Section 132—Limitation on Joint Cargo Aircraft

This section would prohibit the Secretary of the Air Force or the Secretary of the Army from obligating or expending authorized appropriations for the development or procurement of the Joint Cargo Aircraft until 30 days after the Secretary of Defense submits to the congressional defense committees the Air Force Air Mobility Command's Airlift Mobility Roadmap; the Department of Defense Intra-Theater Airlift Capabilities Study; the Department of Defense Joint Intra-Theater Distribution Assessment the Joint Cargo Aircraft Functional Area Series Analysis; the Joint Cargo Aircraft Analysis of Alternatives; and the Secretary of Defense certifies that validated operational requirements exist to fill a Department of the Army, Department of the Air Force, Army National Guard, or Air National Guard capability gap or shortfall for intra-theater airlift with the Joint Cargo Aircraft.

Section 133—Clarification of Limitation on Retirement of U–2 Aircraft

This section would amend section 133 of the John Warner National Defense Authorization Act for Fiscal Year 2007 (Public Law 109–364) requiring the Secretary of Defense to conduct an annual review of the U–2 and Global Hawk transition plan and an assessment of the migration of U–2's intelligence, surveillance, and reconnaissance capabilities to the Global Hawk platform, highlighting any potential gaps in capability. This section would also require the Secretary of Defense to present the findings to Congress and concurrence the U–2 is no longer needed, by April 1st each year until the transition is complete.

Section 134—Repeal of Requirement to Maintain Retired C–130E Tactical Airlift Aircraft

This section would repeal section 137(b) of the John Warner National Defense Authorization Act for Fiscal Year 2007 (Public Law 109–364).

TITLE II—RESEARCH, DEVELOPMENT, TEST, & EVALUATION

OVERVIEW

The budget request contained $75.1 billion for research, development, test, and evaluation (RDT&E). The committee recommends $73.3 billion, a decrease of $1.8 billion to the budget request.

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

PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
DEPARTMENT OF THE ARMY					
BASIC RESEARCH	**305,819**	**15,713**	**17,200**	**(1,487)**	**321,532**
APPLIED RESEARCH	686,237	165,356	165,356	0	851,593
ADVANCED TECHNOLOGY DEVELOPMENT	735,935	254,340	263,150	(8,810)	990,275
ADVANCED COMPONENT DEVELOPMENT AND PROTOTYPES	871,342	(52,960)	51,000	(103,960)	818,382
SYSTEM DEVELOPMENT AND DEMONSTRATION	5,222,457	(899,125)	21,575	(920,700)	4,323,332
RDT&E MANAGEMENT SUPPORT	1,140,246	11,570	11,570	0	1,151,816
OPERTIONAL SYSTEMS DEVELOPMENT	1,627,568	(2,000)	38,000	(40,000)	1,625,568
TOTAL ARMY	10,589,604	(507,106)	567,851	(1,074,957)	10,082,498
DEPARTMENT OF THE NAVY					
BASIC RESEARCH	467,245	10,000	10,000	0	477,245
APPLIED RESEARCH	677,543	54,840	54,840	0	732,383
ADVANCED TECHNOLOGY DEVELOPMENT	521,829	92,000	92,000	0	613,829
ADVANCED COMPONENT DEVELOPMENT AND PROTOTYPES	2,998,086	(78,000)	122,000	(200,000)	2,920,086
SYSTEM DEVELOPMENT AND DEMONSTRATION	7,848,516	163,575	288,575	(125,000)	8,012,091
RDT&E MANAGEMENT SUPPORT	865,146	16,000	16,000	0	881,146
OPERTIONAL SYSTEMS DEVELOPMENT	3,697,171	(350)	28,650	(29,000)	3,696,821
TOTAL NAVY	17,075,536	258,065	612,065	(354,000)	17,333,601
DEPARTMENT OF THE AIR FORCE					
BASIC RESEARCH	375,199	0	0	0	375,199
APPLIED RESEARCH	1,011,075	52,900	52,900	0	1,063,975
ADVANCED TECHNOLOGY DEVELOPMENT	577,266	(37,500)	67,500	(105,000)	539,766
ADVANCED COMPONENT DEVELOPMENT AND PROTOTYPES	2,938,712	5,000	155,000	(150,000)	2,943,712
SYSTEM DEVELOPMENT AND DEMONSTRATION	4,319,233	(73,100)	406,100	(479,200)	4,246,133
RDT&E MANAGEMENT SUPPORT	1,054,328	6,250	6,250	0	1,060,578
OPERTIONAL SYSTEMS DEVELOPMENT	16,436,127	(926,530)	446,220	(1,372,750)	15,509,597
TOTAL AIR FORCE	26,711,940	(972,980)	1,133,970	(2,106,950)	25,738,960

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

PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
DEFENSE WIDE					
BASIC RESEARCH	279,875	22,250	31,750	(9,500)	302,125
APPLIED RESEARCH	1,981,801	52,850	52,850	0	2,034,651
ADVANCED TECHNOLOGY DEVELOPMENT	3,151,818	49,900	133,200	(83,300)	3,201,718
ADVANCED COMPONENT DEVELOPMENT AND PROTOTYPES	8,854,326	(767,000)	90,000	(857,000)	8,087,326
SYSTEM DEVELOPMENT AND DEMONSTRATION	708,071	(19,000)	1,000	(20,000)	689,071
RDT&E MANAGEMENT SUPPORT	889,124	6,000	19,000	(13,000)	895,124
OPERTIONAL SYSTEMS DEVELOPMENT	4,694,835	56,150	66,150	(10,000)	4,750,985
TOTAL DEFENSE-WIDE	20,559,850	(598,850)	393,950	(992,800)	19,961,000
OPERATIONAL TEST & EVALUATION, DEFENSE	180,264	0	0	0	180,264
TOTAL, RESEARCH AND DEVELOPMENT	**75,117,194**	**(1,820,871)**	**2,707,836**	**(4,528,707)**	**73,296,323**

Army Research, Development, Test, & Evaluation

Overview

The budget request contained $10.6 billion for Army research, development, test, and evaluation (RDT&E).

The committee recommends $10.1 billion, a decrease of $507.1 million to the budget request.

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
	RESEARCH, DEVELOPMENT, TEST & EVALUATION, ARMY					
	BASIC RESEARCH					
1	In-House Laboratory Independent Research	19,266				19,266
2	Defense Research Sciences	137,676	6,713			144,389
	Activated Nanostructures for Delcing			2,000		
	Center of Excellence in Industrial Metrology			2,700		
	No justification (F-22)				(545)	
	No justification (H52)				(942)	
	CBR Functionally Integrated Reactive Surface Technologies			3,500		
3	University Research Initiatives	64,843	1,600			66,443
	National Trauma Institute			1,600		0
4	University and Industry Research Centers	84,034	7,400			91,434
	Electron Microprobe Facility			1,400		
	Vehicle Modeling for Reduced Fuel Usage			6,000		0
	TOTAL, BASIC RESEARCH	**305,819**	**15,713**	**17,200**	**(1,487)**	**321,532**
	APPLIED RESEARCH					
5	Materials Technology	18,614	10,500			29,114
	Advanced Lightweight Armor Materials			6,000		
	Ultra Lightweight Metallic Armor			4,500		
6	Sensors and Electronic Survivability	39,826	10,000			49,826
	Network Enabled Combat ID			5,000		
	Electromagnetic Geolocation			2,000		
	Advanced Detection of Explosives			3,000		
7	TRACTOR HIP	4,367				4,367
8	Aviation Technology	42,567	360			42,927
	Automated Helicopter Load Acquisition System			360		

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
9	EW Technology	16,411	8,000			24,411
	Silver Fox and Manta UAS			5,000		
	Knowledge Integration and Management			3,000		
10	Missile Technology	53,038				53,038
11	Advanced Weapons Technology	19,342				19,342
12	Advanced Concepts and Simulation	16,654				16,654
13	Combat Vehicle and Automotive Technology/FCS	53,342	31,800			85,142
	Digital Engine, Hydraulic Valve Actuation			3,900		
	Tactical Metal Fabrication			6,300		
	National Institute for Legged Mobility			2,000		
	Nanofluids for Military Ground Vehicles			2,500		
	Light Utility Vehicle			4,000		
	Teamline Secure Mobile			2,000		
	Open Architecture for Stryker			11,100		
14	Ballistics Technology	55,014	1,650			56,664
	DP-5X			1,650		
15	Chemical, Smoke and Equipment Defeating Technology	2,235				2,235
16	Joint Service Small Arms Program	7,008				7,008
17	Weapons and Munitions Technology - FCS	40,469	12,900			53,369
	Gun Based RAM Defense			6,000		
	Precision Munition Onboard Recorder			1,900		
	Microelectronics Supporting Flexible Display			2,000		
	Hospital Emergency Planning and Integration			3,000		
18	Electronics and Electronic Devices	43,391				43,391
19	Night Vision Technology	24,391	4,650			29,041
	Microdisplay Development			4,650		
20	Countermine Systems	21,795				21,795
21	Human Factors Engineering Technology	17,426	25,000			42,426

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
	LWI Training-based Collaborative Research			25,000		
22	Environmental Quality Technology	15,809	10,000			25,809
	Combined Bomb Unit Decasing and Disposal			3,800		
	Propelling Agent			1,200		
	Integrated Environment Control System/Cryogenic Agent Removal System			5,000		
23	Command, Control, Communications Technology	22,215	19,250			41,465
	Universal Communication Bridge			3,500		
	Portable Flexible Displays			5,000		
	C4ISR Integrated Digital Environment Service Model (IDESM)			2,000		
	Soldier Sensor Computing			2,000		
	Integrated Lightweight Electronics Shelter			1,750		
	Advanced 3D Locator			5,000		
24	Computer and Software Technology	5,368	1,000			6,368
	Bioinspired Security Infrastructure			1,000		
25	Military Engineering Technology	51,120				51,120
26	Manpower/Personnel/Training Technology	16,208				16,208
27	Logistics Technology	23,083	7,670			30,753
	Chem-Bio Protective Hangars			6,000		
	Active and Smart Packaging for Combat Feeding			1,420		
	Chem-Bio Lightweight Shelter			250		
28	Medical Technology	76,544	22,576			99,120
	Synthetic Malaria Vaccine			4,000		
	Bioengineering for Soldier Survivability			3,000		
	Modeling Warfighter Fatigue			4,000		
	Virtual Reality Surgical Simulator			1,000		
	Biofoam Protein Hydrogel			5,800		
	Epigenetics Research			3,000		
	Oxygen Diffusion Dressings for Accelerated Healing			1,000		

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
	Biomedical Neuropsychiatric and PTSD New Treatment Initiative			776		
	TOTAL, APPLIED RESEARCH	**686,237**	**165,356**	**165,356**	**0**	**851,593**
	ADVANCED TECHNOLOGY DEVELOPMENT					
29	Warfighter Advanced Technology	47,065	4,000			51,065
	Future Combat Rations-Processing and Packaging			4,000		
30	Medical Advanced Technology	53,274	48,900			102,174
	Human Organ and Tissue Preservation			3,000		
	Epidemiological Tracking Initiative			5,000		
	Advanced Proteomics			4,000		
	Advanced Medical Technology - University of Texas			3,000		
	Combined Injury Consortium			5,000		
	Freeze Dried Plasma			4,000		
	Cellular Response to Infections and Inflammatory Diseases			2,000		
	National Functional Genomics Center			10,000		
	Nightengale Wireless Personal Status Monitor			2,500		
	Personal Intelligent Medical Assistant			2,500		
	Tracking Soldier Health with Advanced Implants			2,500		
	DOD/VA Healthcare Information Interoperability Demonstration			1,000		
	Malaria Vaccine Development			2,000		
	Electronic Health Records			2,400		
31	Aviation Advanced Technology/ FCS	53,890	44,400			98,290
	Polymer Matrix for Drive Systems			8,000		
	Nanocrystal Line Diamond Rotorblade Leading Edge Protection			2,900		
	Universal Control Program			8,000		
	Laser Peening for Rotorcraft Transmissions - Advanced Helo Performance			3,000		
	NVG Compatible Electrostatically Conductive Windscreen Laminates for Advanced Performance			2,700		

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
	Power Dense Rotorcraft Transmission			1,000		
	Technology for Aging Aircraft Depot Support			3,800		
	Vectored Thrust Ducted Propeller Compound Helo			9,500		
	Aviation Technology for Legacy Systems			5,500		
32	Weapons and Munitions Advanced Technology	59,389	26,850			86,239
	Micro-Seeker for Small Steerable Projectiles			5,000		
	Electromagnetic Gun Initiative			850		
	Affordable Net Shaped MER Titanium Production			4,500		
	Precision Aspheric Optics			6,000		
	Mobile Detection Assessment Response system			5,500		
	Dual Use Radiological and Chemical Detectors			3,000		
	Knowledge Driven Manufacturing			2,000		
33	Combat Vehicle and Automotive Advanced Technology / FCS	131,436	30,387			161,823
	Antiballistic Windshield Armor			4,500		
	Wheeled Vehicle Electric Drive Maturation			6,000		
	Tactical Wheeled Vehicle Armor Structrures Survivability and Performance			10,000		
	Diminishing Manufacturing Sources and Material Support			5,000		
	Shot Spotter Individual Protection System			6,000		
	Fuel Cell-Based Auxillary Power			3,000		
	Dynamometer Facility Upgrade			4,300		
	No justification (OF7)				(3,076)	
	No justification (DC66)				(5,337)	
34	Command, Control, Communications Advanced Technology - Space	12,255				12,255
35	Manpower, Personnel and Training Advanced Technology	6,783				6,783
36	Electronic Warfare Advanced Technology - Tactical C4	49,199	16,700			65,899
	Advanced Wireless Technologies			500		
	Applied Communications and Information Networking			7,000		
	Portable Mobile Emergency Broadband Systems			3,000		

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
	Mission Planning Tool Set			2,500		
	JEM Range Extension			3,700		
37	TRACTOR HIKE	12,633				12,633
38	Next Generation Training & Simulation Systems - ICT	18,723	11,200			29,923
	Virtual Environment for Urban Warfare			4,000		
	Joint Fires and Effects Training System			7,200		
39	TRACTOR ROSE	6,526				6,526
40	IED Defeat Technology Development		8,000			8,000
	Center for Pulsed Power and Power Electronics			8,000		
41	Explosives Demilitarization Technology	10,349	3,400			13,749
	Demilitarization Resource Recovery and Recycle Program - Tooele Army Depot			3,400		
42	Military HIV Research	6,998				6,998
43	Combating Terrorism, Technology Development	13,061	10,000			23,061
	Army Venture Capital Fund Demo			10,000		
44	Global Surveillance/Air Defense/Precision Strike Technology Demonstration					0
45	EW Technology / FCS	17,419				17,419
46	Missile and Rocket Advanced Technology/FCS	60,353	4,500			64,853
	Smart Energetic Architecture for Missile Systems			4,500		
47	TRACTOR CAGE	18,448				18,448
48	Landmine Warfare and Barrier Advanced Technology	25,315				25,315
49	Joint Service Small Arms Program/FCS	8,097	5,000			13,097
	Lightweight Small Arms Technology			5,000		
50	Night Vision Advanced Technology	35,892	19,403			55,295
	Cable Warning Obstacle Avoidance System			3,000		
	Hyperspectral Sensors for Force Protection			7,000		
	Buster Backpack UAV			5,000		
	Personal Miniature Thermal Viewer			4,800		
	No justification - DC65				(397)	

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION

(Dollars in Thousands)

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
51	Environmental Quality Technology Demonstrations	14,982				14,982
52	Military Engineering Advanced Technology	6,837	9,600			16,437
	Synthetic Automotive Virtual Environment			3,600		
	Gas Engine Driven Air Conditioning Demonstration			3,000		
	Buckeye UAS			3,000		
53	Advanced Tactical Computer Science and Sensor Technology	67,011	12,000			79,011
	Digital Array Radar			4,000		
	Advanced Radar Transceiver IC			5,000		
	Software Lifecycle Affordability			3,000		
						0
	TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT	**735,935**	**254,340**	**263,150**	**(8,810)**	**990,275**
	ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES					
54	Unique Item Identification	668	(668)			0
	No Justification				(668)	
55	Army Missile Defense Systems Integration (Non Space)	14,389	21,000			35,389
	Advanced Hypersonic Weapon			7,000		
	Next Generation Interceptors			7,000		
	Integrated Composite Mounting Hardware			2,000		
	Advanced Radiation Hardening Initiative			5,000		
56	Army Missile Defense Systems Integration (Space)	17,421				17,421
57	Air and Missile Defense Systems Engineering	176,142	9,000			185,142
	Area Security and Defense Systems - Center for Defense Systems Research			4,000		
	Advanced Extended Range Attack Missile			5,000		
58	Joint Air-to-Ground Missile (JAGM)	53,500				53,500
59	Landmine Warfare and Barrier - Adv Dev/FCS	24,737	7,000			31,737
	Enhanced Holographic Imager			7,000		
60	Smoke, Obscurant and Target Defeating Sys-Adv Dev	19,449				19,449

