrations (L-36)	3,047				3,047
0604787D8Z	85	Joint Systems Integration Command (JSIC)	20,755				20,755
0604828D8Z	86	Joint FIRES Integration and Interoperability Team	16,782				16,782
0605017D8Z	87	Reduction Of Total Ownership Cost	25,289				25,289
0303191D8Z	88	Joint Electromagnetic Technology (JET) Program	3,672				3,672
		TOTAL, ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES	**9,284,843**	**(147,800)**	**73,000**	**(220,800)**	**9,137,043**
		SYSTEM DEVELOPMENT & DEMONSTRATION					
0604051D8Z	89	Defense Acquisition Challenge Program (DACP)	29,500	4,000			33,500
0604051D8Z		DD(X), CVN Proposals			4,000		
0604161D8Z	90	Nuclear and Conventional Physical Security Equipment RDT&E	9,277				9,277
0604384BP	91	Chemical and Biological Defense Program	212,072				212,072
0604618D8Z	92	MANPADS Defense Program					
0604709D8Z	93	Joint Robotics Program	6,004				6,004
0604764K	94	Advanced IT Services Joint Program Office (AITS-JPO)	9,392				9,392
0604771D8Z	95	Joint Tactical Information Distribution System (JTIDS)	8,177				8,177
0605013BL	96	Information Technology Development	11,005				11,005
0605015BL	97	Information Technology Development-Standard Procurement System					
0605016D8Z	98	Financial Management System Improvements					
0605018DSE	99	Defense Integrated Military Human Resources System (DIMHRS)					
0605019D8Z	100	Acquisition Domain					
0605020BTA	101	Business Transformation Agency R&D Activities	140,245	(50,000)			90,245
0605020BTA		Program Decrease				(50,000)	

Title II– RESEARCH, DEVELOPMENT, TEST AND EVALUATION
(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0605140D8Z	102	Trusted Foundry	42,522				42,522
0605648D8Z	103	Defense Acquisition Executive (DAE) Pilot Program	6,015				6,015
0303129K	104	Defense Message System	11,202				11,202
0303140K	105	Information Systems Security Program					
0303141K	106	Global Combat Support System	18,556				18,556
0303158K	107	Joint Command and Control Program (JC2)	47,031				47,031
0305840K	108	Electronic Commerce					
0305840S	109	Electronic Commerce					
0901200D8Z	110	BMMP Domain Management and Systems Integration					
		TOTAL, SYSTEM DEVELOPMENT & DEMONSTRATION	**550,998**	**(46,000)**	**4,000**	**(50,000)**	**504,998**
		RDT&E MANAGEMENT SUPPORT					
0603704D8Z	111	Special Technical Support					
0603757D8Z	112	Joint Training Transformation (T2)	72,897	4,000			76,897
0603757D8Z		Joint Simulation Linking Campaign Analysis to Warfighter Mission Rehearsal			4,000		
0603858D8Z	113	Unexploded Ordnance Detection and Clearance					
0604140D8Z	114	Capital Asset Management System-Military Equipment					
0604774D8Z	115	Defense Readiness Reporting System (DRRS)	10,322				10,322
0604875D8Z	116	Joint Systems Architecture Development	9,390				9,390
0604940D8Z	117	Central Test and Evaluation Investment Development (CTEIP)	130,290				130,290
0604943D8Z	118	Thermal Vicar	7,492				7,492
0605100D8Z	119	Joint Mission Environment Test Capability (JMETC)	10,600				10,600
0605104D8Z	120	Technical Studies, Support and Analysis	30,339	1,000			31,339
0605104D8Z		NDU Pilot Program			1,000		
0605110BR	121	Critical Technology Support					

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(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0605110D8Z	122	USD (A&T) --Critical Technology Support	2,029	800			2,829
0605110D8Z		Wisconsin Project - International Export Control Center			800		
0605114D8Z	123	BLACK LIGHT					
0605117D8Z	124	Foreign Material Acquisition and Exploitation	38,253				38,253
0605123D8Z	125	Interagency Export License Automation					
0605124D8Z	126	Defense Travel System					
0605126J	127	Joint Theater Air and Missile Defense Organization	52,486				52,486
0605128D8Z	128	Classified Program USD(P)					
0605130D8Z	129	Foreign Comparative Testing	31,995				31,995
0605161D8Z	130	Nuclear Matters - Physical Security	4,285				4,285
0605170D8Z	131	Support to Networks and Information Integration	10,990				10,990
0605200D8Z	132	General Support to USD (Intelligence)	5,637				5,637
0605384BP	133	Chemical and Biological Defense Program	80,134				80,134
0605502BR	134	Small Business Innovation Research					
0605502C	135	Small Business Innovative Research - MDA					
0605502D8Z	136	Small Business Innovative Research					
0605502E	137	Small Business Innovative Research					
0605790D8Z	138	Small Business Innovative Research/Challenge Administration	2,073				2,073
0605798S	139	Defense Technology Analysis	5,577				5,577
0605799D8Z	140	Force Transformation Directorate	20,404	10,000			30,404
0605799D8Z		Project Sheriff			5,000		
0605799D8Z		Tactical Redirected Energy Initiative			5,000		
0605801KA	141	Defense Technical Information Center (DTIC)	51,929				51,929
0605803SE	142	R&D in Support of DoD Enlistment, Testing and Evaluation	9,348				9,348
0605804D8Z	143	Development Test and Evaluation	9,203				9,203
0605898E	144	Management Headquarters (Research and Development) DARPA	50,951				50,951