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
61	Tank and Medium Caliber Ammunition/FCS	44,578				44,578
62	Advanced Tank Armament System (ATAS) / STRYKER	142,486				142,486
63	Soldier Support and Survivability	4,787	(992)			3,795
	No Justification (C08)				(992)	
64	Tactical Electronic Surveillance System - Adv Dev	14,423				14,423
65	Night Vision Systems Advanced Development	3,454				3,454
66	Environmental Quality Technology	6,149	12,000			18,149
	Hawaii Undersea Chemical Weapons Assessment			8,000		
	Vanadium Technology Program			4,000		
67	Warfighter Information Network-Tactical	222,296	(102,300)			119,996
	Program Decrease				(102,300)	
68	NATO Research and Development	4,959				4,959
69	Aviation - Adv Dev	6,481				6,481
70	Logistics and Engineer Equipment - Adv Dev	27,499				27,499
71	Combat Service Support Control System Evaluation and Analysis	19,054				19,054
72	Medical Systems - Adv Dev	12,479	2,000			14,479
	Leishmaniasis Skin Test			2,000		
73	Soldier Systems - Advanced Development	18,178				18,178
74	Integrated Broadcast Service (DISTP)	38,213				38,213
						0
	TOTAL, ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES	**871,342**	**(52,960)**	**51,000**	**(103,960)**	**818,382**
	SYSTEM DEVELOPMENT & DEMONSTRATION					
75	Classified Program					
76	Aircraft Avionics	57,786				57,786
77	Armed Reconnaisance Helicopter	82,310	(32,300)			50,010
	Excess to Requirement				(32,300)	
78	EW Development ATIRCM	55,716	5,225			60,941

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
	Bi-Directional English-Iraqi Instant Language Translator			5,225		
79	Joint Tactical Radio					0
80	All Source Analysis System	5,084				5,084
81	TRACTOR CAGE	17,821				17,821
82	Common Missile	0				0
83	Infantry Support Weapons	45,229	7,400			52,629
	CROWS Javelin Integration			5,400		
	Enhanced Flame Retardant Clothing System			2,000		
84	Medium Tactical Vehicles/FMTV	1,994	800			2,794
	Track Over the Tire System			800		
85	Smoke, Obscurant and Target Defeating Sys-SDD	1,347				1,347
86	Family of Heavy Tactical Vehicles	1,947				1,947
87	Air Traffic Control	8,956				8,956
88	Light Tactical Wheeled Vehicles	82,300				82,300
89	Armored Systems Modernization					0
90	Non-Line of Sight Launch System	253,410				253,410
91	Non-Line of Sight Cannon	137,802				137,802
92	FCS Manned Ground Vehicles and Common Ground Vehicles	696,333	(233,300)			463,033
	Program Reduction				(233,300)	
93	FCS Systems of Systems Engineering and Program Management	1,589,466	(566,300)			1,023,166
	Program Reduction				(566,300)	
94	FCS Reconnaissance (UAV) Platforms	41,464	(21,000)			20,464
	Class IV UAV				(21,000)	
95	FCS Unmanned Ground Vehicles	90,667	(46,700)			43,967
	Program Reduction				(46,700)	
96	FCS Unattended Ground Sensors	10,999				10,999
97	FCS Sustainment and Training R&D	678,781				678,781
98	Modular Brigade Enhancement/FCS	64,796				64,796

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
99	Night Vision Systems	44,619				44,619
100	Combat Feeding, Clothing, and Equipment	2,501				2,501
101	Non-System Training Devices	35,992				35,992
102	Air Defense Command, Control and Intelligence - SDD	21,513				21,513
103	Constructive Simulation Systems Development	31,962				31,962
104	Automatic Test Equipment Development	18,025				18,025
105	Distributive Interactive Simulations (DIS)	16,594	2,150			18,744
	Joint Training Integration and Evaluation			2,150		
106	Combined Arms Tactical Trainer (CATT) Core	37,035				37,035
107	Joint Network Management System	2,786				2,786
108	Weapons and Munitions/GAMRAAM	55,368				55,368
109	Logistics and Engineer Equipment - SDD	45,009				45,009
110	Command, Control, Communications Systems	10,047				10,047
110b	Warfighting Tech Support					0
110c	Nuclear Arms Execution					0
111	Medical Materiel/Medical Biological Defense Equipment - SDD	15,823	2,500			18,323
	Ground On-Board Oxygen Generation System			2,500		
112	Landmine Warfare/Barrier - SDD/FCS	142,315				142,315
113	Classified Program					
114	Artillery Munitions/XM982	63,039	(21,100)			41,939
	Transfer Funds for Additional Excalibur Precision Guided Munition Procurement				(21,100)	
115	Combat Identification	11,362				11,362
116	Army Tactical Command & Control Hardware & Software	99,202				99,202
117	Radar Development / Sentinel	7,067				7,067
118	General Fund Enterprise Business System (GFEBS)	53,559				53,559
119	Firefinder	77,279				77,279
120	Soldier Systems -Warrior Dem/Val					0
121	Artillery Systems	24,221				24,221

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
122	Patriot/MEADS Combined Aggregate Program (CAP)	372,146				372,146
123	Nuclear Arms Control Monitoring Sensor Network	7,300				7,300
124	Information Technology Development	103,485	3,500			106,985
	Health Informatics Initiative			3,500		
	TOTAL, SYSTEM DEVELOPMENT & DEMONSTRATION	**5,222,457**	**(899,125)**	**21,575**	**(920,700)**	**4,323,332**
	RDT&E MANAGEMENT SUPPORT					
125	Classified Program					0
126	Threat Simulator Development	21,887				21,887
127	Target Systems Development	13,499				13,499
128	Major T&E Investment	66,921				66,921
129	Classified Program					
130	Rand Arroyo Center	16,342	2,000			18,342
	Program Increase			2,000		
131	Army Kwajalein Atoll	182,136				182,136
132	Concepts Experimentation Program	34,004	8,000			42,004
	Gunfire Detection System for UAVs			6,000		
	Study of Warfighting Initiative for Future Technologies and Tactics Aviation			2,000		
133	Small Business Innovative Research	0				0
134	Army Test Ranges and Facilities	357,964				357,964
135	Army Technical Test Instrumentation and Targets	74,391	570			74,961
	Robotic Manipulators for EOD			570		
136	Survivability/Lethality Analysis	40,343				40,343
137	DOD High Energy Laser Test Facility	2,801				2,801
138	Aircraft Certification	4,688				4,688
139	Meteorological Support to RDT&E Activities	8,346				8,346
140	Materiel Systems Analysis	16,526				16,526

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
141	Exploitation of Foreign Items	3,291				3,291
142	Support of Operational Testing	75,293				75,293
143	Army Evaluation Center	61,694				61,694
144	Simulation & Modeling for Acq, Rqts, & Tng (SMART)	5,342				5,342
145	Programwide Activities	73,718				73,718
146	Technical Information Activities	41,607				41,607
147	Munitions Standardization, Effectiveness and Safety	19,606	1,000			20,606
	National Polymer Innovation Center			1,000		
148	Environmental Quality Technology Mgmt Support	4,958				4,958
149	Management Headquarters (Research and Development)	14,889				14,889
150	Financing for Cancelled Account Adjustments	0				0
	TOTAL, RDT&E MANAGEMENT SUPPORT	**1,140,246**	**11,570**	**11,570**	**0**	**1,151,816**
	OPERATIONAL SYSTEMS DEVELOPMENT					
151	MLRS Product Improvement Program	54,055	2,500			56,555
	HIMARS Modular Launcher Communications System			2,500		
152	Weapons Capability Modifications UAV	3,900				3,900
153	JT Land Attack Cruise Missile Defense (Aerostat Joint Program Office)	481,251	3,000			484,251
	MEMS Demonstration Radar			3,000		
154	Adv Field Artillery Tactical Data System	16,837				16,837
155	Combat Vehicle Improvement Programs / ABRAMS	27,615	3,000			30,615
	Virtual Simulation and Modernization of BFV Computers			3,000		
156	Maneuver Control System - Tactical C2	43,961				43,961
157	Aircraft Modifications/Product Improvement Programs	325,643	(5,000)			320,643
	Aerial Common Sensor				(5,000)	
157a	Aerial Common Sensor	[26391]				0
157b	Improved Cargo Helo	[11173]				0

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
157c	Black Hawk	[87864]				0
157d	Apache Block III	[193680]				0
157e	JCA	[6535]				0
158	Aircraft Engine Component Improvement Program	476				476
159	Digitization	9,737				9,737
160	Force XXI Battle Command, Brigade and Below (FBCB2)	32,446				32,446
161	Tactical Wheeled Vehicle Improvement Program					
162	Patriot Product Improvement (Missile/Air Defense PIP)	30,219				30,219
163	Other Missile Product Improvement Programs - ATACMS	1,897				1,897
164	TRACTOR CARD	16,573				16,573
165	Joint Tactical Communications Program (TRI-TAC)	1,536				1,536
166	Joint Tactical Ground System/DSP	23,462				23,462
167	Joint High Speed Vessel (JHSV)	5,148				5,148
168	Special Army Program					0
169	Security and Intelligence Activities					0
170	Information Systems Security Program	28,332	1,500			29,832
	RUBIX Multilevel Security			1,500		
171	Global Combat Support System	129,689	(35,000)			94,689
	Program Reduction				(35,000)	
172	SATCOM Ground Environment (SPACE)	107,849				107,849
173	WWMCCS/Global Command and Control System	24,836				24,836
174	Joint Command and Control Program (JC2)	10,415				10,415
175	Tactical Unmanned Aerial Vehicles	97,947	4,000			101,947
	Heavy Fuel Engines			4,000		
175a	Tactical Unmanned Aerial Vehicles	[7950]				0
175b	Advanced Payload	[40531]				0
175c	Small UAV	[1985]				0
175d	Joint Technology Center	[2245]				0

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
175e	Extended Range UAV	[45236]				0
176	Airborne Reconnaissance Systems					0
177	Distributed Common Ground Systems	81,580	15,000			96,580
	Constant Look Operational Support Environment			4,000		
	Asymmetric Threat Response and Analysis Program			5,000		
	Blast Risk Analysis and Mitigation Application			4,000		
	Sensor Visualization Data Fusion			2,000		
178	Avionics Component Improvement Program	1,024				1,024
179	End Item Industrial Preparedness Activities	66,869	9,000			75,869
	Specialized Compact Automated Mechanical Clearance Platform			3,000		
	Non-Hot Pressed Encapsulated Armor Ceramic Manufacturing Technology			6,000		
180	NATO Joint STARS					0
999	Classified Programs	4,271				4,271
	TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT	**1,627,568**	**(2,000)**	**38,000**	**(40,000)**	**1,625,568**
	TOTAL, RDT&E, ARMY	**10,589,604**	**(507,106)**	**567,851**	**(1,074,957)**	**10,082,498**

Items of Special Interest

Active Protection Systems

The committee recognizes the need for future military ground vehicles to incorporate active protection technologies due to the increasing array and capability of anti-vehicle combat systems. The committee is aware that both domestic and foreign producers offer a wide range of active protection systems (APS) using various technologies. The committee urges the Department of Defense to pursue multiple APS development paths due to the diversity of the threats that ground vehicles will face in the future. In addition, due to the non-linear nature of the battlefield in Operation Iraqi Freedom and Operation Enduring Freedom today, the committee supports APS research that seeks to develop protection for light and wheeled vehicles, as well as heavier armored combat platforms.

Advanced lightweight armor materials

The budget request contained $18.6 million in PE 62105A for materials technology.

The programs under this account aim to model, characterize, and incorporate lightweight materials, structures, and processing technologies to enhance survivability of future ground combat vehicles and individual soldier systems.

The committee recommends an increase of $6.0 million in PE 62105A for the development of advanced lightweight armor materials to accelerate work in improving the multi-functional performance capability and survivability of combat vehicles.

Aerial Common Sensor

The budget request contained $26.4 million in PE 23744A for the Department of the Army aerial common sensor (ACS) and contained $16.6 million in PE 35207N for the Department of the Navy's Aerial Common Sensor (ACS) programs.

The committee recognizes that the nation requires the recapitalization of the legacy aerial reconnaissance-low (ARL), RC–12 Guardrail Common Sensor (GRCS), and EP–3 programs in order to succeed in current military operations, provide support to national decision makers, and keep apace of the strategic threat. The committee notes that this is the Army's second and the Navy's third attempt in recapitalizing these critical systems. Over $249.0 million has been expended on failed ACS programs. After most recently attempting to execute a joint program, each service has decided to develop its own capability.

The committee believes that the Army ACS program continues to lack definition and therefore a budget request of this magnitude is premature. The committee is concerned that previously funded ACS efforts in sensor development, performance modeling, intelligence, surveillance, and reconnaissance (ISR) integration and operational concepts have not been fully incorporated into the restructured program. The committee notes that the current definition does not account for the Department's validated military ISR requirements or integrated architectures.

The committee directs the Secretary of the Navy to initiate a program new start for the EP–3 replacement, EP–X, in this fiscal

year, and transfer remaining funds from the ACS programs to the new EP–X program element.

The committee cautions the Departments of the Army and Navy that the ACS program of record must consider common mission systems and consider platforms already in the individual services' inventory. The committee encourages risk mitigation of the ACS program through the reuse of technical data available from the cancelled contract.

The committee recommends $21.4 million, a decrease of $5.0 million, in PE 23744A for the Department of the Army ACS program, and $12.6 million in PE 35207N, a decrease of $4.0 million, for the Department of the Navy ACS program.

Army missile defense systems integration

The budget request contained $14.4 million in PE 63305A for Army missile defense systems integration.

The committee recommends an increase of $7.0 million in PE 63305A. Of the increased amount, $2.0 million is for the continued development of integrated composite mounting hardware for use within missile defense interceptors and $5.0 million is for the advanced hardening initiative.

Cable warning and obstacle avoidance system

The budget request contained $35.9 million in PE 63710A for night vision advanced technology, but contained no funding for the cable warning and obstacle avoidance system.

The committee understands that wires, cables, and other obstacles are a major threat to low flying military aircraft during training and combat operations. Helicopter operations often are required at a very low altitude during periods of reduced visibility caused by a variety of environmental conditions. The committee is aware that an all-weather millimeter wave-imaging radar helicopter demonstration has shown promising results for providing the required warning to helicopter crews. However, additional development is required to increase the field of view, extend the wire detection range, and adapt the system for the helicopter vibration environment.

The committee recommends an increase of $3.0 million in PE 63710A to complete development of an all-weather cable warning and obstacle avoidance system for helicopters and to demonstrate an operational prototype.

Common Remote Operating Weapon Station

The budget request contained $45.2 million in PE 64601A for infantry support weapons; but contained no funds for the integration of the Javelin anti-tank missile onto the common remote operating weapon station (CROWS).

The CROWS system is a vehicle mounted, stabilized remote weapon station system that provides day and night target detection, recognition, and engagement at long distances while allowing the soldier to remain protected by an armored vehicle, accurate shoot on-the-move capability, and one shot-one-hit accuracy that minimizes collateral damage. The committee is aware CROWS has proven its capability successfully and effectively in Operation Iraqi Freedom. The committee understands developmental efforts are

underway to integrate Javelin anti-tank missiles into the CROWS system. The committee believes this program could act as a combat multiplier for Army light infantry brigade combat teams performing unconventional or reconnaissance missions.

The committee recommends an increase of $5.4 million in PE 64601A to complete the integration of the Javelin anti-tank missile onto CROWS systems for operational test and evaluation.

Digital array radar

The budget request contained $67.0 million in PE 63772A for advanced tactical computer science and sensor technology, but contained no funds for digital array radar or advanced radar transceiver integrated circuit development.

The committee supports the completion of the development of the digital array radar in order to validate the technology to support battlefield radar requirements. The committee also supports advanced digital transceiver dual-use development for phased array missile, early warning, weather, and air traffic control purposes.

The committee recommends an increase of $4.0 million in PE 63772A to complete development and test digital array radar prototype antenna technology and $5.0 million in PE 63772A for phased array radar transceiver integrated circuit development.

Enhanced flame retardant clothing systems

The budget request contained $45.2 million in PE 64601A for infantry support weapons, containing $9.7 million for projects involving state-of-the-art individual clothing and equipment to improve the survivability and mobility of the individual soldier; however, the request contained no funds for enhanced flame retardant (FR) clothing systems.

The committee understands there is a need for enhanced FR clothing systems that would provide force protection to the warfighter from severe burns resulting from incendiary improvised explosive devices used in Operation Iraqi Freedom as well as protect the warfighter from enemy detection and observation. The committee notes the U.S. Marine Corps is also developing flame resistant organizational gear to address similar requirements. The committee strongly encourages the Army and the Marine Corps to share critical information regarding enhanced FR clothing systems.

The committee recommends an increase of $2.0 million in PE 64601A for the rapid development of enhanced FR clothing systems.

Epidemiological studies for Operation Iraqi Freedom and Operation Enduring Freedom

The budget request contained $53.3 million in PE 63002A for advanced medical technologies, but contained no funds for epidemiological studies.

The committee remains strongly committed to the health surveillance and protection of members of the armed forces. Sections 733, 734, 735, and 738 of the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005 (Public Law 108–375) required the Department of Defense (DOD) to create a baseline health data collection program, to track medical care and surveillance in the theater of operations, to declassify information on exposures to en-

vironmental hazards, and to fully implement a medical readiness tracking and health surveillance program and force health protection and readiness program. The committee remains concerned that while the services and the Department have made efforts to meet the intent of the law, the Department is not meeting the full requirement and the military services are not effectively carrying out many of DOD's policies.