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Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0301555G	145	CLASSIFIED Programs					
0301556G	146	SPECIAL PROGRAM					
0303169D8Z	147	Information Technology Rapid Acquisition	5,090				5,090
0305193D8Z	148	Intelligence Support to Information Operations (IO)	14,128				14,128
0305193G	149	Intelligence Support to Information Operations (IO)					
0901585C	150	Pentagon Reservation	15,586				15,586
0901598C	151	Management Headquarters - MDA	87,389				87,389
0901598D8W	152	IT Software Dev Initiatives	1,412				1,412
		TOTAL, RDT&E MANAGEMENT SUPPORT	**770,229**	**15,800**	**15,800**		**786,029**
		OPERATIONAL SYSTEMS DEVELOPMENT					
0604130V	153	Defense Information System for Security (DISS)	35,439				35,439
0605127T	154	Partnership for Peace (PfP) Information Management System	1,521				1,521
0607384BP	155	Chemical and Biological Defense (Operational Systems Development)	7,035				7,035
0607828D8Z	156	Joint Integration and Interoperability	66,906				66,906
0204571J	157	JS Functional Capabilities Border	7,686				7,686
0208043J	158	Classified Programs	1,662				1,662
0208045K	159	C4I Interoperability	84,313				84,313
0208052J	160	Joint Analytical Model Improvement Program					
0301011G	161	Cryptologic Activities					
0301301L	162	General Defense Intelligence Program					
0301318BB	163	HUMINT (Controlled)					
0301398L	164	Management Headquarters GDIP, DIA					
0301555BB	165	Classified Programs					
0301556BB	166	SPECIAL PROGRAM					

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Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0302016K	167	National Military Command System-Wide Support	721				721
0302019K	168	Defense Info Infrastructure Engineering and Integration	34,007				34,007
0303126K	169	Long Haul Communications (DCS)	1,523				1,523
0303131K	170	Minimum Essential Emergency Communications Network (MEECN)	7,691				7,691
0303135G	171	Public Key Infrastructure (PKI)	14,240				14,240
0303136G	172	Key Management Infrastructure (KMI)	38,257				38,257
0303140D8Z	173	Information Systems Security Program	14,856				14,856
0303140G	174	Information Systems Security Program	404,337	7,000			411,337
0303140G		Polymorphic Encryption and Detection			4,000		
0303140D8Z		Accelerated Intelligence Analyst Education and Training			3,000		
0303149J	175	DISA Mission Support Operations	1,224				1,224
0303149J	176	C4I for the Warrior	3,556				3,556
0303149K	177	C4I for the Warrior	6,551				6,551
0303150K	178	Global Command and Control System	59,681				59,681
0303153K	179	Joint Spectrum Center	12,448				12,448
0303165K	180	Defense Collaboration Tool Suite (DCTS)					
0303170K	181	Net-Centric Enterprise Services (NCES)	28,630				28,630
0303610K	182	Teleport Program	14,424				14,424
0304210BB	183	Special Applications for Contingencies	11,302				11,302
0304345BQ	184	National Imagery and Mapping Program					
0305102BQ	185	Defense Imagery and Mapping Program					
0305125D8Z	186	Critical Infrastructure Protection (CIP)	12,422				12,422
0305127BZ	187	Foreign Counterintelligence Activities					
0305146BZ	188	Defense Joint Counterintelligence Activities	20,791				20,791
0305183L	189	Defense Human Intelligence (HUMINT) Program (DHIP)					
0305193L	190	Intelligence Support to Information Operations (IO)					

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Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
0305199D8Z	191	Net Centricity	8,746				8,746
0305202G	192	Dragon U-2					
0305206G	193	Airborne Reconnaissance Systems					
0305207G	194	Manned Reconnaissance Systems					
0305208BQ	195	Distributed Common Ground Systems					
0305208G	196	Distributed Common Ground/Surface Systems					
0305208K	197	Distributed Common Ground/Surface Systems	7,451				7,451
0305208L	198	Distributed Common Ground/Surface Systems					
0305880L	199	Combatant Command Intelligence Operations					
0305883L	200	Hard and Deeply Buried Target (HDBT) Intel Support					
0305884L	201	Intelligence Planning and Review Activities					
0305885G	202	Tactical Cryptologic Activities					
0305889G	203	Counterdrug Intelligence Support					
0305889L	204	Counterdrug Intelligence Support					
0307141G	205	NASS, IO Technology Integration & Tool Dev					
0307207G	206	Aerial Common Sensor (ACS)					
0708011S	207	Industrial Preparedness	18,748	3,000			21,748
0708011S		Lithium Battery Systems for Asset Tracking			3,000		
0708012S	208	Logistics Support Activities	2,912				2,912
0902298J	209	Management Headquarters (JCS)	3,090				3,090
1001018D8Z	210	NATO Joint STARS	41,670				41,670
1160279BB	211	Small Business Innovative Research/Small Bus Tech Transfer Pilot Prog					
1160403BB	212	Special Operations Aviation Systems Advanced Development	83,704				83,704
1160404BB	213	Special Operations Tactical Systems Development	45,241	13,000			58,241
1160404BB		Covert Wavelet Packet Modulation			4,400		
1160404BB		Dominant Vision			4,500		

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(Dollars in Thousands)

Account	Line	PROGRAM TITLE	FY 2007 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2007 Committee Authorization
1160404BB		Combat Assault Rifle			4,100		
1160405BB	214	Special Operations Intelligence Systems Development	29,011	5,000			34,011
1160405BB		METOC			5,000		
1160408BB	215	SOF Operational Enhancements	99,010	7,000			106,010
1160408BB		Miniaturized Tracking Devices			7,000		
1160421BB	216	Special Operations CV-22 Development					
1160425BB	217	Special Operations Aircraft Defense Systems	7,850				7,850
1160426BB	218	Operations Advanced Seal Delivery System (ASDS) Development	32,452	10,000			42,452
1160426BB		Program Increase			10,000		
1160427BB	219	Mission Training and Preparation Systems (MTPS)	1,782				1,782
1160428BB	220	Unmanned Vehicles (UV)	1,521				1,521
XXXXXXX	999	Classified	3,312,490	29,000			3,341,490
XXXXXXX		Program Increase			29,000		
		TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT	**4,586,901**	**74,000**	**74,000**		**4,660,901**
		TOTAL, RDT&E, DEFENSE WIDE	**20,809,939**	**(46,900)**	**325,800**	**(372,700)**	**20,763,039**
		OPERATIONAL TEST & EVAL, DEFENSE					
0603941D8Z	1	Test & Evaluation Science & Technology					
0604940D8Z	2	Central Test and Evaluation Investment Development (CTEIP)					
0605118D8Z	3	Operational Test and Evaluation	50,161				50,161
0605131D8Z	4	Live Fire Testing					
0605131OTE	5	Live Fire Test and Evaluation	11,245				11,245
0605804D8Z	6	Development Test and Evaluation					
0605814OTE	7	Operational Test Activities and Analyses	120,114				120,114
		TOTAL, OPERATIONAL TEST & EVAL, DEFENSE	**181,520**				**181,520**
		TOTAL, RESEARCH AND DEVELOPMENT	**73,156,008**	**908,570**	**2,282,350**	**(1,373,780)**	**74,064,578**

Items of Special Interest

Accelerated intelligence analyst education and training

The budget request contained no funds in PE 33140G within the information systems security program for intelligence analyst education and training.

The committee is aware that the defense intelligence community needs a new generation of intelligence analysts due to the emergence of new missions and the retirement of older analysts. The committee further understands that there are very few colleges and universities that provide organized degree programs that can lead to intelligence analyst certification in preparation for subsequent entry into the defense intelligence analyst career field. The lack of such programs is compounded by the lengthy security clearance process, making it more challenging to develop a qualified analyst pool.

The committee recommends an increase of $3.0 million in PE 33140G for the National Security Agency to establish a process to identify those college and university curriculums that may lead to intelligence analyst certification. The committee also recommends this funding be used to identify those security clearance eligible students enrolled in such programs who may also be interested in pursuing a career as an intelligence analyst.

Advanced data encryption technology

The budget request contained $404.3 million in PE 33140G for the information systems security program, but included no funding for advanced data encryption technology.

The committee supports the Department of Defense's (DOD) increased emphasis on information assurance programs in the budget request, but believes that more should be done to address future cyber security threats. The committee is concerned that the proliferation of super computers around the globe renders DOD systems vulnerable to cyber attack, and believes that the Department should pursue the development and deployment of polymorphic encryption and decryption technology to provide for more secure computer and data systems.

The committee recommends an increase of $4.0 million in PE 33140G for the development of the polymorphic encryption and detection protocol.

Advanced SEAL Delivery System

The budget request contained $32.5 million in PE 1160426BB for advanced SEAL delivery systems development, but included no funds for a new design competition.

The committee understands that the Department of Defense recently cancelled the advanced SEAL delivery system (ASDS) due to its performance and reliability to date. The committee believes a new design competition will ensure that the most current technologies are incorporated into future ASDS designs and will provide valuable information for future decisions regarding the ASDS program.

The committee recommends $42.5 million in PE 1160426BB for advanced SEAL delivery systems development, an increase of $10.0 million for a new design competition.

Advanced surface radar technologies

The budget request contained no funds in PE 63720S for advanced surface radar technologies (ASuRT).

The ASuRT program will focus on the development and adaptation of electronic components for application in the Navy's next-generation surface ship radar systems. The committee notes that future theater air and missile defense (TAMD) radar systems for next- generation surface ships must be modular and scalable, have a designed-in growth path for technology insertion upgrades, and must include major improvements over current radar systems in power, sensitivity and cost.

To support these requirements, the committee recommends an increase of $8.0 million in PE 63720S and encourages the Defense Microelectronics Activity organization to focus on the development of lower cost, modular and open architecture radar components for use in future TAMD radar systems.

Advanced tactical laser program

The budget request contained $80.4 million in PE 1160402BB for special operations advanced technology development, including $45.0 million for the advanced tactical laser advanced concept technology demonstration (ATL ACTD).

The committee has previously expressed concern with the ATL ACTD program but recognizes that funding in the fiscal year 2007 budget allows a full test of the integrated system and completion of the ACTD.

Therefore, the committee recommends that no change be made to the budget request of $45.0 million for the completion of the ATL ACTD. The committee makes it clear that this funding completes the ATL ACTD and that no further funding will be provided past fiscal year 2007.

Ballistic missile defense

The budget request contained $9.3 billion for the ballistic missile defense programs of the Missile Defense Agency (MDA).

The committee supports the more cautious, measured approach to missile defense testing arising out of the Independent Review Team recommendations and standup of the Mission Readiness Task Force in 2005. While the committee understands that the spiral development strategy employed by the Department of Defense (DOD) for ballistic missile defense (BMD) is appropriate to the research and development nature of the BMD program elements, the committee also notes that rigorous testing that leads to fielding of operational systems should take priority over future block research and development efforts.

A March 2006 Government Accountability Office (GAO) report titled, "Missile Defense Agency Fields Initial Capability but Falls Short of Original Goals," is critical of several fundamental management processes within the MDA, and cites costs overruns at $458.0 million in fiscal year 2005, with Ground-based Midcourse Defense (GMD) accounting for $365.0 million of this overrun, as well as a failure to meet program goals for many program elements. The report states that while both the Airborne Laser (ABL) and the Kinetic Energy Interceptor (KEI) programs follow a knowledge-based strategy, the GMD program has not. The GMD program is per-

mitted by the Department to concurrently mature technology, complete design activities, and produce and field assets before end-to-end testing of the GMD system. The GAO report finds that the failure to require this knowledge-based strategy of the GMD program has resulted in poor quality control, cost overruns, and inability to achieve performance goals.

The committee strongly encourages the Secretary of Defense to implement a knowledge-based acquisition strategy for all Ballistic Missile Defense System (BMDS) program elements, which the committee understands is consistent with the DOD's acquisition regulations. The committee agrees with GAO's findings that BMDS program elements would benefit from the more detailed knowledge-based review conducted by other DOD acquisition programs.

The committee also agrees with certain aspects of GAO's report, which questions whether MDA's current two-year block strategy is compatible with the knowledge-based development strategy. While stopping short of directing the Department to restructure the two-year block organization of BMDS elements, the committee directs the Secretary of Defense to conduct a detailed review of the knowledge-based strategy in the context of the existing two-year block organization of BMDS elements, and report to the congressional defense committees by March 1, 2007, the findings and recommendations of this review. This report shall specifically assess whether there are changes that need to be made to the two-year block organization to more appropriately reflect wider application of knowledge-based strategies as has been utilized in the restructuring of the ABL and KEI programs.