The committee directs the Secretary of Defense to establish an epidemiological tracking initiative that would capture relevant data from servicemembers returning from overseas operational deployment to create a database of epidemiologically relevant data. The initiative shall then provide the opportunity for researchers to compete for funding on both the basis of scientific merit and the contribution that the studies could make to the identification, diagnosis, and treatment of deployment-related illness(es).

The committee recommends that the projects to be considered for funding under the epidemiological tracking initiative include, but are not limited to the following:

(1) Multiple Sclerosis; and

(2) Adverse health events associated with the use of anti-malarial drugs.

The committee recommends an increase of $5.0 million in PE 63002A for the establishment of the Epidemiological Tracking Initiative and creation of the database of epidemiologically relevant data.

Future Combat Systems Program

The budget request contained $3.7 billion for the Future Combat Systems (FCS) program.

The committee's recommendation to decrease authorized funding for the FCS program in fiscal year 2008 is based upon a combination of significant program schedule and cost challenges, a history of Army changes to the FCS program, and a serious concern about how the cost of the FCS program could undermine the future health of the Army. Although the committee continues to support moving mature technologies that provide needed military capability to the field as soon as possible, the committee is concerned that the larger context in which the FCS program exists has changed significantly since the program began, but the Army has not sufficiently adjusted the FCS program to accommodate the new reality the Army faces.

In the committee report (H. Rept. 109–452) accompanying the National Defense Authorization Act for Fiscal Year 2007 the committee expressed its views regarding the cost and schedule of the FCS program. Despite the Army's restructuring of the FCS program in January 2007, the committee remains concerned that the Army's effort to develop FCS brigades continues to pose a high risk of significant cost increases and substantial schedule delays. In section 115 of the John Warner National Defense Authorization Act of 2007 (Public Law 109–364), the Senate Committee on Armed Services and the House Committee on Armed Services required the Secretary of Defense to conduct an independent cost analysis of the FCS program. This cost estimate, conducted by the Institute for Defense Analysis, concluded that the research, development, test and evaluation (RDT&E) costs for the FCS program could grow by

$13.0 billion over current Army projections, a 50 percent increase in overall RDT&E costs. This analysis of possible cost increase in RDT&E is similar to 2006 RDT&E cost estimates by the Cost Analysis Improvement Group, an element of the Office of the Secretary of Defense.

Additionally, the committee is concerned about the Army's changing position on the overall purpose and size of the FCS program. When funding was first authorized for FCS in the Bob Stump National Defense Authorization Act of 2003 (Public Law 107–314), the Army's goal was to have an initial FCS operational capability in 2010 followed by the conversion of the Army's entire combat force to FCS brigades by 2032. In 2007, the Army's goal is to have an initial FCS operational capability in 2015, with just fifteen of the Army's seventy-six combat brigades converted to FCS configuration by 2029. Overall, the Army's plans for the FCS program have changed from a program intended to rapidly transform the entire Army to one that would focus on transforming just 20 percent of the Army's combat units and provide a medium-weight combat capability similar to that provided by existing Stryker brigade combat teams.

Finally, the committee believes that the overall context in which the FCS program exists has changed dramatically. When first conceived in 1999, the Army was not at war, there was little chance of the size of the Army increasing, and modernization of the Army's existing equipment was not well funded. From the committee's perspective in 2007, all of these basic assumptions have changed. High operational demands on the Army are likely to continue for many years with attendant costs of replacing and resetting equipment used during ongoing operations. Furthermore, the Army is now on a path to add significant additional troops to its ranks, and many other Army equipment modernization efforts are well funded in the 2008–2013 Future Years Defense Program.

Given the Army's many other RDT&E, procurement, and force structure efforts, including continued reset costs to support overseas deployments, upgrades to current combat systems, fully equipping the Army National Guard, completion of the Army's modular force initiative, and the growth in the size of the Army over the next five years, the committee does not believe that the FCS program is on a sustainable or realistic path. As a result, the committee recommends substantial changes to the structure of the FCS program in fiscal year 2008. The committee's recommended changes seek to preserve the aspects of the FCS program that could, if successful, benefit the entire Army and get useful equipment into the hands of soldiers on a realistic timeline. However, the committee's recommended changes seek to delay aspects of the FCS program that will not deliver capability for many years, or are redundant given existing Army capabilities. The committee expects the Army to comply with existing law regarding fielding of the Non Line of Sight Cannon (NLOS–C), which directs the Army to deliver both Increment 0 and Increment 1 prototypes for the NLOS–C in accordance with the schedule found in the Army's 2008 budget justification materials.

Future Combat Systems manned ground vehicles

The budget request contained $696.3 million in PE 64660A for Future Combat Systems (FCS) manned ground vehicle development.

The committee is concerned that much of the FCS manned ground vehicles' survivability in combat is tied to FCS sensors and networking equipment providing vehicle crew members with unprecedented levels of situational awareness regarding enemy and friendly forces. Because the network and sensor elements of FCS are being developed at the same time as the vehicles, should the sensor and network elements face delays or not meet performance expectations, it is possible that the Army would have to reevaluate the design of the FCS manned ground vehicles late in the development process to accommodate lower network capability than now assumed. Changes late in a development cycle could push FCS manned ground vehicles beyond an affordable level given the Army's other procurement goals outside the FCS program in the 2010–2015 timeframe. Based on this cost risk, delays in complementary programs, high-risk technology elements, and unstable requirements, the committee believes that the Army should delay the development of FCS manned ground vehicles.

The committee recommends $463.0 million, a decrease of $233.3 million in PE 64660A, for FCS manned ground vehicle development. The committee notes that this decrease leaves intact the FCS program's efforts to develop the non line-of-sight cannon system, funding for which is authorized under a separate program element. The committee also leaves funding intact for development of active protection systems, which the committee believes is an important element for all future Army vehicles.

Future Combat Systems system of systems engineering and program management

The budget request contained $1.6 billion in PE 64661A for Future Combat Systems (FCS) system of systems engineering and program management.

This budget request is based upon integration of work done in the other aspects of the FCS program that are separately funded. Because the committee is recommending significant decreases to other parts of the FCS program, the committee believes that decreases in the FCS system of systems engineering and program management program element are warranted to properly align overall program management and engineering efforts with the total authorized level of funding.

The committee recommends $1.0 billion, a decrease of $566.3 million in PE 64661A, for FCS system of systems engineering and program management.

Future Combat Systems unmanned aerial systems

The budget request contained $41.1 million in PE 64662A for Future Combat Systems (FCS) unmanned aerial systems (UAS) development.

The committee notes that the Army is currently fielding a large fleet of UAS of various models and capabilities. The committee believes that the Class IV FCS unmanned aerial system provides a

capability that would be redundant when considering other Army UAS programs.

The committee recommends $20.1 million, a decrease of $21.0 million in PE 64662A, for FCS UAS development.

Future Combat Systems unmanned ground vehicles

The budget request contained $90.7 million in PE 64663A for Future Combat Systems (FCS) unmanned ground vehicle development.

The committee believes that while large or armed FCS unmanned ground vehicles could provide a useful capability to the Army in the future, a combination of high-risk technology development, unclear requirements, and immature operational concepts require additional time devoted to developing basic technologies for large or armed FCS unmanned ground vehicles.

The committee recommends $43.9 million, a decrease of $46.7 million in PE 64663A, for FCS unmanned ground vehicle development.

Global Combat Support System

The budget request contained $129.7 million in PE 33141A for the Global Combat Support System-Army (GCSS–A).

GCSS–A is the tactical component of the Single Army Logistics Enterprise (SALE), and will implement a comprehensive logistics automation solution for deployed units that provides streamlined supply operations, maintenance operations, property accountability and logistics management, and integration procedures. The committee notes, however, that the Army is encountering problems in executing the acquisition and test strategies for this program, which will likely affect the Army's ability to execute funds in a timely manner.

The committee recommends $94.7 million, a decrease of $35.0 million in PE 33141A to GCSS–A.

Leishmaniasis skin test antigen

The budget request contained $12.5 million in PE 63807A for medical systems advanced development, but contained no funds for leishmaniasis skin test antigen.

Leishmaniasis is normally a cutaneous parasitic disease that is endemic to many global regions where U.S. military involvement is possible. Approximately 1000 cases a year are diagnosed in military personnel deployed to Operation Iraqi Freedom and Operation Enduring Freedom, which has resulted in a significant number of evacuations for treatment in the continental United States. During Operation Desert Storm, visceralization of the disease was observed for the first time, leading to a number of servicemember fatalities. Leishmaniasis also poses a threat to the blood supply, which is now managed by screening out military donors who have recently returned from deployment in endemic regions.

The committee understands that in fiscal year 2000, the U.S. Army Medical Material Development Activity programmed funds for Food and Drug Administration (FDA) trials of a diagnostic antigen skin test that had been under intramural development, but because of funding constraints ceased support in fiscal year 2003 to concentrate exclusively on clinical treatments for those personnel

already presenting symptoms. The committee believes a leishmania antigen skin test would provide a valuable tool for military doctors to identify and provide definitive care to asymptomatic servicemembers infected with the parasite, and to safeguard the blood supply by screening out servicemembers who should not become donors.

The committee recommends $14.5 million, an increase of $2.0 million in PE 63807A, to support FDA phase III trials of the leishmaniasis skin test antigen.

Lightweight small arms technologies

The budget request contained $8.1 million in PE 63607A for the joint service small arms program, containing $7.3 million for lightweight small arms technologies (LSAT) demonstrations.

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 are two of the four heaviest items an infantryman carries into combat. The committee notes that the basic infantryman entering combat can be required to carry combat configured loads of equipment exceeding 90 pounds. The committee is supportive of efforts that accelerate advanced technologies to reduce the combat carrying equipment load for dismounted infantrymen. Additionally, the committee believes lighter combat configured equipment loads will have a positive effect on soldier performance and mobility.

The committee recommends $13.1 million, an increase of $5.0 million in PE 63607A to accelerate the early "spin out" demonstrations of lightweight technology enhancements to existing small arms weapon programs.

Longitudinal research on troop health outcomes

The Veterans Health Care Amendments of 1983 (Public Law 98–160) directed the Department of Veterans Administration to conduct a study in order to better understand Vietnam veterans' psychological postwar adjustment trends. This investigation, known as the National Vietnam Veterans Readjustment Study, provided results and recommendations to Congress that continue to help shape important public policies for the prevention and treatment of posttraumatic stress disorder for military and veteran populations. With ongoing deployments to Operation Iraqi Freedom and Operation Enduring Freedom there is evidence, from short-term studies of military personnel and veterans, that the current war zones may be associated with unique health outcomes not seen in former veterans' cohorts. Experts acknowledge that these problems may negatively affect both military readiness and the quality of life of deployed service members and their families.

The committee believes that a representative, longitudinal study with a comprehensive clinical assessment of key outcomes is required so that the true needs of deployed service members and their families can be identified and supported. The committee encourages the Secretary of Defense and the Secretary of Veterans Affairs to engage in a research partnership to proactively identify and address the short and long-term health and behavioral health consequences of war zone service among servicemembers and their families.

Modeling fatigue and cognitive effectiveness

The budget request contained $76.5 million in PE 62787A for medical technologies, containing $3.1 million for modeling fatigue in warfighters, but contained no funds for modeling the impact of fatigue on operationally-relevant cognitive effectiveness.

The committee is aware of the need for understanding the interaction between the warfighter's fatigue and operationally-relevant cognitive effectiveness. The committee believes that technology solutions that improve this understanding and can provide relevant data to battlefield commanders would prove critical to the commander's situational awareness.

The committee recommends an increase of $4.0 million in PE 62787A for developing modeling technology to evaluate individual warfighter fatigue and operationally-relevant cognitive effectiveness.

Nanocrystaline laminates and protective coatings for rotorcraft windscreens

Blowing sand and dust particles cause damage to helicopter windscreens, inhibiting the ability of aircrew members to see through the windscreens, requiring the expenditure of funds, and resulting in aircraft downtime to repair.

The committee is aware that thin film laminates are being applied to helicopters operating in Operation Iraqi Freedom and Operation Enduring Freedom which is resulting in dollar and manpower savings. Promising technology has also been demonstrated using plasma enhanced chemical vapor deposition for applying a nanocrystalline diamond thin film layer onto critical engine, transmission, and structural aircraft components to increase durability in harsh environments.

The committee encourages the Department of Defense to examine the use of nanocrystalline diamond coatings and protective laminants on critical systems to preserve components, increase aircraft availability, reduce costs, and increase safety.

Network enabled combat identification

The budget request contained $39.8 million in PE 62120A for sensors and electronic survivability, containing $1.9 million for combat identification (CID) technologies.

The committee recognizes the urgent need to field a cost-effective CID network combat capability that will provide the warfighter greater freedom of action and enable enhanced operational tempo, while reducing fratricide in all tactical and operational environments including urban and restrictive terrain.

The committee recommends an increase of $5.0 million in PE 62120A for continued development and demonstration of network enabled CID.

Oxygen diffusion dressings

The budget request contained $76.5 million in PE 62787A for medical technology, but included no funding for oxygen diffusion dressings for the accelerated healing of battlefield wounds and burns.

Wounds are generally hypoxic and oxygen has been shown to have a beneficial effect on wound healing. The committee under-

stands, however, that practical implementation of oxygen therapy at reasonable cost with broad flexibility has been problematic. The committee is aware that the Food and Drug Administration has recently approved an oxygen diffusion dressing that allows the slow release of oxygen directly to the wound site. The committee believes these dressings have the potential to improve outcomes for servicemembers suffering from burns and injuries, two priorities for the U.S. Army Institute for Surgical Research.

The committee recommends an increase of $1.0 million in PE 62787A to assess the efficacy of oxygen diffusion dressings in reducing healing time, pain, scarring, and complications such as infection.

Patriot/Medium Extended Air Defense System combined aggregate program

The budget request contained $372.1 million in PE 64869A for the Patriot/Medium Extended Air Defense System (MEADS) combined aggregate program, a decrease of $177.3 million from what was originally planned for fiscal year 2008 according to budget justification material provided by the Army.

The committee is concerned that this decrease could potentially impact the U.S. contribution to the tri-national U.S./German/Italian MEADS program. The committee is aware that the Army plans to re-program approximately $42.0 million to ensure that it meets its commitments to the MEADS program. The committee believes that MEADS will provide the warfighter an improved capability to deal with short- and medium-range ballistic and cruise missile threats and encourages the Army to fully fund the MEADS program in its future budget requests.

The committee recommends $372.1 million in PE 64869A for the Patriot/Medium Extended Air Defense System combined aggregate program, the amount of the budget request.

Polymer matrix composites for rotorcraft drive systems

The budget request contained $53.9 million in PE 63003A for aviation advanced technology, but contained no funds for the demonstration of polymer matrix composite drive trains.

The committee notes the opportunity to reduce production, operations, and support costs of rotorcraft through the use of polymer matrix composite (PMC) technologies for major components such as drive trains. Prior year funding for risk reduction and coupon testing has resulted in the development of PMC full scale test articles that require life system testing prior to integration for actual rotorcraft testing.

The committee recommends an increase of $8.0 million in PE 63003A to demonstrate full scale PMC drive train test articles under the rotorcraft drive system-21 program.

RAND Arroyo Center

The budget request contained $16.3 million in PE 65103A for the RAND Arroyo Center.

The committee is concerned that the Army proposed decreasing the budget for its only Federally Funded Research and Development Center (FFRDC) from a requested amount of $21.5 million in fiscal year 2007 to a requested amount of $16.3 million in fiscal

year 2008. The committee recognizes the important role of FFRDCs in developing solutions to critical Army resourcing, logistics, manpower, training, technology development and strategic concepts challenges, and believes that the proposed 24 percent funding decrease will significantly reduce the RAND Arroyo Center's ability to provide high-quality analysis to the Army.

The committee recommends $18.3 million, an increase of $2.0 million in PE 65103A for the RAND Arroyo Center.

Sensor visualization and data fusion program

The budget request contained $81.6 million in PE 35208A for the Distributed Common Ground System (DCGS).

The committee recognizes the potential for the DCGS program to enhance the capabilities of commanders to synchronize and consolidate intelligence data fusion efforts. The committee also recognizes the use for video simulation of battlefield threats in mission rehearsals.

The committee recommends an increase of $2.0 million in PE 35208A for the sensor visualization and data fusion research within the DCGS program.

Smart energetic architecture for missile systems

The budget request contained no funds for the smart energetic architecture for missile systems.

The smart energetic architecture for missile systems is intended to improve the safety, reliability, and performance of missile systems across the Department of Defense.

The committee recommends an increase of $4.5 million in PE 63313A to raise the technology readiness level rating of the smart energetic architecture for missile systems.

Tactical metal fabrication system

The budget request contained no funds for the tactical metal fabrication system.

The tactical metal fabrication system would provide a mobile, containerized foundry to provide deployed forces with the capability to manufacturer repair parts in theater.

The committee recommends an increase of $6.3 million in PE 62601A for the tactical metal fabrication system.

Tactical wheeled vehicle improvement program

The budget request contained no funds for the tactical wheeled vehicle improvement program.