The committee recommends a reallocation of the request to focus on testing and fielding of near-term capability ballistic missile defense elements while deferring more long-term efforts.

The committee recommends $9.1 billion, a decrease of $183.5 million for BMD programs of the Missile Defense Agency.

Aegis ballistic missile defense

The budget request contained $1.0 billion in PE 63892C for Aegis ballistic missile defense (BMD).

The committee is encouraged by the Aegis BMD program performance and overall cost/schedule performance. The committee understands that budget constraints have reduced planned SM–3 interceptor procurement, thereby delaying SM–3 interceptor deployment to Aegis BMD platforms.

The committee recommends $1.1 billion in PE 63892C for Aegis BMD, an increase of $40.0 million, to include: $10.0 million for continued S-band advanced radar algorithm work for missile defense applications, $10.0 million for Aegis open architecture program acceleration, and $20.0 million to increase the SM–3 production rate from two per month to four per month.

Boost defense segment

The budget request contained $631.6 million in PE 63883C for boost phase defense.

The committee notes that the Airborne Laser (ABL) program achieved several significant milestones in 2005, including the successful System Integration Laboratory laser long run performance test and is scheduled to conduct a lethal demonstration in calendar

year 2008. While the ABL program still faces risks associated with cutting-edge technology, the committee believes that the potential benefits to national security of a successful lethal demonstration warrant continued program support. The committee notes with approval the knowledge point-based foundation for the ABL program.

The committee recommends $631.6 million for PE 63883C, the amount of the budget request.

Core

The budget request contained $473.1 million in PE 63890C for ballistic missile defense systems (BMDS) core.

The committee is concerned with the results of a March 2006 Department of Defense Inspector General report finding weaknesses in the Missile Defense Agency's systems engineering plans and processes. The committee is particularly concerned with the report's finding that the Aegis missile defense system, an element of the BMDS that has achieved success in actual intercept tests and that is being fielded and deployed now, lacks an approved systems engineering plan. The committee directs the Secretary of Defense to submit a report to the congressional defense committees by February 1, 2007, stating the specific deficiencies in the Aegis systems engineering plan and the required corrective action.

The committee recommends $483.1 million in PE 63890C, an increase of $10.0 million for additional support for the Aegis missile defense system information assurance and systems engineering integration efforts.

Midcourse defense segment

The budget request contained $2.9 billion in PE 63882C for ballistic missile defense (BMD) midcourse defense segment.

The committee supports the restructured Ground-Based Midcourse Defense (GMD) testing program following the recommendations of the Independent Review Team and the new charter from the Mission Readiness Task Force. As in previous years, the committee continues to urge the Director of the Missile Defense Agency to focus on robust testing of near-term block capabilities even where that means deferring work on future blocks. As noted above, the committee shares the concerns of the Government Accountability Office (GAO) in their March 2006 report, "Missile Defense Agency Fields Initial Capability but Falls Short of Original Goals," that the rush to deploy GMD capabilities while concurrently developing future blocks has negatively impacted the program. In order to sustain the current fielded system, the committee recommends an increase of $20.0 million to support concurrent test and operations of the existing block 2004/2006 capability.

The committee notes that the budget request contained $354.9 million for block 2008 development, including the development and testing of new and evolving BMD systems technologies. The budget request specifically referenced Block 2008 efforts that will include enhanced exo-atmospheric kill vehicle (EKV) and sea-based X-band radar capabilities, and additional GMD fire control capabilities and countermeasures mitigation. While the committee understands that investing in future capabilities is integral to a spiral development program, the committee also believes it is premature to spend funds on future technology development when the initial block

2004/2006 capability is yet to be tested in a successful end-to-end flight intercept test. While the committee recommends authorization of the requested $354.9 million for GMD Block 2008 development, the committee also withholds $200.0 million of the request until 30 days after receiving certification from the Secretary of Defense that the planned FTG–04 and FTG–05 intercept tests referenced in the March 17, 2006, GMD corrected testing schedule forwarded to the committee have met their test objectives. In the event that these tests objectives are not met, the committee directs the Secretary to report to the congressional defense committees within 30 days of the completion of these intercept tests as to whether the remaining block 2008 funds should be reallocated for additional testing of the block 2004/2006 configuration.

The committee notes that the budget request contained $118.9 million for block 2010, including $55.8 million for the third site in Europe, and $63.1 million for long-lead items for European site interceptors. The committee believes it is premature to invest in the third site until the existing block 2004/2006 GMD configuration successfully completes integrated end-to-end testing. Accordingly, the committee authorizes no funds for the third site. With respect to long-lead procurement of third site interceptors, the committee authorizes $63.1 million, the amount of the request, to initiate long-lead procurement for interceptors 41–50 understanding that these interceptors could be available for use as assets at either the Fort Greeley, Alaska, or Vandenberg, California GMD sites.

The committee is concerned with reports of GMD costs overruns, $365.0 million was reported by the GAO in the March 2006 report, as well as with problems GAO noted with the EKV. The committee urges the Department of Defense to swiftly address these issues with contractor performance.

The committee recommends $2.8 billion in PE 63882C, a decrease of $35.8 million for the midcourse defense segment.

Multiple kill vehicle

The budget request contained $165.0 million in PE 63894C for the Multiple Kill Vehicle program.

The committee notes that the request is triple the amount of funding in fiscal year 2006 and is for a program that would support the ballistic missile defense system program no earlier than 2010. The committee believes the amount of the request to be excessive for a program that is oriented for block 2010 prior to successful demonstration of the Exo-atmospheric Kill Vehicle technology resident in the block 2004/2006 Ground-based Midcourse Defense configurations.

The committee recommends $100.0 million, a decrease of $65.0 million in PE 63894C for the Multiple Kill Vehicle program, and encourages the Department of Defense to focus on risk reduction for critical technologies.

System interceptor

The budget request contained $405.5 million in PE 63886C for system interceptor.