The committee remains concerned about casualties caused by rollovers of overweight lightweight tactical wheeled vehicles. While survivability against improvised explosive devices remains a primary concern, the importance of rollover prevention should also be considered as the Department of Defense develops the next generation of lightweight tactical vehicles as an important force protection measure. The committee is aware domestic torque-vectoring technology could increase stability and performance in lightweight commercially available vehicles. The committee notes torque-vectoring allows active control of wheel speed ratio and torque distribution typically through the application of multi-plate wet clutches coupled with advance gear-train technology. The committee encour-

ages the Secretary of Army to examine the feasibility and capital investment required to develop the means to transfer commercially available torque-vectoring technology, once its been demonstrated, to the emerging and future classes of lightweight tactical wheeled vehicles.

Tactical wheeled vehicle long term armoring strategy

The budget request contained $131.4 million in PE 63005A for combat vehicle and automotive advanced technology.

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 using an A-Kit/B-Kit concept. The committee is aware 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 understands the LTAS would allow for the upgrade of armor protection as the force protection threat increases or as new armoring technologies are developed. The committee supports this initiative and commends the Army for pursuing this capability based strategy.

The committee understands aluminum has been chosen as a base material for the development of future TWV armor kits as part of the LTAS. The committee understands fiscal year 2007 appropriations are being used to perform the design and development of several large structural components for the truck fleet to include the integration of an aluminum A-kit, side plates, frame rails, cross members into a common chassis. The committee also understands significant work is being conducted to advance the development and re-engineer the design of antiballistic windshield armor prototypes (AWA) to be integrated onto the TWV fleet.

The committee recommends an increase of $10.0 million in PE 63005A to demonstrate the use of aluminum alloys, processes, and other joining technologies to meet LTAS requirements for the TWV fleet, as well as an increase of $4.5 million in PE 63005A for the development of advanced AWA prototypes.

Training-based collaborative research in consequence management

The budget request contained $17.4 million in PE 62716A for human factors engineering technology, but contained no funds for training-based collaborative research in military consequent management efforts.

The committee strongly supports Department of Defense initiatives to improve training and urges the Department to establish well-defined training performance measurements as a means to ameliorate effective training and soldier performance on the battlefield, especially for arduous and dynamic situations involving consequence management activities. To improve the effectiveness of training for such situations the committee encourages the Department to continue efforts to harness the collective talents of industry and academia, and to introduce technological innovation at the earliest phases of doctrinal and acquisition development. The committee urges the Department to apply these techniques to military

law enforcement, chemical-biological management and training, mine and unexploded ordnance mitigation, non-lethal weaponry, and other engineering disciplines. The committee strongly supports efforts to improve these capabilities.

The committee recommends an increase of $25.0 million in PE 62716A for training-based collaborative research.

Unmanned rotorcraft risk reduction demonstrations

The budget request contained $55.0 million in PE 62618A for ballistics technology, but contained no funds for the DP–5X unmanned helicopter for testing advanced blades, engines, weapons and tail boom technologies.

The committee recommends an increase of $1.8 million in PE 62618A to procure DP–5X rotorcraft test aircraft.

Warfighter Information Network—Tactical

The budget request contained $222.3 million in PE 63782A for continued development of the Warfighter Information Network—Tactical (WIN–T).

The committee expressed a concern regarding the lack of coordination and potential capability overlap between the WIN–T program and the Joint Network Node (JNN) program in the John Warner National Defense Authorization Act for Fiscal Year 2007 (Public Law 109–364). The WIN–T program continues to experience unclear requirements, schedule changes, cost growth, and high-risk technology development challenges. In addition, on March 5, 2007 the committee received notification of a Nunn-McCurdy cost growth breach for the WIN–T program. The Under Secretary of Defense for Acquisition, Technology, and Logistics is required to make a final decision on the future of the WIN–T program by June 5, 2007. The committee also notes that the Army has now committed to field the JNN system, a system that provides a similar capability to that planned for the WIN–T system, to the entire Army.

The committee recommends $120.0 million in PE 63782A, a decrease of $102.3 million for the WIN–T program. The committee urges the Army to stabilize the WIN–T program and place it on a schedule that more realistically addresses the Army's substantial existing and planned investment in the JNN system. The committee also urges the Army to consider using the WIN–T program to upgrade existing JNN equipment using incremental improvements to bring the WIN–T program's mobile networking capability to the Army as soon as possible. The committee also urges the Army to consolidate its oversight and management of the JNN and WIN–T programs to better manage the path toward a single future battlefield network capability.

NAVY RESEARCH, DEVELOPMENT, TEST, AND EVALUATION

Overview

The budget request contained $17.1 billion for Navy research, development, test, and evaluation (RDT&E).

The committee recommends $17.3 billion, an increase of $258.1 million to the budget request.

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
	RESEARCH, DEVELOPMENT, TEST & EVALUATION, NAVY	**0**				
	BASIC RESEARCH					
1	University Research Initiatives	76,637	5,000			81,637
	Center for Nanosciences and Nanomaterials			5,000		
2	In-House Laboratory Independent Research	16,556				16,556
3	Defense Research Sciences	374,052	5,000			379,052
	Energetics Concepts and Development			5,000		
						0
	TOTAL, BASIC RESEARCH	**467,245**	**10,000**	**10,000**	**0**	**477,245**
	APPLIED RESEARCH					
4	Power Projection Applied Research	83,419	13,300			96,719
	High Energy Conventional Energetics			6,000		
	Jefferson Lab High Power FEL Development			5,000		
	Advanced Linear Accelerator			2,300		
5	Force Protection Applied Research	155,936	1,500			157,436
	Optical Recognition Protocol for Biologics Detection			1,500		
6	Marine Corps Landing Force Technology	26,785	3,000			29,785
	Compact Pulse Power Sources			3,000		
7	Materials, Electronics and Computer Technology	0	5,000			5,000
	Improved Corrosion Protection for Electromagnetic Aircraft Launch System (EMALS)			3,000		
	Infrared Materials Center			2,000		
8	Common Picture Applied Research	93,376	6,000			99,376
	Agile Coalition Environment			4,000		

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
	Blossom Point Satellite Facility			2,000		
9	Warfighter Sustainment Applied Research	88,297	15,000			103,297
	PULSE-Virtual Clinical Learning Lab			15,000		
10	RF Systems Applied Research	45,451				45,451
11	Ocean Warfighting Environment Applied Research	49,869	2,240			52,109
	Marine Mammal Effects of Sound			2,240		
12	Joint Non-Lethal Weapons Applied Research	6,081				6,081
13	Undersea Warfare Applied Research	68,455	4,800			73,255
	Persistent Littoral Under Sea Surveillance			4,800		
14	Mine and Expeditionary Warfare Applied Research	59,874	4,000			63,874
	Autonomous Underwater Vehicle Docking and Recharging Station			4,000		
	TOTAL, APPLIED RESEARCH	**677,543**	**54,840**	**54,840**	**0**	**732,383**
	ADVANCED TECHNOLOGY DEVELOPMENT					
15	Power Projection Advanced Technology/ RATTLRS	49,684	17,000			66,684
	Countermine LIDAR Undersea Vehicle (CLUBS)			2,200		
	Tactical Compact Optical Interrogator			7,800		
	High Bandwidth Ship to Ship Optical Communications			1,000		
	DP-2 Vectored Thrust Aircraft			6,000		
16	Force Protection Advanced Technology	70,850	47,000			117,850
	Composite Technologies for SOF Medium Range Endurance Craft			1,000		
	Swimmer Detection Sonar			6,000		
	Secure Naval Infrastructure			7,000		
	Naval Power Systems and Homeport Security			7,000		
	High Speed Power Node Switching and Control			4,000		
	Seafighter			22,000		

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
17	Common Picture Advanced Technology	40,782	12,800			53,582
	Project Athena			10,000		
	Maritime Identification Surveillance Technology			2,800		
18	Warfighter Sustainment Advanced Technology	102,124				102,124
19	RF Systems Advanced Technology	22,676				22,676
20	Marine Corps Advanced Technology Demonstration (ATD)	70,968	2,500			73,468
	Ground Warfare Acoustical Combat System			2,500		
20a	Advanced Technology Demonstration (ATD)					0
21	Joint Non-Lethal Weapons Technology Development	10,938	7,000			17,938
	Hail and Warning Laser			7,000		
22	Navy Technical Information Presentation System	0				0
23	Warfighter Protection Advanced Technology	12,145				12,145
24	Undersea Warfare Advanced Technology	73,626	5,700			79,326
	Deployable Autonomous Distributed System			5,700		
25	Navy Warfighting Experiments and Demonstrations	41,196				41,196
26	Mine and Expeditionary Warfare Advanced Technology	26,840				26,840
	TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT	**521,829**	**92,000**	**92,000**	**0**	**613,829**
	ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES					
27	Air/Ocean Tactical Applications	47,914				47,914
28	Aviation Survivability	6,252	11,250			17,502
	Rotorcraft External Airbag System			4,000		
	Air Sentinel UAS			7,250		
29	Deployable Joint Command and Control	9,475				9,475
30	ASW Systems Development	16,706	10,000			26,706
	Marine Mammal Alert System			4,000		

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
	Tactical E-Field Buoy Development Program			6,000		
31	Tactical Airborne Reconnaissance / UAV CONOPS	4,063				4,063
32	Advanced Combat Systems Technology	9,331	8,000			17,331
	Open Architecture Technology Insertion Management Environment			8,000		
33	Surface and Shallow Water Mine Countermeasures	91,122				91,122
34	Surface Ship Torpedo Defense	15,967				15,967
35	Carrier Systems Development (CVN-21)	84,806				84,806
36	Shipboard System Component Development	9,450	29,500			38,950
	Diagnostic Pump System			6,000		
	High Temperature Superconducting Motor			9,000		
	Hybrid Propulsion Permanent Magnet Motor			8,000		
	Propulsor Manufacturing Technology Department			6,500		
37	PILOT FISH	132,131				132,131
38	REFRACT LARCH	89,601				89,601
39	REFRACT JUNIPER	37,405				37,405
40	Radiological Control	1,546				1,546
41	Surface ASW	25,560				25,560
42	SSGN Conversion					0
43	Advanced Submarine System Development	134,882	9,750			144,632
	Fiber Optic Federated Acoustic Systems			4,000		
	Twinline Thin Line Towed Array			4,500		
	Low Cost Laser Module Assembly for High Frequency Fiber Optic Acoustic Sensors			1,250		
44	Submarine Tactical Warfare Systems	9,865				9,865
45	Ship Concept Advanced Design	30,858				30,858
46	Ship Preliminary Design & Feasibility Studies	18,736	10,000			28,736
	Wavemaker Replacement at Naval Surface Warfare Center (NSWC)			10,000		
47	Advanced Nuclear Power Systems (CVN-21)	166,196				166,196
48	Advanced Surface Machinery Systems	0				0

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
49	CHALK EAGLE	211,201				211,201
50	Littoral Combat Ship (LCS)	217,502				217,502
51	Combat Systems Integration	53,427				53,427
52	Conventional Munitions	8,941				8,941
53	Marine Corps Assault Vehicles	288,220	(200,000)			88,220
	Program Delay				(200,000)	
54	Marine Corps Mine/Countermeasures Systems - Adv Dev: Mine Detector	657				657
55	Marine Corps Ground Combat/Support System/JLTV	80,403				80,403
56	Joint Service Explosive Ordnance Development	83,361				83,361
57	Cooperative Engagement	33,283				33,283
58	Ocean Engineering Technology Development	5,122				5,122
59	Environmental Protection	19,850				19,850
60	Navy Energy Program	5,335	1,500			6,835
	Synthetic Fuels			1,500		
61	Facilities Improvement	4,131				4,131
62	CHALK CORAL	28,297				28,297
63	Navy Logistic Productivity	3,547				3,547
64	REFRACT MAPLE	346,144				346,144
65	LINK PLUMERIA	88,748				88,748
66	REFRACT ELM	79,144				79,144
67	Ship Self Defense	10,954				10,954
68	LINK EVERGREEN	31,607				31,607
69	Special Processes	40,940				40,940
70	NATO Research and Development	9,934				9,934
71	Land Attack Technology	31,021	38,000			69,021
	JSOW-ER Demo			3,000		

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
	Affordable Weapon System			30,000		
	76mm Super Rapid Medium Caliber Gun System			5,000		
72	Nonlethal Weapons	45,892				45,892
73	Joint Combat ID Evaluation Team [All Services Combat ID Evaluation Team]	0				0
74	Joint Precision Approach and Landing Systems	70,811				70,811
75	Single Integrated Air Picture (SIAP) System Engineer (SE)	46,450				46,450
76	Counterdrug RDT&E Projects	0				0
77	Directed Energy Research					
78	Tactical Air Directional Infrared Countermeasures (TADIRCM)	27,569	4,000			31,569
	High Power Fiber Laser Based Pod			4,000		
79	Conventional TRIDENT [Hard and Deeply Buried Target Defeat System]	126,434				126,434
80	Joint Air-to-Ground Missile (JAGM)	15,000				15,000
81	Space and Electronic Warfare (SEW) Architecture/Engineering Support	42,295				42,295
82	Joint Warfare Transformation Programs	0				0
	TOTAL, ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES	**2,998,086**	**(78,000)**	**122,000**	**(200,000)**	**2,920,086**
	SYSTEM DEVELOPMENT & DEMONSTRATION					
83	Other Helo Development	46,815				46,815
84	AV-8B Aircraft - Eng Dev	17,360				17,360
85	Standards Development	106,242	7,500			113,742
	Advanced Measurements Standards			7,500		
86	Multi-Mission Helicopter Upgrade Development	78,151				78,151
87	Air/Ocean Equipment Engineering	5,162				5,162
88	P-3 Modernization Program	8,621				8,621
89	Naval Coastal Warfare (Warfare Support System)	2,911				2,911
90	Tactical Command System	86,921	5,000			91,921
	Software Reconfigurable Payloads			5,000		

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
91	Advanced Hawkeye	808,993				808,993
92	H-1 Upgrades	3,608				3,608
93	Acoustic Search Sensors	18,325	2,000			20,325
	Deep Extended Echo Ranging			2,000		
94	V-22A	117,997				117,997
95	Air Crew Systems Development	24,267				24,267
96	EA-18G	272,699				272,699
97	EW Development	41,064				41,064
98	VH-71 Executive Helo Development	270,971				270,971
99	Joint Tactical Radio System - Navy (JTRS-Navy)	853,676				853,676
100	DDG 1000	621,544	9,000			630,544
	Permanent Magnet Motor			9,000		
101	Aegis Combat System Engineering (Surface Combatant Combat System Engineering)	142,810				142,810
102	LPD-17 Class System Integration	4,300				4,300
103	Small Diameter Bomb (SDB)	9,832				9,832
104	Standard Missile Improvements	231,791				231,791
105	Airborne MCM	54,761				54,761
106	Naval Integrated Fire Control - Counter Air Systems Engineering	11,497				11,497
107	Advanced Above Water Sensors	121,494				121,494
108	SSN-688 and Trident Mods (Submarine Systems Development)	114,789				114,789
109	Air Control	4,166				4,166
110	Enhanced Modular Signal Processor	0				0
111	Shipboard Aviation Systems	28,100				28,100
112	Combat Information Center Conversion	17,139				17,139
113	Virginia Class Design	223,958				223,958
114	SSN-21 Developments	2,457				2,457
115	Submarine Tactical Warfare System	53,703				53,703
116	Ship Contract Design/ Live Fire T&E (CVN-21)	62,404				62,404

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
117	Navy Tactical Computer Resources	0				0
118	Mine Development	2,092				2,092
119	Unguided Conventional Air-Launched Weapons	0				0
120	Lightweight Torpedo Development	27,056				27,056
121	JDAM					
122	Joint Service Explosive Ordnance Development	10,382				10,382
123	Personnel, Training, Simulation, and Human Factors	8,830				8,830
124	Battle Group Passive Horizon Extension System	0				0
125	Joint Standoff Weapon Systems	24,851				24,851
126	Ship Self Defense (Detect & Control)	33,064				33,064
127	Ship Self Defense (Engage: Hard Kill)	67,366	7,800			75,166
	Phalanx Next Generation			7,800		
128	Ship Self Defense (Engage: Soft Kill/EW)	34,323	3,000			37,323
	Distributed Detection, Classification, Localization (DCL)			3,000		
129	Intelligence Engineering	1,959				1,959
130	Medical Development	7,973	14,275			22,248
	Pandemic Influenza Vaccine Program			2,000		
	Implantable Middle-Ear Hearing System			4,000		
	Human Clinical Trials - Infusible Hemostatic Drug			8,275		
131	Navigation/ID System	42,121				42,121
132	Distributed Surveillance System					0
133	Joint Strike Fighter (JSF)	1,707,372	115,000			1,822,372
	Program Reduction				(125,000)	
	Competitive Engine Program			240,000		
134	Smart Card Program	0				0
135	USMC Information Technology Development	22,181				22,181
136	Information Technology Development	54,098				54,098

(Dollars in Thousands)

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
137	Multinational Information Sharing (MNIS)					0
138	CH-53K	417,161				417,161
139	Multi-mission Maritime Aircraft (MMA)	880,106				880,106
140	Tactical Cryptologic Systems	39,053				39,053
	TOTAL, SYSTEM DEVELOPMENT & DEMONSTRATION	**7,848,516**	**163,575**	**288,575**	**(125,000)**	**8,012,091**
	RDT&E MANAGEMENT SUPPORT					
141	Threat Simulator Development	23,924				23,924
142	Target Systems Development	32,376	10,000			42,376
	Threat D Target System			10,000		
143	Major T&E Investment	37,614	6,000			43,614
	Fiber Optic Data Link - Network Expansion			6,000		
144	Studies and Analysis Support - Navy	7,516				7,516
145	Center for Naval Analyses	49,360				49,360
146	Fleet Tactical Development					0
147	Small Business Innovative Research	0				0
148	Technical Information Services	694				694
149	Management, Technical & International Support	49,498				49,498
150	Strategic Technical Support	3,452				3,452
151	RDT&E Science and Technology Management	68,180				68,180
152	RDT&E Instrumentation Modernization	1,423				1,423
153	RDT&E Ship and Aircraft Support	184,541				184,541
154	Test and Evaluation Support	336,130				336,130
155	Operational Test and Evaluation Capability	12,176				12,176

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
156	Navy Space and Electronic Warfare (SEW) Support	2,439				2,439
157	SEW Surveillance/Reconnaissance Support	29,071				29,071
158	Marine Corps Program Wide Support	20,166				20,166
159	Tactical Cryptologic Activities	1,508				1,508
160	Service Support to JFCOM, JNTC	5,078				5,078
161	Financing for Cancelled Account Adjustments	0				0
	TOTAL, RDT&E MANAGEMENT SUPPORT	**865,146**	**16,000**	**16,000**	**0**	**881,146**
	OPERATIONAL SYSTEMS DEVELOPMENT					
162	Advanced Development Projects					
163	HARPOON Modifications	43,470				43,470
164	UCAV	161,665				161,665
165	Strategic Sub & Weapons System Support	81,398	(25,000)			56,398
	Reliable Replacement Warhead				(25,000)	
166	SSBN Security Technology Program	33,109				33,109
167	Submarine Defensive Warfare Systems	4,149				4,149
168	Navy Strategic Communications/E-6B	36,531				36,531
169	Rapid Technology Transition (RTT)	44,756				44,756
170	F/A-18 Squadrons	44,891				44,891
171	E-2 Squadrons	22,691				22,691
172	Fleet Telecommunications (Tactical)	23,108	4,900			28,008
	Communications Upgrade - DDG Modernization			3,900		
	IPv6 Transition Planning Laboratory - SPAWAR			1,000		
173	Tomahawk Weapons System	11,405	1,750			13,155
	Weapons Control System			1,750		
174	Integrated Surveillance System	27,740				27,740
175	Amphibious Tactical Support Units	1,845				1,845

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
176	Consolidated Training Systems Development	6,987				6,987
177	Cryptologic Direct Support	1,443				1,443
178	Electronic Warfare (EW) Readiness Support	34,340				34,340
179	HARM Improvement / AARGM	34,762				34,762
180	Tactical Data Links	5,534				5,534
181	Surface ASW Combat System Integration	11,200	10,000			21,200
	Acoustic Windows			10,000		
182	MK-48 ADCAP	17,941	2,000			19,941
	Post Launch Communication System			2,000		
183	Aviation Improvements	100,284	3,000			103,284
	Age Exploration Model			3,000		
184	Navy Science Assistance Program	3,473				3,473
185	Operational Nuclear Power Systems	71,720				71,720
186	Marine Corps Communications Systems	280,140				280,140
187	Marine Corps Ground Combat/Supporting Arms Systems	57,177	4,000			61,177
	Ultrasonic Consolidation for Embedded Sensors			4,000		
188	Marine Corps Combat Services Support	12,946				12,946
189	Tactical Air Intercept Missiles (Tactical AIM Missiles)	4,445				4,445
190	Advanced Medium Range Air-to-Air Missile (AMRAAM)	4,579				4,579
191	Joint High Speed Vessel (JHSV)	18,934				18,934
192	Maritime Intelligence					
193	Collection Management					
194	Technical Reconnaissance and Surveillance					
195	Satellite Communications (SPACE)	736,572	2,000			738,572
	Joint Integrated systems for Advanced Digital Networking			2,000		
196	Information Systems Security Program	28,393				28,393
197	Joint Command and Control Program (JC2)	1,007				1,007
198	Joint Command and Control Program	5,015				5,015

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
199	COBRA JUDY	132,679				132,679
200	Defense Meteorological Satellite Program	4,887				4,887
201	Joint C4ISR Battle Center (JBC)	0				0
202	Joint Military Intelligence Programs	5,444				5,444
203	Tactical Unmanned Aerial Vehicles	50,185	1,000			51,185
	Compact Real-Time Hyperspectral ISR			1,000		
204	Endurance Unmanned Aerial Vehicles	116,666				116,666
205	Airborne Reconnaissance Systems	50,677				50,677
206	Manned Reconnaissance Systems	22,488				22,488
207	Distributed Common Ground Systems	19,350				19,350
208	Aerial Common Sensor (ACS)	16,606	(4,000)			12,606
	Aerial Common Sensor				(4,000)	
209	Modeling and Simulation Support	7,832				7,832
210	Depot Maintenance (Non-IF)	19,402				19,402
211	Avionics Component Improvement Program	1,635				1,635
212	Industrial Preparedness	56,445				56,445
213	Maritime Technology (National Shipbuilding Research Program)	0				0
999	Classified Programs	1,219,225				1,219,225
	TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT	**3,697,171**	**(350)**	**28,650**	**(29,000)**	**3,696,821**
	TOTAL, RDT&E, NAVY	**17,075,536**	**258,065**	**612,065**	**(354,000)**	**17,333,601**

Items of Special Interest

76mm super rapid medium caliber gun system

The budget request contained $31.0 million in PE 63795N for land attack technology, but contained no funds for continued testing of the 76mm super rapid medium caliber gun system.

The committee believes this system may advance the threshold of superiority for medium caliber gun systems on naval vessels and creates a competitive environment for future procurement of medium caliber gun systems.

The committee recommends an increase of $5.0 million in PE 63795N for continued testing of the 76mm super rapid medium caliber gun system.

Advanced materials for acoustic window applications.

The budget request contained $11.2 million in PE 25620N for surface anti-submarine warfare combat system integration, but contained no funds for advanced materials for acoustic window applications.

The committee remains concerned over the failure of existing sonar array windows on surface vessels. Therefore, the committee encourages the Secretary of the Navy to begin a developmental program using advanced composite materials. This program should combine numerical analysis techniques with large scale testing.

The committee recommends an increase of $10.0 million in PE 25620N for advanced materials for acoustic window applications.

Advanced non-lethal hail and warning laser system

The budget request contained $10.9 million in PE 63651M for joint non-lethal weapons technology development, but contained no funds for the enhancement of the non-lethal hail and warning laser system.

The committee recognizes the Marine Corps' need to signal and hail vehicles at increased operational ranges. The committee encourages the Marine Corps to identify and integrate new laser technologies and techniques in its hail and warning devices such that range is increased and eye safety is improved for both civilian and military personnel.

The committee recommends $17.9 million, an increase of $7.0 million in PE 63651M for the enhancement of the non-lethal hail and warning laser system.

Affordable Weapon System

The budget request contained $31.0 million in PE 63795N for land attack technology, but contained no funds for the Affordable Weapon System (AWS).

The committee understands that AWS is an advanced technology initiative to design, develop, and produce a precision guided weapon similar to existing missile systems. Launched by a small rocket booster and powered in flight by a small turbojet engine, AWS is designed to carry a 200-pound warhead to a target over 600 hundred miles away, and could support the Navy triad of fires concept for combat operations in the littorals. During previous flight testing, AWS demonstrated line-of-sight communications and could have the potential to communicate with ground control stations

using beyond line-of-sight satellite data links. The concept of AWS employment is to fly directly to its target guided by the Global Positioning System, or loiter for several hours until a forward observer commands it to a target. AWS could be adapted to a variety of launch platforms and payloads, and could offer a unique opportunity to leverage commercial off-the-shelf technologies and systems engineering principles to rapidly produce and deploy an affordable loitering cruise missile.

The committee recommends an increase of $30.0 million in PE 63795N for AWS.

Age exploration model

The budget request contained $100.3 million in PE 25633N for the development of various aviation-related improvements, but contained no funds for development of age exploration model.

The age exploration model is being developed to understand connections between aircraft age, reliability, maintainability, and readiness to provide the Department of the Navy with a tool for understanding, predicting, and communicating impacts of decisions to extend aircraft service lives, and for mitigating risks associated with these decisions. The committee notes that development of the age exploration model was initiated by the Department of the Navy in fiscal year 2002; the Department of the Navy requested and Congress authorized and appropriated $2.9 million for fiscal year 2005; and the committee understands that these funds are currently being used to complete development of a prototype predictive information technology-based model. The committee understands that efforts thus far have proven the tool's mathematical foundation and provided a viable operational tool for engineering analysis. The committee believes that the age exploration model should be employed in the Department of the Navy's intermediate- and depot-level aircraft maintenance facilities, and understands that the age exploration model could be enhanced for use on other platform domains such as ships and support vehicles.

The committee recommends $103.3 million, an increase of $3.0 million in PE 25633N to enhance the age exploration model for use on other platform domains, and to further develop the age exploration model so that it can be used in the Department of the Navy's intermediate- and depot-level aircraft maintenance facilities.

Blossom Point Satellite facility

The budget request contained $93.4 million in PE 62235N, but contained no funds for the Blossom Point Satellite facility.

The Blossom Point Satellite facility provides 24 hour command and control support to low-earth and mid-earth orbiting satellites.

The committee recommends an increase of $2.0 million in PE 62235N for the Blossom Point Satellite facility.

Countermine light imaging detection and ranging undersea autonomous vehicle based system

The budget request contained $49.7 million in PE 63114N, but contained no funds to continue the countermine light imaging detection and ranging (LIDAR) unmanned aerial vehicle (UAV)-based system (CLUBS).

On going CLUBS efforts include programming efforts to produce high resolution images of the seafloor. Further funding in this area will allow continuance of ongoing algorithm and software development to achieve detection and classification of targets of interest.

The committee recommends an increase of $2.2 million in PE 63114N to continue the development of CLUBS.

Critical composite technologies for special operations forces medium range endurance craft

The budget request contained $70.9 million in PE 63123N, but contained no funds for the development of critical composite technologies for Special Operations Forces medium-range endurance craft.

The committee recommends an increase of $1.0 million in PE 63123N for research and development to reduce technical risk associated with the use of composite technologies for larger craft.

DDG 1000 permanent magnet motor system

The budget request contained $503.4 million in PE 64300N for DDG 1000 total ships systems engineering, but contained no funds for continued development of the permanent magnet motor.

The committee understands that the permanent magnet motor technology will save weight and increase fuel efficiency in the next generation of surface combatants, including the DDG 1000.

The committee recommends an increase of $9.0 million in PE 64300N to complete design of the motor and motor control electronics.

Deep extended echo ranging

The budget request contained $18.4 million in PE 64261N for acoustic search sensors.

The committee commends the Navy's commitment to research into acoustic detection capabilities in broad area deep ocean environments. The committee understands that using existing sonobuoy capability coupled with new software and processing systems has the potential to significantly increase the ability to detect contacts using only acoustic means in broad areas of the deep ocean.

To meet this goal, the committee recommends an increase of $2.0 million in PE 64261N for development and testing of the deep extended echo ranging system.

Diagnostic/prognostic pump system

The budget request contained $9.5 million in PE 63513N, but contained no funds for a diagnostic/prognostic pump system.

The committee understands that a pump system with internal diagnostic capabilities provides an invaluable aid for proactive maintenance, eliminating the need to perform conditional assessments via planned maintenance. In addition, the system will provide savings on inventory and reduce the need for redundant systems.

The committee recommends an increase of $6.0 million in PE 63513N for the development of a two-screw magnetic drive pump system with diagnostic/prognostic capability.

DP–2 vectored thrust aircraft

The budget request contained $49.7 million in PE 63114N for the development of various power projection advanced technology programs, but contained no funds for the DP–2 vectored thrust aircraft program.

The DP–2 is a twin-engine, vectored thrust, high-speed combat transport aircraft capable of hover and vertical take-off and landing. The committee believes that the DP–2 has the potential to provide leap-ahead capabilities to Special Operations Forces and other forces since it can combine vertical take-off and landing capabilities of a helicopter with the superior range and payload characteristics of fixed-wing jet aircraft. The committee understands that to date DP–2 testing has focused on milestones set by the Office of Naval Research, which include hover out of ground effect and mild hover maneuvers, but believes testing should be expanded to include flight in a conventional forward-thrust mode.

The committee recommends an increase of $6.0 million in PE 63114N for the DP–2 vectored thrust program, and expects that these funds will provide for forward-thrust mode testing, structural loads testing, continued hover testing, and to obtain an experimental aircraft type certificate from the Federal Aviation Administration.

Fiber optic technology

The budget request contained $134.9 million in PE 63561N for advanced submarine system design.

The committee recommends an increase of $4.0 million in PE 63561N to continue research and development of promising fiber optic technology for development of advanced fiber optic acoustic systems.

Free electron laser development for naval applications

The budget request contained $10.0 million in PE 62114N for Power Projection Applied Research. The committee believes that this research is critical to advanced technologies which might employ high energy lasers.

The committee recommends an increase of $5.0 million in PE 62114N to further the development of this important new technology.

High temperature superconducting motor

The budget request contained $9.5 million in PE 63513N for shipboard system component development, but contained no funds for the continued testing of the high temperature superconducting motor.

The committee commends the Navy for funding the development of this critical technology, but remains concerned that no funds were requested for final full load testing and for design modifications, which allow the motor to be compatible with the shipboard environment. The committee views funding for the development of both the permanent magnet motor and the high-temperature superconducting motor to be in the best interest of the future naval force.

The committee recommends an increase of $9.0 million in PE 63513N for full load testing and design modifications for the high temperature superconducting motor.

Hybrid-electric drive systems

The budget request contained $9.5 million in PE 63513N for shipboard system component development, but contained no funds for development of a hybrid electric motor for use during the modernization of DDG 51 class destroyers.

The committee understands that development of this technology would have significant benefits to the efficiency of the ships propulsion system and may save thousands of gallons of fuel yearly.

The committee recommends and increase of $8.0 million in PE 63513N to investigate multiple technologies to develop and field a hybrid electric drive system.

Improved corrosion protection for electromagnetic aircraft launch system

The budget request contained no funds in PE 62234N for improved corrosion protection for the electromagnetic aircraft launch system (EMALS).

The committee understands that the EMALS currently scheduled to be fielded on the Ford class aircraft carriers must operate in a highly corrosive environment.

The committee recommends an increase of $3.0 million in PE 62234N to fund a program to develop design-specific corrosion data under simulated catapult conditions to allow continued design refinement to mitigate the effect of the corrosive environment on EMALS operation.

Joint Stand-Off Weapon-Extended Range

The budget request contained $31.0 million in PE 63795N for the development of various land attack technology programs, but contained no funds for flight demonstration of the joint stand-off weapon (JSOW)-extended range (ER).

The JSOW is a 1,000-pound, air-to-surface precision strike glide weapon that can carry several different lethal packages with a stand-off range of 12 to 63 miles. The committee understands that the integration of an engine into the JSOW would result in a weapon known as the JSOW-ER, which would substantially increase stand-off attack range capabilities at a lower cost than similar weapons.

The committee recommends an increase of $3.0 million in PE 63795N for a JSOW-ER flight demonstration.

Marine Corps assault vehicles

The budget request contained $288.0 million in PE 63611M for development of the expeditionary fighting vehicle (EFV).

While the committee recognizes the Marine Corps requirement to conduct amphibious assaults and land operations using armored vehicles, it is concerned that the EFV program continues to have unclear requirements and serious technology development challenges. The committee supports efforts by senior Marine Corps, Navy, and Department of Defense (DOD) leaders to thoroughly review the EFV program, analyze its requirements, and assess its en-

gineering and design challenges. The committee also notes that the EFV program received $347.8 million in fiscal year 2007 funding, which was based on continued research and development that has now been suspended pending the outcome of DOD reviews of the program, making it unlikely that the full $347.8 million will be obligated or executed in fiscal year 2007. In addition, the committee notes that the schedule for the new system development and demonstration phase proposed in Marine Corps budget justification materials is likely to be further delayed.

The committee recommends $88.0 million, a decrease of $200.0 million in PE 63611M for EFV development. The committee believes that this amount, in addition to the excess funds provided in fiscal year 2007, are sufficient to support continued engineering work and development of EFV prototypes in fiscal year 2008.

Maritime identification surveillance technology

The budget request contained $40.8 million in PE 63235N for common picture advanced technology, but contained no funds for development of a demonstration project of a maritime identifications surveillance system.

The committee understands that the development of high-resolution, imaging phased array radar systems provide significant promise in the identification, surveillance, and tracking of all contacts in and around naval vessels at sea, in coastal waters, and ports.

The committee recommends an increase of $2.8 million in PE 63235N for the development of a demonstration project in support of a maritime identification surveillance system.

MK–48 torpedo technology development

The budget request contained $17.9 million in PE 25632N for MK–48 torpedo advanced capability (TADCAP) development, but contained no funds for a post-launch communication system for use in the littorals.

The committee understands that the Chief of Naval Operations has stressed that successful operations in shallow water is critical to countering third world diesel submarine threats. Torpedo testing in shallow water has demonstrated that in-service MK–48 TADCAP has less than full capability in a shallow water engagement environment. The committee notes that traditional weighted and hollow flexible-hose and guidance wire communications technologies cannot satisfy future operating environment requirements, and that a high bandwidth post-launch communications system is needed to ensure the MK–48 TADCAP is able to meet requirements in the littoral environment.