The committee notes that in the National Defense Authorization Act for Fiscal Year 2006 (Public Law 109–163), the conferees stated that the Department of Defense had designated the Airborne Laser

(ABL) program as the primary boost phase defense and that the system interceptor, or Kinetic Energy Interceptor (KEI) program, represented a risk-mitigation strategy should ABL fail to perform as expected. The conferees directed that fiscal year 2006 funding for the program be focused on reducing high-technology challenges. The committee understands that future funding profiles have resulted in shifting the system interceptor from a 2012 to 2014 capability and that the Department is also exploring use of the interceptor in midcourse defense scenarios.

The committee is concerned with the affordability of pursuing both the ABL and KEI programs in parallel through the projected 2008 knowledge point demonstrations. Given that ABL is the primary boost phase defense program and that the KEI capability is not scheduled to be fielded until the 2014 time-frame, the committee believes that the KEI program should focus on only those critical technology efforts that support the 2008 booster demonstration. Any long-term efforts not directly associated with the 2008 booster tests should be deferred until a decision is made on the future of both the ABL and KEI programs.

The committee recommends $305.5 million in PE 63886C, a decrease of $100.0 million for the system interceptor program, and directs that the KEI program focus its priority on the 2008 booster demonstration.

Technology

The budget request contained $206.7 million in PE 63175C for ballistic missile defense (BMD) technology.

The committee notes that the BMD technology request includes $40.7 million for the High Altitude Airship (HAA); however, the HAA program did not meet its weight or advanced concept technology demonstration criteria last year. The committee also notes that the request states that the benefit to the ballistic missile defense system (BMDS) is for potential use as a sensor and communications and/or weapons platform without any greater connection to a specific BMDS element. The committee does not view the HAA program as an essential element of the BMDS system.

The committee recommends no funding for the HAA program.

The committee provides an additional $8.0 million in PE 63175C for the Net-Centric Airborne Defense Element (NCADE) to continue the NCADE risk-mitigation program that commenced in fiscal year 2006.

The committee recommends $173.9 million in PE 63175C for BMD technology, a decrease of $32.7 million.

Biological warfare defense

The budget request contained $112.2 million in PE 62383E for biological warfare defense applied research, but included no funds for the development of asymmetrical protocols to enhance biological defense capabilities.

The committee notes that there are a number of biological agents that could, with the appropriate development and weaponization, be used in biological warfare and terrorist attack. Yet, developing specific protections against all possible biological agents is not feasible. The cost of developing one new medicine is currently estimated at $800.0 million and the average development time is 10

to 15 years. As a result, the committee believes there is a need for therapeutics that would provide broad spectrum protection against a range of possible biological agents, necessitating research in approaches for enhancing individual non-specific immunities and blocking pathogens to a degree commensurate with the biological warfare threat.

The committee recommends $124.2 million in PE 62383E for biological warfare defense, an increase of $12.0 million for asymmetrical protocols for biological defense enhancement.

Business transformation agency

The budget request contained $140.2 million in PE 65020BTA for the research and development activities of the Business Transformation Agency (BTA).

The committee supports the mission of the agency, but believes that a new agency such as BTA will not be able to effectively execute this funding.

The committee recommends $190.2 million in PE 65020BTA, a decrease of $50.0 million for the Business Transformation Agency.

Chemical-biological collective protective shelters

The budget request included $280.4 million in PE 62384BP for chemical and biological defense applied research, but contained no funds for low-cost collective protection shelters.

The committee continues to support efforts to improve collective protection against chemical and biological agents.

Therefore, the committee recommends an increase of $5.0 million in PE 62384BP for low-cost collective protection shelters.

Chemical and biological defense program

The committee recommends continuation of the chemical and biological basic research, applied research, and advanced technology development initiatives established in the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005 (Public Law 108–375). These initiatives would provide opportunities for emerging technologies and concepts to compete for funding on the basis of technical merit and on the contribution that such technologies could make to the chemical and biological defense capabilities of the armed forces and to homeland defense.

The committee also notes that the 2006 Quadrennial Defense Review recommended an investment of more than $1.5 billion over the next five years to develop broad-spectrum medical countermeasures against advanced bio-terror threats, referred to as the Transformational Medical Technology Initiative (TMTI). This is an ambitious program, for which initial efforts began in late fiscal year 2006. While the committee supports both TMTI and the concept of broad-spectrum medical countermeasures, the committee is concerned that the supporting technologies identified in fiscal year 2006 will not be sufficiently mature in fiscal year 2007 to execute the funding proposed in the President's request for related applied research and advanced technology development.

Advanced technology development

The budget request contained $207.1 million in PE 63384BP for chemical and biological warfare defense advanced technology development.

The committee recommends that the technologies to be considered for funding under the chemical and biological advanced technology development initiative, would include, but would not be limited to the following:

(1) Antioxidant micronutrient therapeutic countermeasures for chemical agents; and

(2) Advanced technologies for biological and chemical agent detection sensor systems.

The committee recommends $197.1 million in PE 63384BP for chemical and biological defense, an increase of $10.0 million for the chemical and biological advanced technology development initiative and a decrease of $20.0 million for the Transformational Medical Technology Initiative.

Applied research

The budget request contained $280.4 million in PE 62384BP for chemical and biological warfare defense applied research.

The committee recommends that the technologies to be considered for funding under the chemical and biological applied research initiative, would include, but would not be limited to the following:

(1) Novel vaccine/therapeutic delivery means, particularly for recombinant protein vaccines;

(2) Multipurpose biodefense immunoarrays and diagnostic tools;

(3) Self-decontaminating polymer-based coatings for fabrics and other substrates; and

(4) Novel prophylaxis/therapeutics effective against biological warfare agents.

The committee recommends an increase in PE 62384BP of $20.0 million for the chemical and biological applied research initiative and a decrease of $30.0 million in PE 62384BP for the Transformational Medical Technology Initiative.

Basic research

The budget request contained $99.2 million in PE 61384BP for chemical and biological warfare defense basic research.

The committee recommends that the technologies to be considered for funding under the chemical and biological basic research initiative, would include, but would not be limited to the following:

(1) Mismatch repair technology for the development of human antibodies for prophylactic and therapeutic treatments; and

(2) Superstructural particle evaluation and characterization with targeted reaction analysis of emerging prophylactics for chemical and biological agent protection.

The committee recommends $109.2 million in PE 61384BP for chemical and biological defense, an increase of $10.0 million for the chemical and biological basic research initiative.

Combating terrorism technology support

The budget request contained $65.8 million in PE 63122D8Z for combating terrorism technology support, but included no funds for additional prototypes of technologies for which the Technical Support Working Group (TSWG) and its international partners have previously invested.

The committee recommends TSWG support the development of a limited number of additional prototypes of the following systems for more rapid military utility evaluation: (1) SHIELD, (2) COLD FIRE, (3) Wall Street, and (4) Muzzle Flash Detection System.

The committee recommends an increase of $18.0 million in PE 63122D8Z for cooperative research, development, and prototyping.

Generic logistics research and development technology demonstrations

The budget request contained $23.4 million in PE 63712S for generic logistics research and development technology demonstrations, but included no funds for the expansion of the Connectory program for rapid identification of technology sources for the Department of Defense (DOD), for the emerging critical interconnection technology program, or for vacuum-aided mobility packing technology.

The committee notes that the Department needs access to the best available technologies from all sources, especially small and medium size companies not normally accessed by the defense acquisition process. The committee encourages the Defense Logistics Agency to:

(1) Expand Connectory profiles to include detailed sources for high-priority DOD required products and services;

(2) Collaborate with DOD agencies and other government organizations having databases of technology products in order to test the feasibility of linking the Connectory to these other data sources; and

(3) Explore ways to allow small companies to obtain first-time business with the Department using the Connectory program.

The committee also notes that printed circuit boards are fundamental components of military navigation, guidance and control, electronic warfare, missile, and surveillance and communications equipment. Printed circuit boards for military systems have unique design requirements for high performance, high reliability, and the ability to operate under extreme environmental conditions that require the use of high density, highly rugged, and highly reliable interconnection technology. Moreover, the commercial printed circuit board industry focuses on the design and high-volume production of low-cost boards and the United States has lost much of its printed circuit board manufacturing capability to overseas sources. The committee recognizes the need to enhance the United States' capability for development and production of high density, highly reliable printed circuit boards for use in U.S. military systems.

Finally, the committee understands vacuum-aided mobility packing technology may provide considerable benefits for transporting troop supplies. The committee is aware that such technology may provide significant improvements in weight, space, and handling

requirements and may facilitate more efficient utilization of military lift assets.

The committee recommends $34.4 million in PE 63712S for generic logistics research and development technology demonstrations, an increase of $1.0 million for the Connectory program for rapid identification of technology sources for the Department and an increase of $10.0 million for the emerging critical interconnection technology program. The committee also urges the Secretary of Defense to explore vacuum-aided mobility packing technology as a potential cost saving measure.

Improved suborbital operations

The budget request contained $254.9 million in PE 63287E for space programs and technology, but contained no funds for improved suborbital space operations.

The committee believes that the design and development of an unmanned, reusable suborbital launch vehicle to provide a platform for tactical battlefield surveillance, can provide quick reaction, fast turnaround, and frequent regional reconnaissance capabilities.

The committee recommends $259.9 million in PE 63287E, an increase of $5.0 million for improved suborbital space operations.

Joint training transformation

The budget request contained $72.9 million in PE 63757D8Z for joint training transformation, but included no funds for the development of a joint simulation capability for linking campaign analysis to warfighter mission rehearsal. The committee recommends the Department of Defense capitalize on the joint infrastructure and connectivity built into the Joint Warfare System (JWARS) simulation program to expand into complementary mission space areas, by linking in-theater tools to campaign analysis capabilities and database providers in the continental United States.

The committee recommends $76.9 million in PE 63757D8Z for joint training transformation, an increase of $4.0 million for joint simulation for linking campaign analysis to warfighter mission rehearsal.

Office of force transformation

The budget request contained $20.4 million in PE 66799D8Z for the Office of Force Transformation, including unspecified funding for the Project Sheriff initiative, but included no funds for the tactical re-directed energy technology initiative.

The committee notes that the Project Sheriff initiative meets a validated and approved urgent operational need to provide combat commanders with more options for dealing with the chaos of urban operations. Project Sheriff is a combat system that incorporates a unique blend of lethal and non-lethal capabilities that have never before been integrated together into a single vehicle.

The tactical re-directed energy technology initiative intends to quickly develop an experimental prototype that can be rapidly fielded to gain new insights into the use of directed energy at the tactical level. The committee notes that this initiative focuses on targeting those who lay improvised explosive devises (IEDs) rather than the IEDs themselves.

The committee recommends $30.4 million in PE 66799D8Z, an increase of $10.0 million, $5.0 million for the Project Sheriff initiative and $5.0 million for the tactical re-directed energy initiative program.

Special operations advanced technology development

The budget request contained $80.4 million in PE 1160402BB for special operations advanced technology development, but included no funds for special operations modular computing technology, for the surveillance augmentation vehicle-insertable on request (SAVIOR) system, or for Foxhound Arabic software.

The committee understands that U.S. Special Operations Command (USSOCOM) is currently procuring non-ruggedized modular personal computers and that the Naval Postgraduate School's Coalition and Operating Area Surveillance and Targeting System (COASTS) plans to further develop the modular personal computer application to broader configurations. Additional funds would allow the development of a ruggedized version of the modular PC.

The committee understands that the SAVIOR system is a mobile, intelligent sensor suite that can alert ground forces to the presence of a threat with its intensive surveillance network. SAVIOR meets USSOCOM's need for a rapidly configurable, highly mobile sensor and command and control platform.

The committee understands that Foxhound Arabic transliteration and genealogical search software provides USSOCOM with enhanced capability to conduct automated transliteration and link-analysis key to counter-terrorism operations. The software is currently being used at headquarters level and further funding would provide the capability to operator levels.