The committee recommends an increase of $2.0 million in PE 25632N for development of a post-launch communication system for the MK–48 TADCAP.

Propulsor manufacturing technology development

The budget request contained $9.5 million in PE 63513N for shipboard systems component development but contained no funds for propulsor manufacturing technology development (PMTD).

The PMTD program is pursuing new technologies and manufacturing process to introduce Nickel Boron (NiB) coatings for propellers, water jets, and submarine propulsors. These coatings have the

potential to significantly reduce fouling, drag, cavitation, and wear, which will increase ship fuel efficiency and reduce life cycle maintenance costs.

The committee recommends an increase of $6.5 million in PE 63513N for PMTD.

Reliable Replacement Warhead

The budget request contained $81.4 million in PE 11221N for strategic submarine and weapons systems support, and containing $30.0 million specifically for the Reliable Replacement Warhead (RRW) program.

The Navy budget justification material describes the RRW funds as enabling the Navy to "continue the RRW Program into Phase 3 Engineering Development." In Title XXXI of this Act, the committee decreases funding for execution of the RRW program by the National Nuclear Security Administration. The committee does not support moving into Phase 3 activities during fiscal year 2008, but understands that the Navy intends to pursue better design definition as part of the Phase 2a study during fiscal year 2008.

The committee recommends $56.4 million in PE 11221N, a decrease of $25.0 million for the RRW program.

Rotorcraft external airbag system

The budget request contained $6.3 million in PE 63216N for aviation survivability development, but contained no funds for development of a rotorcraft external air bag system (REAPS) for helicopters.

The committee notes that Congress appropriated $2.7 million in fiscal year 2006 and $2.9 million in fiscal year 2007 for the development of a rotorcraft external airbag system. Current testing has demonstrated that REAPS application for rotorcraft will require larger airbags integrated into the aircraft and will be enhanced by the development of a predictive crash sensors and algorithms. The committee understands that REAPS should increase overall aircrew survivability during a rotorcraft ground or water crash or unintentional hard landing.

The committee recommends an increase of $4.0 million in PE 63216N for REAPS.

Seafighter

The budget request contained $70.8 million in PE 63123N for force protection advanced technology, but contained no funding for Seafighter (formerly X-Craft).

Seafighter is a high speed, shallow draft advanced technology demonstration vessel that has been used to validate many of the Navy's operational concepts for littoral warfare and mitigate risk for future acquisition programs, including the Navy's Littoral Combat Ship (LCS). The committee notes that in fiscal year 2007 Congress authorized and appropriated funds to begin the process of upgrading Seafighter to a condition, which would allow the ship to deploy in support of urgent combatant commander requirements.

The committee understands the Navy intends to home port the vessel in Panama City, Florida, with a contracted civilian crew, and use the vessel for experimental purposes. The committee believes this plan fails to take full advantage of the capabilities of

this vessel. The committee notes that the Navy currently operates the High Speed Vessel (HSV–2), a high speed, wave piercing aluminum hulled catamaran, under contract with Australia. This vessel has been used by the Navy in development, risk mitigation, and deployed operations. The committee recommends that the Navy transition Seafighter to those tasks when the HSV–2 lease expires in July 2007.

The committee recommends an increase of $22.0 million for PE 63123N to continue modifications to Seafighter including, the addition of offensive and defensive armament, the improvement of ship survivability systems, and the completion of command and control, hull, mechanical, and electrical upgrades.

Software reconfigurable payloads

The budget request contained $86.9 million in PE 64231N for tactical command systems, but contained no funds for software reconfigurable payloads.

FORCEnet is the Navy and Marine Corps' premiere initiative to implement network centric operations. The software reconfigurable payload capability will assist in the development of the FORCEnet architecture by providing multi-mission communications and intelligence, surveillance and reconnaissance (ISR) capabilities; dynamic bandwidth allocation; real-time reprogrammability to support changing tactical situations; and interoperability with joint, allied and coalition forces.

The committee recommends $91.9 million, an increase of $5.0 million in PE 64231N to develop robust and reconfigurable communications packages to support Navy and Marine Corps applications.

Tactical e-field buoy development program

The budget request contained $16.7 million in PE 63254N for antisubmarine warfare (ASW) systems development, but contained no funds for a tactical electric (E) field buoy development program.

The committee believes that countering the ASW threat in the littoral ocean environment will require a variety of systems and platforms. The committee understands that E-field detecting buoys have shown promising results against challenging targets at a tactically significant range in at-sea testing.

The committee recommends an increase of $6.0 million for PE 63254N for development and testing of an affordable E-field buoy that is capable of detecting challenging targets in acoustically difficult littoral waters, and is compatible with existing Navy air deployment systems.

Virtual medical education

The budget request contained $88.3 million in PE 62236N for warfighter sustainment applied research, but contained no funds for virtual reality technologies to improve medical education.

The committee is concerned that as the number of casualties from Operation Iraqi Freedom and Operation Enduring Freedom grows, the need for proficient and experienced medical professionals to care for wounded warriors is more important than ever. One method for maintaining a high degree of clinical expertise in a supportive, low-stress environment is to provide experiential learning tools generated by game-based modeling and simulation

technologies. Such virtual game-based modeling and simulation technologies offer efficiencies by combining classroom education techniques with skills-based learning to link the education experience with performance.

The committee recommends $103.3 million, an increase of $15.0 million in PE 62236N to create and deploy cutting-edge training technologies designed to improve the readiness and ensure a trained workforce in military medicine.

AIR FORCE RESEARCH, DEVELOPMENT, TEST, AND EVALUATION

Overview

The budget request contained $26.7 billion for Air Force research, development, test, and evaluation (RDT&E).

The committee recommends $25.7 billion, a decrease of $973.0 million to the budget request.

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
	RESEARCH, DEVELOPMENT, TEST & EVALUATION, AIR FORCE					
	BASIC RESEARCH					0
1	Defense Research Sciences	258,259				258,259
2	University Research Initiatives	104,304				104,304
3	High Energy Laser Research Initiatives	12,636				12,636
	TOTAL, BASIC RESEARCH	**375,199**	**0**	**0**	**0**	**375,199**
	APPLIED RESEARCH					0
4	Medical Development					0
5	Materials	122,794	9,000			131,794
	Advanced Carbon Fiber Energy Reduction			4,000		
	Lightweight Laser Designator Rangefinder			5,000		
6	Aerospace Vehicle Technologies	131,948	2,000			133,948
	Advancement of Intelligent Aerospace Systems			2,000		
7	Human Effectiveness Applied Research	79,856	9,500			89,356
	Warfighter XP			7,000		
	Chem Bio RFID Detectors			2,500		
8	Aerospace Propulsion	179,161	8,700			187,861
	Integrated Starter/Generator/IES			3,500		
	Wavelength Agile Spectral Harmonic Oxygen Sensor			5,200		
9	Aerospace Sensors	108,055	6,000			114,055
	Optikey Optical Maximum Entropy Verification			6,000		
10	Multi-disciplinary Space Technology	0				0
11	Space Technology	109,566	1,000			110,566
	Space Entrepreneurship			1,000		
12	Conventional Munitions	57,804	4,800			62,604
	Lightweight Compact Transmitter for Imaging Laser Radar			4,800		

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
13	Directed Energy Technology	54,883				54,883
14	Command Control and Communications	116,705	11,900			128,605
	Cyber Attack Mitigation Lab			2,900		
	Adaptive Optics Laser Communications			5,000		
	LIDAR Transceiver			4,000		
15	Dual Use Science and Technology Program	0				0
16	High Energy Laser Research	50,303				50,303
17	Joint Helmet Mounted Cueing System (JHMCS)					0
18	Classified Programs					
19	Special Program					
	TOTAL, APPLIED RESEARCH	**1,011,075**	**52,900**	**52,900**	**0**	**1,063,975**
	ADVANCED TECHNOLOGY DEVELOPMENT					0
20	Advanced Materials for Weapon Systems	39,730	18,000			57,730
	Electromagnetic Interference Grid Fabrication			4,000		
	Metals Affordability Initiative			14,000		
21	Advanced Aerospace Sensors	55,549	14,000			69,549
	Versatile Affordable Advanced Turbine Engine			10,000		
	Moving Target Strike			4,000		
22	Aerospace Technology Dev/Demo	64,922	(35,000)			29,922
	Program Reduction				(35,000)	
23	Aerospace Propulsion and Power Technology	117,990	10,000			127,990
	Assured Fuels Initiative			10,000		
23a	Aerospace Propulsion and Power Technology	[85351]				0
23b	Aerospace Propulsion and Power Technology (10SP/4922)	[32639]				0
24	Crew Systems and Personnel Protection Technology	28,558	7,000			35,558
	Variable Transmittal Vision			3,000		

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
	Force Health Protection Genotyping			1,500		0
	JSF Authentic Flight Simulator			1,500		
	Reusable Training and Operations System for Satellite Training			1,000		
25	Electronic Combat Technology	23,743				23,743
26	Ballistic Missile Technology	0				0
27	Joint Unmanned Combat Air Systems (J-UCAS)					0
28	Advanced Spacecraft Technology	78,704	5,500			84,204
	Laser Communications System Development			4,000		
	Systematic Approach to Radiation Hardened Electronics			1,500		
29	Global Positioning System (GPS) Extension Program	70,758	(70,000)			758
	Program Reduction-High Integrity GPS				(70,000)	
30	Maui Space Surveillance System (MSSS)	5,237	10,000			15,237
	High Accuracy Network Determination System			10,000		
31	Multi-disciplinary Advanced Development Space Technology					0
32	Conventional Weapons Technology	16,904				16,904
33	Advanced Weapons Technology	43,999	3,000			46,999
	Satellite Active Imaging National Testbed			3,000		
34	C3I Advanced Development	27,357				27,357
35	Special Programs					0
36	High Energy Laser Advanced Technology Program	3,815				3,815
37	Tactical Airborne Control Systems					0
38	Classified Programs					0
39	Special Program	0				0
	TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT	**577,266**	**(37,500)**	**67,500**	**(105,000)**	**539,766**
	ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES					
40	Intelligence Advanced Development	4,930				4,930

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
41	Physical Security Equipment	466				466
42	NAVSTAR Global Positioning System III	587,226	(150,000)			437,226
	Program delay				(150,000)	
43	Advanced EHF MILSATCOM (SPACE)	603,179	100,000			703,179
	Program Increase			100,000		
44	Polar MILSATCOM (SPACE)	178,754				178,754
45	Space Control Technology	37,604	25,000			62,604
	Self Aware-Space Situational Awareness			25,000		
46	Combat Identification Technology	26,054				26,054
47	NATO Research and Development	4,280				4,280
48	International Space Cooperative R&D	619				619
49	Transformational SATCOM (TSAT)	963,585				963,585
50	Integrated Broadcast Service	21,192				21,192
51	ICBM	26,519				26,519
52	Wideband Gapfiller System RDT&E (Space)	19,213				19,213
53	Space-Based Radar					0
54	Pollution Prevention	2,838				2,838
55	Joint Precision Approach and Landing Systems	7,544				7,544
56	Next Generation Long Range Strike					0
57	Hardened Target Munitions	0				0
58	Joint Unmanned Combat Air Systems (J-UCAS)	0				0
59	Operationally Responsive Launch					0
60	Common Aero Vehicle (CAV)	32,806				32,806
61	Operationally Responsive Space	87,032	30,000			117,032
	Program Increase			30,000		
62	Advanced Communications Systems	0				0

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
63	National Polar-Orbiting Operational Environmental Satellite System (NPOESS)	334,871				334,871
	TOTAL, ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES	**2,938,712**	**5,000**	**155,000**	**(150,000)**	**2,943,712**
	SYSTEM DEVELOPMENT & DEMONSTRATION					
64	Global Broadcast Service (GBS)	29,407				29,407
65	Joint Helmet Mounted Cueing System (JHMCS)					0
66	Nuclear Weapons Support	20,319				20,319
67	B-1B	159,126				159,126
68	Specialized Undergraduate Flight Training	12,622				12,622
69	F-22	0				0
70	B-2 Advanced Technology Bomber	244,019	7,200			251,219
	Small Diameter Bomb Integration			7,200		
71	CSAR-X/HC-130	290,059	(153,300)			136,759
	CSAR-X program reduction				(153,300)	
72	EW Development/MALD/PLAID	101,649				101,649
73	Joint Tactical Radio					0
74	Physical Security Equipment	34				34
75	Small Diameter Bomb (SDB)	145,191				145,191
76	Counterspace Systems	53,412	5,000			58,412
	Space Control Test Capabilities			5,000		
77	Space Situation Awareness Systems	187,804	9,800			197,604
	Space Fence-Space Situational Awareness			9,800		
78	Airborne Electronic Attack	20,007				20,007
79	Space Based Infrared System (SBIRS) High	587,004	127,600			714,604
	MCS-B Upgrade			27,600		
	Program Increase			100,000		
80	Alternative Infrared Space System (AIRSS)	230,887	(200,900)			29,987

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
	Program reduction				(200,900)	
81	Munitions Dispenser Development					0
82	Armament/Ordnance Development	1,985	5,000			6,985
	Internal 1000 Pound Warhead Tech Demo			5,000		
83	Submunitions	1,988				1,988
84	Agile Combat Support	10,623				10,623
85	Joint Direct Attack Munition					0
86	Life Support Systems	12,649				12,649
87	Combat Training Ranges	17,657				17,657
88	Integrated Command & Control Applications (IC2A)	189	7,000			7,189
	Distributed Mission Interoperability Toolkit			7,000		
89	National Air Intelligence Center	1,469				1,469
90	Common Low Observables Verification System (CLOVerS)	0				0
91	Joint Strike Fighter (JSF)	1,780,874	115,000			1,895,874
	Program Decrease				(125,000)	
	Competitive Engine Program			240,000		
92	Intercontinental Ballistic Missile					0
93	Evolved Expendable Launch Vehicle Program					0
94	RDT&E for Aging Aircraft	17,021	4,500			21,521
	Enhanced Smart Triple Ejector Rack			4,500		
95	Test and Evaluation Support	3,044				3,044
96	Link-16 Support and Sustainment	199,363				199,363
97	Family of Interoperable Operational Pictures (FIOP)	0				0
98	E-10 Squadrons	39,703				39,703
99	Single Integrated Air Picture (SIAP)	4,976				4,976
100	Full Combat Mission Training	87,096				87,096
101	Combat Survivor Evader Locator	0				0
102	Joint Cargo Aircraft (JCA)	42,368				42,368

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
103	CV-22	16,688				16,688
	TOTAL, SYSTEM DEVELOPMENT & DEMONSTRATION	**4,319,233**	**(73,100)**	**406,100**	**(479,200)**	**4,246,133**
	RDT&E MANAGEMENT SUPPORT					
104	Threat Simulator Development	39,892				39,892
105	Major T&E Investment	59,064	6,000			65,064
	FPS-16 Radar Mobilization Upgrade			6,000		
106	RAND Project Air Force	30,999				30,999
107	Ranch Hand II Epidemiology Study	0				0
108	Small Business Innovation Research	0				0
109	Initial Operational Test & Evaluation	30,203				30,203
110	Test and Evaluation Support	737,558				737,558
111	Rocket Systems Launch Program (SPACE)	15,145				15,145
112	Space Test Program (STP)	47,430				47,430
113	Facilities Restoration and Modernization - Test and Evaluation Support	59,131				59,131
114	Facilities Sustainment - Test and Evaluation Support	30,865	250			31,115
	Low Profile Arresting Gear			250		
115	General Skill Training					0
116	Financing for Expired Account Adjustments					0
117	International Activities	4,041				4,041
	TOTAL, RDT&E MANAGEMENT SUPPORT	**1,054,328**	**6,250**	**6,250**	**0**	**1,060,578**
	OPERATIONAL SYSTEMS DEVELOPMENT					
118	Anti-Tamper Technology Executive Agency	10,930				10,930
119	Analysis Support Group					
120	B-52 Squadrons	41,916				41,916

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
121	Advanced Cruise Missile					0
122	Air-Launched Cruise Missile (ALCM)	4,672				4,672
123	Strat War Planning System - USSTRATCOM	20,340				20,340
124	Night Fist - USSTRATCOM	5,296				5,296
125	Advanced Strategic Programs					0
126	Region/Sector Operation Control Center Modernization Program	23,495				23,495
127	Warfighter Rapid Acquisition	14,245				14,245
128	MQ-9/ Reaper UAS	61,069				61,069
129	A-10 Squadrons	1,963	2,000			3,963
	Computer Modeling and Prediction of Wing Spar Cracking			2,000		
130	F-16 Squadrons	90,620				90,620
131	F-15E Squadrons	101,251				101,251
132	Manned Destructive Suppression					0
133	F-22A Squadrons	743,593				743,593
134	F-117A Squadrons					0
135	Tactical AIM Missiles	7,927				7,927
136	Advanced Medium Range Air-to-Air Missile (AMRAAM)	36,838				36,838
137	Joint Helmet Mounted Cueing System (JHMCS)	5,338				5,338
138	Combat Rescue and Recovery	0				0
139	AF TENCAP	11,526				11,526
140	Special Evaluation Program					0
141	Compass Call	4,603				4,603
142	Aircraft Engine Component Improvement Program	139,042				139,042
143	CSAF Innovation Program		3,000			3,000
	Hawaii National Guard Communications Support Environment			3,000		
144	Joint Air-to-Surface Standoff Missile (JASSM)	12,152				12,152
145	Air and Space Ops Center	111,557				111,557
146	Modular Control Systems	16,505				16,505