The committee recommends $92.9 million in PE 1160402BB for special operations advanced technology development, an increase of $5.0 million for special operations modular computing technology, an increase of $3.5 million for development of the SAVIOR system and an increase of $4.0 million for Foxhound Arabic software.

Special operations forces operational enhancements

The budget request contained $99.0 million in PE 1160408BB for special operations forces (SOF) operational enhancements, but included no funds for miniaturized tracking devices. The committee understands that these devices provide SOF the ability to successfully track and monitor high value targets.

The committee recommends $106.0 million in PE 1160408BB for SOF operational enhancements, an increase of $7.0 million for miniaturized tracking devices.

Special operations intelligence systems development

The budget request contained $29.0 million in PE 1160405BB for special operations (SO) intelligence systems development, but included no funds for the U.S. Special Operations Command (USSOCOM) joint meteorological and oceanographic (METOC) program. The joint METOC program provides USSOCOM with deployable sensors to measure weather conditions and other environmental and situational parameters. The joint METOC program would further develop an air-droppable version and would meet requirements for additional measurement capabilities.

The committee recommends $34.0 million in PE 1160405BB for SO intelligence systems development, an increase of $5.0 million for the joint METOC program.

Special operations tactical systems development

The budget request contained $45.3 million in PE 1160404BB for special operations tactical systems development, but contained no funds for the special operations forces (SOF) combat assault rifle (SCAR) or for Dominant Vision, and only $1.4 million for covert wave packet modulation (WPM).

The committee understands that SCAR will replace five different weapons systems currently used by SOF and that low rate initial production will support milestone C final validation for inclusion of SCAR in U.S. Special Operations Command's (USSOCOM) 2008 program objective memorandum.

The committee understands that Dominant Vision enhances USSOCOM's capability to conduct special operations by enhancing aircrew's situational awareness and ability to locate, identify and engage targets. Additional funding would continue development of spectral targeting, integrated defense capability, and ground station capability, and would integrate and test the digital sensor recorder.

The committee understands that covert WPM waveform modules will be embedded into USSOCOM communication, networked threat warning and networked sensor systems that are critical to the safety and covertness of special operations missions. The effort will develop a new joint tactical radio system-compliant covert communication capability with embedded positive threat identification.

The committee recommends $58.3 million in PE 1160404BB for special operations tactical systems development, an increase of $4.1 million for the SOF combat assault rifle, an increase of $4.5 million for Dominant Vision, and an increase of $4.4 million for covert WPM waveform modules.

Special operations technology development

The budget request contained $12.7 million in PE 1160401BB for special operations technology development, but included no funds for AngelFire and no funds for Global Observer.

The AngelFire program is derived from the full-spectrum active protection close-in layered shield (FCLAS) to protect special operations forces' assets from rocket propelled grenades by using counter munitions. The committee understands that AngelFire will provide increased protection to lightly protected aircraft and vehicles operating in hostile environments.

Global Observer promises to fulfill U.S. Special Operations Command's (USSOCOM) requirements for persistent intelligence, surveillance and reconnaissance. Global Observer will develop a seven day endurance, hydrogen-fueled unmanned aircraft system that will significantly expand USSOCOM's ability to identify, track, and interdict targets, as well as enhance force protection of U.S. forces.

The committee recommends $32.7 million in PE 1160401BB for special operations technology development, an increase of $10.0 million for the AngelFire for FCLAS program, and an increase of $10.0 million for the Global Observer program.

OPERATIONAL TEST AND EVALUATION, DEFENSE

Overview

The budget request contained $181.5 million for Operational Test and Evaluation, Defense.

The committee recommends $181.5 million, no change to the budget request.

LEGISLATIVE PROVISIONS

SUBTITLE A—AUTHORIZATION OF APPROPRIATIONS

Section 201—Authorization of Appropriations

This section would establish the amounts authorized to be appropriated for research, development, test, and evaluation for the Department of Defense for fiscal year 2007.

Section 202—Amount for Defense Science and Technology

This section would establish basic, research, applied research, and advanced technology development funding levels for the Department of Defense for fiscal year 2007.

SUBTITLE B—PROGRAM REQUIREMENTS, RESTRICTIONS, AND LIMITATIONS

Section 211—Alternate Engine for Joint Strike Fighter

This section would require that the Departments of the Navy and the Air Force obligate not less than $408.0 million of the funds authorized to be appropriated for the system development and demonstration program for the Joint Strike Fighter, for continued development of an alternate engine for the Joint Strike Fighter.

Section 212—Extension of Authority To Award Prizes for Advanced Technology Achievements

This section would amend section 2374a of title 10, United States Code, to extend the authority of the Director, Defense Advanced Research Projects Agency (DARPA), to award prizes for advanced technology achievements through September 30, 2010. The Director's current prize authority would expire on September 30, 2007.

Section 213—Extension of Defense Acquisition Challenge Program

This section would amend section 2359b of title 10, United States Code, to remove the September 30, 2007, termination clause for the Defense Acquisition Challenge Program. This program, established as a pilot program, has shown its value to provide opportunities for the increased introduction of innovative and cost-saving technology in acquisition programs of the Department of Defense.

This section would also direct the Under Secretary of Defense for Acquisition Technology and Logistics to ensure that the identity of each proposed challenger is not disclosed outside the federal government, without the consent of the challenger.

Section 214—Future Combat Systems Milestone Review

This section would require the Secretary of Defense to conduct a Future Combat Systems (FCS) milestone review, following the preliminary design review, by September 30, 2008. This section would also require the Secretary to submit a report on the results of the FCS milestone review which will be a go/no-go review of the FCS program that is based on its demonstration of a sound business case to the congressional defense committees not later than February 13, 2009.

Section 215—Independent Cost Analyses for Joint Strike Fighter Engine Program

This section would require the Comptroller General and the Secretary of Defense through the Cost Analysis Improvement Group to conduct independent cost analyses and provide independent reports on alternate engine acquisition strategies for the Joint Strike Fighter (JSF). The reports would include an analysis of an acquisition strategy resulting in the JSF powered with the F135 engine, an acquisition strategy resulting in the JSF powered by either the F135 or the F136 engine through a competitive program, or any other alternative, whether competitive or sole source, that would reduce the total program lifecycle cost, improve program schedule, or both.

Section 216—Dedicated Amounts for Implementing or Evaluating DD(X) and CVN–21 Proposals Under Defense Acquisition Challenge Program

This section would require the Secretary of Defense to provide the Defense Acquisition Challenge Program with an additional $4.0 million to evaluate or implement challenge proposals specifically for the DD(X) next-generation destroyer and the CVN–21 next-generation aircraft carrier programs.

SUBTITLE C—BALLISTIC MISSILE DEFENSE

Section 221—Fielding of Ballistic Missile Defense Capabilities

This section would allow funds to be authorized to the Secretary of Defense for research, development, test, and evaluation for the Missile Defense Agency to be used for the development and fielding of ballistic missile defense capabilities.

Section 222—Limitation on Use of Funds for Space Based Interceptor

This section would prevent the Department of Defense from obligating funds for the testing or deployment of a space-based interceptor program until 90 days after submitting a report to Congress describing the program and its national security implications.

SUBTITLE D—OTHER MATTERS

Section 231—Review of Test and Evaluation Policies and Practices To Address Emerging Acquisition Approaches

This section would amend section 239(b)(2) of title 10, United States Code, to require the Director, Operational Test and Evaluation (DOT&E) to state whether the results of operational test and evaluation of major defense acquisition programs confirm that the items tested are operationally acceptable under limited conditions. Under current law, DOT&E prepares a report at the conclusion of operational test and evaluation, stating: (1) whether the test and evaluation performed were adequate, and (2) whether the results of such test and evaluation confirm that the items tested are effective and suitable for combat.

The committee is aware that in the Director's report, DOT&E evaluates a system as not operationally effective or suitable for combat if the system does not fully meet the Capabilities Development Document (CDD), or similar description of the user's standards for effectiveness and suitability as reflected in the requirements process. DOT&E has also informally included assessments of military utility for mission environments which are less than those set forth in the system's requirements. This section would formalize this valuable analysis by DOT&E to enable reasoned decision making by the combatant commanders and acquisition program managers regarding the fielding of systems which meet some, but not all, of the systems' requirements.

This section would also require the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L)), in coordination with DOT&E and the Director of the Defense Test Resource Management Center (DTRMC) to review Department of Defense test and evaluation (T&E) policies and practices and issue new or revised guidance, as necessary, to ensure test and evaluation practices keep pace with emerging acquisition approaches.

The committee is aware that T&E policies and practices have been impacted by both the spiral development authorities and the rapid acquisition authorities of sections 803 and 806, respectively, of the Bob Stump National Defense Authorization Act for Fiscal Year 2003 (Public Law 107–314). T&E policies and practices could potentially be further impacted by other emerging acquisition approaches. For example, should USD(AT&L) accept the recommendations of the "Defense Acquisition Performance Assessment" (DAPA) report issued in January 2006, T&E policies and practices could be affected by the implementation of time-certain development programs. The DAPA report defines time-certain development programs as development programs which are assigned, ". . . a specific length of time in which milestone events will be accomplished by contract." The committee wishes to ensure that T&E policies and practices neither impede the intended flexibilities of these authorities nor fail to provide an independent assessment of system capabilities. Lastly, the committee believes T&E policies and practices should be reviewed to ensure the Department is properly testing and evaluating materiel, such as outer tactical vests, that do not fall within the purview of DOT&E, because they do not meet the acquisition thresholds set forth in sections 2366 and 2399 of title 10, United States Code, but which do require limited oper-

ational test and evaluation to ensure the safety and survivability of the materiel and the personnel using the materiel.

This section would also require the Director of DTRMC to ensure that any revisions to T&E policies and practices are reflected in a description of and in the budgeting for the testing needs of the Department. Finally, this section would require USD (AT&L) to report to the congressional defense committees within nine months after the enactment of the this Act on the review conducted and on any new or revised guidance issued.

TITLE III—OPERATION AND MAINTENANCE

OVERVIEW

The budget request contained approximately $154.8 billion in operation and maintenance funds to ensure the U.S. military can meet the demands identified by each combatant commander. These funds will be used to train U.S. forces, purchase equipment and spare parts, repair older equipment, and transport equipment and personnel around the world. The budget request represents an increase of $7.4 billion over spending levels authorized and appropriated for fiscal year 2006. The challenge for the Department of Defense is that most of the $7.4 billion covers civilian pay raises and general inflation ($4.0 billion) and price growth due to rising fuel costs ($3.0 billion). The committee is concerned that the total budget increase does not accurately reflect the impact of inflation and increased fuel prices.

The committee is concerned about the state of military readiness, as the global war on terrorism (GWOT) enters its fifth year. The committee notes that the increased budget request actually funds fewer operation and maintenance related activities critical to ensuring the armed forces' ability to fight and win our nation's wars. As the Department faces rising health care costs, fuel costs and inflation, budget challenges are found in the operation and maintenance accounts. Currently, all the services are funded below the levels required to conduct the minimal training necessary to maintain military readiness. For example, the shortfalls in fiscal year 2007 budget are as follows:

(1) Navy funds only 36 steaming days a quarter versus the required 51 steaming days per quarter;

(2) Navy increases deferred maintenance from $54.0 million in fiscal year 2005 to $240.0 million in fiscal year 2007;

(3) Army funds 615 tank miles a year versus the combined arms training strategy requirement of 899 miles;

(4) Army funds 11.6 helicopter flying hours per month versus 14.5 helicopter flying hours per month;

(5) Marine Corps funds 88 percent of the combat ready days—equipment and training requirement; and

(6) Air Force funds 98 percent of the flying hour training requirement while mission capable rates are scheduled to fall to 75 percent for the first time since 1998.

In the fiscal year 2006 Future Years Defense Program (FYDP), the services anticipated receiving $154.7 billion for operation and maintenance programs in fiscal year 2007. Instead, this year's budget request is $154.8 billion, a decrease of $0.1 billion. Com-