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
147	Airborne Warning and Control System (AWACS)	152,721				152,721
148	Tactical Airborne Control Systems	3,387				3,387
149	Advanced Communications Systems/JTRS	33,584				33,584
150	Evaluation and Analysis Program	650,608				650,608
151	Advanced Program Technology					0
152	Theater Battle Management (TBM) C4I	9,961				9,961
153	Fighter Tactical Data Link	39,545				39,545
154	Bomber Tactical Data Link	37,130				37,130
155	C2ISR Tactical Data Link	1,809				1,809
156	Command and Control (C2) Constellation	45,049				45,049
157	Joint Surveillance and Target Attack Radar System (Joint STARS)	65,924				65,924
	Program Reduction					
158	Seek Eagle	22,969				22,969
159	Advanced Program Evaluation					0
160	USAF Modeling and Simulation	23,044	2,000			25,044
	Crowd Behavior Modeling			2,000		
161	Wargaming and Simulation Centers	6,490				6,490
162	Distributed Training and Exercises/JFCOM Wargaming	7,522				7,522
163	Mission Planning Systems	105,371				105,371
164	Information Warfare Support	12,111				12,111
165	Special Evaluation System	760,312				760,312
166	National Air Intelligence Center		2,500			2,500
	Missile Related Systems Threat Representations			2,500		
167	COBRA BALL					0
168	Missile and Space Technical Collection					0
169	FOREST GREEN					0
170	GDIP Collection Management					0
171	E-4B National Airborne Operations Center (NAOC)	19,529				19,529

Title II-- RESEARCH, DEVELOPMENT, TEST AND EVALUATION

(Dollars in Thousands)

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
172	Air Force Communications (AIRCOM)	2,022				2,022
173	Minimum Essential Emergency Communications Network (MEECN)	103,846				103,846
174	Information Systems Security Program	229,657	3,920			233,577
	Applications Security Initiative			3,920		
175	Global Combat Support System	10,631				10,631
176	Global Command and Control System	3,397	10,000			13,397
	Command and Control Service Level Management Program			10,000		
177	Joint Command and Control Program (JC2)	5,841				5,841
178	MILSATCOM Terminals	388,491				388,491
179	Special Activities		2,000			2,000
	EMP Protected Computer Hardware			2,000		
180	Airborne SIGINT Enterprise	139,627	(10,900)			128,727
	Airborne Signal Intelligence Enterprise				(10,900)	
181	Selected Activities					0
182	Advanced Geospatial Intelligence					0
183	Communication, Navigation, Surveillance	6,681				6,681
184	Satellite Control Network (SPACE)	27,256				27,256
185	Weather Service	39,747				39,747
186	Air Traffic Control, Approach, and Landing System (ATCALS)	4,672				4,672
187	Aerial Targets	7,376				7,376
188	Special Application Programs					0
189	Foreign Counterintelligence Activities					
190	Security and Investigative Activities	829				829
191	Applied Technology and Integration					0
192	Defense Reconnaissance Support Activities (SPACE)		(1,160,850)			(1,160,850)
	Space Radar				(30,000)	
	California Space Infrastructure Project			1,000		
	Classified Program				(1,131,850)	

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
193	Defense Meteorological Satellite Program (SPACE)					0
194	NAVSTAR Global Positioning System (User Equipment) (SPACE)	93,267	63,200			156,467
	Accelerate User Equipment			63,200		
195	NAVSTAR Global Positioning System (Space and Control Segments) / OCS	120,931	40,000			160,931
	Program Increase			40,000		
196	Combined Advanced Applications					
197	Space and Missile Test and Evaluation Center	3,089				3,089
198	Space Warfare Center	1,678				1,678
199	Spacelift Range System (SPACE)	27,300				27,300
200	Intelligence Support to Information Operations (IO)	1,134				1,134
201	Dragon U-2					0
202	Airborne Reconnaissance Systems	64,869				64,869
203	Manned Reconnaissance Systems / COBRA BALL	12,672	6,000			18,672
	Rivet Joint			6,000		
204	Distributed Common Ground Systems	107,117				107,117
205	MQ-1 Predator UAV	22,296				22,296
206	Global Hawk UAV	298,501				298,501
207	Network-Centric Collaborative Target	8,641				8,641
208	Electronic Combat Intelligence Support	5,362				5,362
209	NCMC - TW/AA System	11,882				11,882
210	SPACETRACK (SPACE)	0				0
211	NUDEF Detection System (SPACE)	38,974				38,974
212	Space Architect					0
213	National Security Space Office	10,821				10,821
214	Space Situation Awareness Operations	23,980				23,980
215	NASS, IO Technology Integration & Tool Dev	15,681				15,681
216	Shared Early Warning (SEW)	3,152				3,152
217	C-130 Airlift Squadron	188,069	7,100			195,169

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
	Automated Maintenance			7,100		
218	C-5 Airlift Squadrons	203,585	2,000			205,585
	Inductive Thermography Equipment			2,000		
219	C-17 Aircraft	181,734				181,734
220	C-130J Program	74,223				74,223
221	Aeromedical Evacuation	0				0
222	Large Aircraft IR Countermeasures (LAIRCM)	19,324				19,324
223	KC-135s	8,766				8,766
224	KC-10s	36,790				36,790
225	KC-135 Tanker Replacement	314,454	(200,000)			114,454
	Program Decrease				(200,000)	
226	VC-25A	4,868				4,868
227	Air Mobility Tactical Data Link					0
228	Special Tactics/Combat Control	5,225	2,700			7,925
	Biostatic Protective Clothing			2,700		
229	Depot Maintenance (Non-IF)	1,510				1,510
230	Acquisition and Management Support	22,317	2,300			24,617
	Combat Support Information Security			2,300		
231	Industrial Preparedness	39,906	4,500			44,406
	Production of Nanocomposites for Aerospace Applications			4,500		
232	Logistics Support Activities					0
233	Logistics Information Technology (LOGINT)	114,176				114,176
234	Support Systems Development	11,076	17,000			28,076
	SOF Logisitics Improvement			4,000		
	Hydrogen Fueling Infrastructure- Lackland AFB			4,000		
	Low Emission Hybrid Electric Vehicle Engine Propulsion			5,000		
	Strategic Airlift Modeling			4,000		
235	Joint National Training Center	3,128				3,128

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
236	Other Personnel Activities	115				115
237	Joint Personnel Recovery Agency	5,377				5,377
238	Service Wide Support	6,495				6,495
239	Civilian Compensation Program	8,070				8,070
240	Personnel Administration	16,832				16,832
241	Financial Management Information Systems Development	47,105				47,105
999	Classified Programs	9,819,618	275,000			10,094,618
	Program Increase			180,000		
	Program Increase			95,000		
	TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT	**16,436,127**	**(926,530)**	**446,220**	**(1,372,750)**	**15,509,597**
	TOTAL. RDT&E, AIR FORCE	**26,711,940**	**(972,980)**	**1,133,970**	**(2,106,950)**	**25,738,960**

Items of Special Interest

Advanced Composite Cargo Aircraft Demonstration

The budget request contained $64.9 million in PE 63211F for aerospace technology development and demonstration, containing $35.0 million for the Advanced Composite Cargo Aircraft Demonstration program.

The committee notes that the program is not adequately linked to requirements for future military aircraft, nor has the program been structured to effectively capitalize on previous technology development programs, such as the Composites Affordability Initiative.

The committee recommends $29.9 million, a decrease of $35.0 million in PE 63211F for the Advanced Composite Cargo Aircraft Demonstration program.

Advanced Extremely High Frequency 4

The budget request contained $603.2 million in PE 63430F for Advanced Extremely High Frequency (AEHF) procurement.

The committee is concerned about the fragility of the current constellation of protected communication satellites used by the warfighter. Delays in the development and fielding of the Transformational Satellite Communications (TSAT) program could result in a gap in global strategic communications coverage.

The committee believes that an additional AEHF satellite can provide adequate near-term connectivity without risking a gap in protected communications capability and coverage. As a result of these concerns, the committee recommends procuring an additional AEHF satellite.

The committee recommends $703.2 million, an increase of $100.0 million, for parts obsolescence studies for AEHF 4.

Airborne Signals Intelligence Enterprise

The budget request contained $139.6 million in PE 34260F for the airborne signals intelligence (SIGINT) enterprise, containing $10.9 million for the Global Hawk Unmanned Aerial System (UAS). The budget request also contained $298.5 million in PE 35220F for the Global Hawk UAS.

The committee is aware that the Airborne SIGINT Enterprise continues to provide non-recurring engineering for SIGINT equipment for the Global Hawk UAS. The committee is concerned that the research and development request in PE 34260F for the SIGINT capability on board the Global Hawk UAS duplicates the request in PE 35220F.

Therefore, the committee recommends $128.7 million, a decrease of $10.9 million in PE 34260F for the airborne SIGINT payload for the Global Hawk UAS.

Alternate infrared satellite system

The budget requests contained $230.9 million in PE 64443F for development of the Alternate Infrared Satellite System (AIRSS).

The committee is concerned with the current AIRSS acquisition strategy. This system was initially conceived as a low-technical risk system in case the current missile warning system being developed did not perform to expectations. The AIRSS program now includes

significant technology development and a flight test demonstration; both activities add additional risk to the program and have little benefit in the near-term. Furthermore, the system requirements are ill defined and the committee is concerned that the cost and schedule estimates are optimistic.

With the success achieved by the Space Based Infrared System highly elliptical orbit payload in 2007, the committee believes the AIRSS development program is premature.

The committee recommends $30.0 million in PE 64443F to support continued development of wide field-of-view focal plane technology, a decrease of $200.9 million to the AIRSS program.

B–2 Small Diameter Bomb integration

The budget request contained $244.1 million in PE 64240F for the B–2 bomber, but contained no funds for integration of the small diameter bomb (SDB).

The committee understands the Air Force has identified a requirement to effectively engage and destroy moving targets, but that global positioning system weapons have a limited ability to prosecute moving targets. The committee notes that with further research and development the SDB could have the potential to engage moving targets and the Chief of Staff of the Air Force has included integration of the SDB on the B–2 platform as an unfunded priority.

The committee recommends $251.3 million, an increase of $7.2 million in PE 64240F for development and integration of the SDB for the B–2 bomber.

Biostatic protective clothing

The budget request contained $5.2 million in PE 48011F for special tactics/combat control, but contained no funds for biostatic protective clothing.

The committee understands Air Force Special Operations Command (AFSOC) special tactics teams and forward combat air controllers operate in harsh environments and conditions that require extreme physical exertion for extended periods of time. The committee is aware that recent developments in clothing technology indicate better materials are available for undergarments which will reduce the effects of moisture on the body as well as provide superior antimicrobial characteristics. The committee believes these materials could benefit the combat airman and consequently improve performance in prolonged harsh combat conditions.

The committee recommends $7.9 million, an increase of $2.7 million in PE 48011F for the rapid development and fielding of biostatic protective clothing for AFSOC.

C–130 airlift squadrons

The budget request contained $188.1 million in PE 41115F for C–130 development programs, but contained 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 also understands that the Department of the Air Force has invested over $10.0 million on this effort to date, and believes that this program should be continued.

The committee recommends $195.2 million, an increase of $7.1 million, in PE 41115F for C–130 development programs for the AIRCAT system.

California Space Infrastructure Project

The budget request contained no funds for California Space Infrastructure Project.

This program will continue to assess existing space infrastructure, Air Force space requirements, and gaps in space infrastructure.

The committee recommends an increase of $1.0 million in PE 35159F for the continued support of the California Space Infrastructure Project.

Combat search and recovery vehicle

The budget request contained $290.1 million in PE 64261F for the development of personnel recovery systems, containing 280.0 million for the combat search and rescue vehicle-X (CSAR-X) development program.

The CSAR-X program is developing the next generation personnel recovery vehicle, which will replace the current HH–60G Pave Hawk helicopter, and provide increased capabilities of speed, range survivability, cabin size, and high-altitude hover operations. The Department of the Air Force anticipated beginning CSAR-X integration and demonstration activities in early fiscal year 2007, but these activities have been delayed by bid protests, which were subsequently sustained, and will require the Department of the Air Force to re-solicit bids for the CSAR-X program. As a result of this delay, the committee notes that the Government Accountability Office (GAO) reported that this program exceeds the fiscal year 2008 requirements by $153.3 million. The committee further notes that the Department of the Air Force CSAR-X program office agreed with the GAO recommendation that the CSAR-X budget request could be reduced by $153.3 million.

The committee recommends $136.8 million, a decrease of $153.3 million, in PE 64261F for the CSAR-X development program.

Communications support environment

The budget request did not contain funds in PE 27277F for the Hawaii National Guard communications support environment (HCSE) program.

The HCSE program would be a new program that would develop and demonstrate a robust and integrated information sharing and communications capability necessary to coordinate the activities of military, civilian, and interagency authorities in the event of a homeland security or homeland defense crisis event in the state of Hawaii. The committee notes that the National Guard Bureau is pursuing validation of the Joint Continental United States Communications Support Environment (JCCSE) program, which extends trusted information capabilities from the Department of Defense,

through the Joint Force Headquarters in the states, to an incident site during a crisis event, and understands that the JCCSE will provide increased communications necessary for information exchange; direct communications among first responders, state and national authorities; and deployable communications. The committee believes that the capabilities of the JCCSE should be extended to the state of Hawaii with the HCSE.

The committee recommends $3.0 million in PE 27277F for the HCSE.

Electro-magnetic interference grid fabrication technology

The budget request contained $39.7 million in PE 63112F for the development of various advanced materials for weapons, but contained no funds for development of electro-magnetic interference (EMI) grid fabrication technology.

The committee understands that the F–35 requires sensor suite windows that are integrated into the aircraft's fuselage, which will exhibit precise EMI shielding characteristics through the use of shielding grids on those sensor surfaces. Such EMI shielding would allow the F–35's sensors to function in the presence of EMI. However, the committee further understands that there are significant challenges in the fabrication of EMI shielding grids, and no domestic commercial vendors are currently capable of EMI shielding grid production.

The committee recommends an increase of $4.0 million in PE 63112F to develop fabrication and coating technologies for the production of high-precision EMI shielding grids that exhibit performance stability over time and when subject to changing temperatures.

EMP immune computer hardware

The budget request contained no funds for the Carbon Nanotube-based Radiation Hard Non-Volatile RAM program.

This program will develop more reliable electronics for military applications.

The committee recommends an increase $2.0 million in PE 34111F for the Carbon Nanotube-based Radiation Hard Non-Volatile RAM program.

Enhanced smart triple ejector rack

The budget request contained $17.0 million in PE 65011F for development of various products and services to improve the performance of aging aircraft systems, but contained no funds to expedite the development of and to initiate low-rate initial production (LRIP) activities for the enhanced smart triple ejector rack (ESTER) program.

The ESTER program is developing an upgrade to the triple ejector rack–9A (TER–9A), which is currently used on the Department of the Air Force's A–10 and F–16 fleets. The committee understands that the TER–9A is unable to carry precision-guided munitions (PGMs) such as the joint direct attack munition or the wind-corrected munitions dispenser, but that the ESTER upgrade would allow the carriage of up to three PGMs on each of the A–10 and F–16 weapons carriage stations. The committee also understands that the Department of the Air Force has an immediate require-

ment to increase PGM carrying capacity of its A–10 and F–16 fleets, and believes that the ESTER program will meet this requirement.

The committee recommends $21.5 million, an increase of $4.5 million in PE 65011F to expedite the development of and to initiate LRIP activities for the ESTER program.

Global Positioning System IIF, satellites 13–15

The budget request contained $120.9 million in PE 35165F for Global Positioning System (GPS) IIF.

The GPS constellation currently supports the military as well as civil and commercial endeavors around the world. The committee recognizes the importance of maintaining this capability without the possibility of a gap due to the large number of users relying on the GPS system. The committee also understands the desire to include new capabilities such as more accurate position and timing data, anti-jam, and a new civil signal compatible with the European positioning system Galileo.

However, the committee believes the strength of the GPS systems is in the continuity of operations and availability of the GPS signals. The committee considers procuring additional GPS IIF satellites as the best solution for maintaining the GPS capability used by the warfighter. In addition, this recommendation will allow for the ground system and user equipment to leverage the capabilities resident on the satellites.

The committee recommends $160.9 million, an increase of $40.0 million to conduct parts obsolescence studies for GPS satellites 13–15.

Global Positioning System III

The budget request contained $587.2 million in PE 63421F for Global Positioning System (GPS) III satellite system.

The committee is aware that the Under Secretary of the Air Force is taking steps to develop a block approach for development and fielding of the next-generation GPS satellite constellation. However, the committee is concerned by the Air Force's decision to pursue a new acquisition and competition before resolving the problems on the current GPS IIF program. In addition, the committee questions the operational utility of the proposed GPS III systems when current (M-Code) capabilities cannot be used by the warfighter due to delays in the user equipment and ground systems upgrades. Furthermore, the committee is concerned about the delay in fielding the ground system to command and control the current GPS constellation and recommends the Department of the Air Force focus resources on enhancing this system to effectively use space-based capabilities.

The committee notes the need for future enhancements such as cross-links, anti-jam capabilities, and more accurate clocks. The committee recommends the Department of the Air Force pursue technology maturation and risk-mitigation efforts on these areas for inclusion on a future evolution of the GPS IIF satellite system.

The committee recommends $437.2 million, a decrease of $150.0 million, in PE 63421F to the GPS III program.

Global Positioning System modernized user equipment

The budget request contained $93.3 million in PE 35165F for Global Positioning System (GPS) modernized user equipment (MUE).

However, the budget request contained no funds for continued competition in this program that will provide the Department of Defense (DOD) with a more robust capability to operate in a projected threat environment.

The United States maintains GPS for the benefit of military and civilian users worldwide. Military dependence on this system continues to grow at a rapid rate and now covers ground, sea, air, and space users. Increasingly, GPS is being targeted by systems capable of jamming the signal, denying the use of the GPS constellation. The DOD's strategy for combating this jamming has been to develop the (M-Code) signal and corresponding user equipment highly resistant to GPS jamming. M-Code is already being transmitted from space and the Air Force is moving toward a full constellation on-orbit; however, user equipment development is lagging behind.

Furthermore, the committee notes the budget request did not allocate sufficient funding to support the requirements of the current MUE received card development contracts, which were originally intended to preserve the industrial base, mature the information assurance approach, and reduce the total ownership cost to the government for next generation receivers. This action will significantly impact the GPS user equipment industrial base and will fail to provide the user with the best technical, cost effective solution for position, navigation, guidance, and identification.

The committee recommends $156.5 million, an increase of $63.2 million in PE 35165F to support accelerated development of user equipment.

High Accuracy Network Determination System

The budget request contained no funds for High Accuracy Network Determination System (HANDS).

HANDS addresses critical space situational awareness needs and reduces the potential for collisions of space assets by reducing errors in the current space-object maintenance catalog, as well as supplements the catalog with system characterization information.

The committee recommends an increase of $10.0 million in PE 63444F for the HANDS program.

High Integrity Global Positioning Systems

The budget requests contained $70.0 million in PE 63422F and $10.0 million in PE 1160403BB for development of the capabilities associated with the High Integrity Global Positioning System also called iGPS.

The funds have been directed to develop receivers using the iGPS constellation concept of integrating signals from the Iridium constellation with the GPS constellation creating better timing and accuracy, and some potential anti-jam capabilities. The benefits of this approach have not been sufficiently proven and the committee does not recommend funding either of these requests.

The committee recommends no funds in PE 63422F and in PE 1160403BB for development of the capabilities associated with the High Integrity Global Positioning System.

Inductive thermography inspection equipment

The budget request contained $203.6 million in PE 41119F for C–5 airlift squadrons, but contained no funds for inductive thermography inspection equipment.

The committee understands that C–5 aircraft are experiencing cracks in the upper aft crown skin and the aft section of the torque deck. Traditional non-destructive inspection (NDI) techniques are costly and time intensive for maintenance personnel. The committee notes that alternative NDI techniques used by Air Force maintenance personnel on other aircraft, such as inductive thermography, can be more cost effective to detect weaknesses in airframe structures. However, inductive thermography equipment has not been developed for inspections on C–5 aircraft.

The committee recommends $205.6 million, an increase of $2.0 million in PE 41119F for C–5 airlift squadrons, and for development of inductive thermography equipment for C–5 aircraft.

Intelligent Free Space Optical Satellite Communications Node

The budget request contained no funds for the Intelligent Free Space Optical Satellite Communications Node program.

The Intelligent Free Space Optical Satellite Communications node can support the development of light-weight, low-cost, space qualified laser communications hardware.

The committee recommends an increase of $4.0 million in PE 63401F for continued development of the Intelligent Free Space Optical Satellite Communications Node.

Joint Strike Fighter

The budget request contained $1.8 billion in PE 64800F, and $1.7 billion in PE 64800N, for development of the Joint Strike Fighter (JSF), but contained no funds for development of a competitive JSF propulsion system.

The competitive JSF propulsion system program is developing the F136 engine, which would provide a competitive alternative to the currently-planned F135 engine. In the committee report (H. Rept. 109–452) accompanying the National Defense Authorization Act for Fiscal Year 2007, the committee recommended an increase for the JSF competitive propulsion system, and notes that the other three congressional defense committees also recommended increases for this purpose. Section 211 of the John Warner National Defense Authorization Act for Fiscal Year 2007 (Public Law 109–364) required that the Secretary of Defense, acting through the Department of Defense Cost Analysis Improvement Group, the Comptroller General, and a federally funded research and development center each provide an independent lifecycle cost analysis of the JSF propulsion system, which would include a competitive engine program by March 15, 2007. On March 22, 2007, the Subcommittees on Air and Land Forces and Seapower and Expeditionary Forces held a hearing, which included witnesses from the Department of Defense, the Institute for Defense Analyses, and the Government Accountability Office (GAO), to receive testimony regard-

ing their findings on the JSF propulsion system. The committee believes the results of these studies were, in the aggregate, inconclusive on whether there would be a financial benefit to the Department in continuing to develop a competitive propulsion system for the JSF program. However, the committee notes that all studies identified significant non-financial factors of a two-engine competitive program, which include: better engine performance; improved contractor responsiveness; a more robust industrial base; increased engine reliability; and improved operational readiness. The committee believes that the benefits, which could be derived from the non-financial factors, favor continuing the JSF competitive propulsion system program, and recommends an increase of $480.0 million for this purpose.

The committee recommends $1.8 billion in PE 64800N, an increase of $115.0 million, and directs that $240.0 million of the recommended funds be used for the competitive JSF propulsion system program; and $1.9 billion in PE 64800F, an increase of $115.0 million, and directs that $240.0 of the recommended funds be used for the competitive JSF propulsion system program.

Additionally, the committee recommends a provision (section 213) that would require the Secretary of Defense to obligate sufficient annual amounts to develop and procure a competitive propulsion system for the JSF program, in order to conduct a competitive propulsion source selection, from funds appropriated pursuant to an authorization of appropriations or otherwise made available for research, development, test, and evaluation, and procurement for the JSF program. The committee notes that current plans for the competitive JSF propulsion system would complete the development of the competitive propulsion system so that a competition for the JSF propulsion would occur in fiscal year 2012 with the sixth lot of low-rate initial production aircraft.

KC–X

The budget request contained $314.5 million in PE 41221F for KC–X, the Air Force's next generation aerial refueling aircraft and the replacement for the KC–135 aircraft.

The committee notes that prior year unobligated appropriations of $173.5 million are available for execution of the KC–X development program. The committee notes that the system development and design contract award was expected in fiscal year 2007, but has been delayed until fiscal year 2008. Further, the request for proposal issued to industry by the Air Force on January 30, 2007 identified $250.0 million as the likely funding level available for KC–X developmental activities in fiscal year 2008. The committee fully supports recapitalization of the KC–135 fleet and understands that a decrement to the funding request for fiscal year 2008 should not have a significant impact to program execution.

The committee recommends $114.5 million, a decrease of $200.0 million in PE 41221F for KC–X development.

Lightweight, compact transmitter for imaging laser radar

The budget request contained $57.8 million in PE 62602F for conventional munitions, but contained no funds for a lightweight, compact transmitter for imaging laser radar.

The committee recommends an increase of $4.8 million in PE 62602F for a lightweight, compact transmitter for imaging laser radar.

Low emission hybrid electric engine propulsion

The budget request contained $11.0 million in PE 78611F for support systems development, but contained 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 could potentially be 40 percent more fuel efficient.

The committee recommends an increase of $5.0 million in PE 78611F for the continued refinement in system development and demonstration of low emission and fuel efficient hybrid electric engine propulsion for aviation refueling trucks.

Metals Affordability Initiative

The budget request contained $39.7 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 government and private sectors of the aerospace industry, and providing improved affordability of aerospace materials.

The committee recommends an increase of $14.0 million in PE 63112F for the Metals Affordability Initiative.

National Security Space Integration

The committee reaffirms its belief that the integration of black, classified, and white, unclassified, space activities enhance national security and provide the best possible suite of capabilities to meet the needs of the warfighter, intelligence analyst, and policy-maker. Given the challenges associated with space acquisitions including the expensive nature of modern satellite development programs and a limited cadre of space professionals, it is in the national security interests of the United States for the black and white space communities to work together to coordinate and cooperate on space capabilities, technologies, and resources; leverage expertise; promote greater information sharing; and minimize duplication wherever feasible.

The committee encourages the Department of the Defense and the Intelligence Community to place greater emphasis on black and white space integration in the areas of: joint planning and acquisition; technology development; operations and greater integration across ground architectures; and space professional development.

Operationally Responsive Space

The budget requests contained $87.0 million in PE 64857F for development of Operationally Responsive Space (ORS) systems.

The committee acknowledges efforts by the Department of Defense to establish an ORS program office and budget resources for this mission area. In light of the recent Chinese anti-satellite test and other growing threats to space, the committee reaffirms its support for ORS.

The committee has provided direction in previous legislation that ORS shall consist of low-cost, rapid reaction payloads, busses, spacelift, and launch control capabilities. The committee is concerned the Department has not balanced the resources in the ORS account to address each of these areas, with a majority of the request going towards acquisition of existing spacelift systems. The committee encourages the Department to re-balance the fiscal year 2008 resources across existing launch vehicle purchases, responsive launch vehicle development, responsive payload and bus development, and responsive launch control capabilities.

In addition, the committee requests the Department continue to support joint ORS activities with the services, agencies, research labs, Defense Advanced Research Projects Agency, and industry as these organizations bring core competencies and expertise to the development of ORS capabilities.

The committee recommends $117.0 million, an increase of $30 million in PE 64857F for the development efforts associated with responsive launch and payload design and testing.

Optical maximum entropy verification

The budget request contained $108.1 million in PE 62204F for aerospace sensors, but contained no funds for enhancing the security of the common access card.

The committee supports the optical maximum entropy verification technology, which began as a U.S. Air Force demonstration program, and the Genus II open architecture, Java programmable terminal, to satisfy several critical military, government, and commercial security requirements on a global scale.

The committee recommends $114.1 million, an increase of $6.0 million in PE 62204F to produce initial integrated systems to address Department of Defense security requirements for the Common Access Card. The committee further encourages the Navy and Army to consider participation in this program.

Radiation Hardened Electronics

The budget request contained no funds for the Systematic Approach to Radiation Hardened Electronics program.

The Systematic Approach to Radiation Hardened Electronics program will enable accelerated delivery of reliable radiation hardened integrated circuits.

The committee recommends an increase of $1.5 million in PE 63401F for the Systematic Approach to Radiation Hardened Electronics program.

Rivet Joint Network Interface Growth

The budget request contained no funds for Rivet Joint Network Interface Growth.

The Rivet Joint Program supports collaboration within the Theater Network Geo-location environment and the continued development of the Dual Multithreaded Collection Architecture.

The committee recommends an increase of $6.0 million in PE 35207F for the Rivet Joint Program.

Satellite Active Imaging National Testbed program

The budget request contained no funds for the Satellite Active Imaging National Testbed (SAINT) program.

The SAINT program will expand space object identification and capabilities analysis of objects in low-earth orbit and geosynchronous orbit.

The committee recommends an increase of $3.0 million in PE 63605F for the SAINT program.

Self-Aware—Space Situation Awareness

The budget request contained no funds for the Self-Aware—Space Situational Awareness (SASSA) program.

The SASSA program will provide additional capability to the Space Situational Awareness architecture.

The committee recommends an increase of $25.0 million in PE 63438F for the SASSA program.

Space Based Infrared System, geosynchronous satellite 4

The budget request contained $587.0 million in PE 64441F for Space Based Infrared System (SBIRS) geosynchronous (GEO) satellites.

The committee is encouraged by the successes achieved from SBIRS Highly Elliptical Orbit (HEO) system and recommends the Department of the Air Force procure SBIRS GEO satellites 4 and 5.

The committee recommends an increase of $100.0 million to conduct parts obsolescence analysis for SBIRS GEO 4.

Space Based Infrared System-High Mission Control System backup

The budget requests contained $587.0 million in PE 644415F for the procurement of the Space Based Infrared System (SBIRS) satellite constellation and ground system.

The committee supports the upgrade of the Mission Control System backup (MCS–B) at Schriever Air Force Base, Colorado, to support full SBIRS operations.

The committee recommends an increase of $27.6 million in PE 64441 for the upgrade of SBIRS MCS–B.

Space Control Test Capabilities

The budget request contained no funds for the Space Control Test Capabilities program.

The Space Test Control Test Capabilities program will support the analysis of space control systems to provide the most effective architecture.

The committee recommends an increase of $5.0 million in PE 64421F for the Space Test Control Test Capabilities program.

Space entrepreneurship

The budget request contained no funds for Space Entrepreneurship.

The Space Entrepreneurship initiative will support partnerships with entrepreneurial space companies and universities to accelerate technology that supports the aerospace community.

The committee recommends an increase of $1.0 million in PE 62601F for Space Entrepreneurship.

Space fence

The budget request contained $4.1 million in PE 64425F for the Space Fence program.

This program is an integral part of the space situational awareness architecture, providing tracking of resident space objects.

The committee recommends an increase of $9.8 million in PE 64425F for the Space Fence program.

Space Situational Awareness

The budget request contained no funds for the Air Force unfunded requirement #22, Classified—Space Situational Awareness (SSA) program.

This program will support the SSA architecture.

The committee recommends an increase of $95.0 million for the Air Force unfunded requirement #22, Classified—Space Situational Awareness program.

Strategic airlift transformation and integration modeling

The budget request contained $11.1 million in PE 78611F for support systems development, but contained no funds for strategic airlift transformation and integration modeling (SATIM).

The committee understands that the SATIM program seeks to improve strategic aircraft availability and reduce total ownership costs by identifying maintenance process improvement opportunities, inserting technology into recommended solutions, and including private industry best practices in maintenance tracking and planning at air logistics centers. The committee notes that previous SATIM efforts have streamlined and automated maintenance processes to reduce manual research and lower personnel dwell time on resolving maintenance issues.

The committee recommends an increase of $4.0 million in PE 78611F for support systems development for SATIM.

Wideband Global System laser communication integration

The committee is interested in the possibilities of integrating a laser communications packages on Wideband Global System satellites. The committee believes pursuing an early demonstration and integration of laser communications capability will provide a migration path for this critical technology into the communications architecture. This approach will allow user equipment to experiment with laser communication capabilities before a more robust system, like the Transformational Communications satellite, is available.

DEFENSE-WIDE RESEARCH, DEVELOPMENT, TEST, AND EVALUATION

Overview

The budget request contained $20.6 billion for Defense-wide research, development, test, and evaluation (RDT&E).

The committee recommends $20.0 billion, a decrease of $598.9 million to the budget request.

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
	RESEARCH, DEVELOPMENT, TEST & EVAL, DEFENSEWIDE					
	BASIC RESEARCH					0
1	DTRA University Strategic Partnership	5,000	5,000			10,000
	Combating Weapons of Mass Destruction			5,000		
2	Defense Research Sciences	152,622	8,000			160,622
	Semiconductor Focus Research			8,000		
3	Government/Industry Cosponsorship of University Research	0				0
4	Defense Experimental Program to Stimulate Competitive Research	5,878				5,878
5	National Defense Education Program	44,372	0			44,372
	Materials World Modules			4,500		
	Science, Mathematics, and Research for Transformation			3,000		
	National Science and Engineering Faculty Fellowships			2,000		
	Preengineering Modules				(9,500)	
6	Chemical and Biological Defense Program	72,003	9,250			81,253
	CBDP Initiative Basic Research			8,000		
	Biodefense Technologies - Polymedix			1,250		
	TOTAL, BASIC RESEARCH	**279,875**	**22,250**	**31,750**	**(9,500)**	**302,125**
	APPLIED RESEARCH					0
7	Joint Munitions Technology	15,542				15,542
8	Medical Free Electron Laser		18,000			18,000
	Program Increase			18,000		
9	Historically Black Colleges and Universities (HBCU) Science	15,150				15,150
10	Lincoln Laboratory Research Program	29,524				29,524
11	Information & Communications Technology	229,739	9,000			238,739

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
	Document Exploitation			8,000		
	Intelligent Representative Analysis (NASEC)			1,000		
12	Cognitive Computing Systems	179,728				179,728
13	Biological Warfare Defense	99,137				99,137
14	Chemical and Biological Defense Program	305,327	20,000			325,327
	CBDP Initiative Applied Research			20,000		
15	Human, Social and Culture Behavior Modeling (HSCB) Applied Research	7,300				7,300
16	Tactical Technology	374,717				374,717
17	Materials and Biological Technology	306,022				306,022
18	WMD Defeat Technology					
19	Electronics Technology	213,529				213,529
20	WMD Defense Technologies					0
21	Weapons of Mass Destruction Defeat Technologies	182,416				182,416
22	Joint Spectrum Center					0
23	Special Operations Technology Development	21,282	5,850			27,132
	Foliage Penetration Reconnaissance & Surveillance			5,850		
24	SOF Medical Technology Development	2,388				2,388
	TOTAL, APPLIED RESEARCH	**1,981,801**	**52,850**	**52,850**	**0**	**2,034,651**
	ADVANCED TECHNOLOGY DEVELOPMENT					0
25	Insensitive Munitions - Advanced Development	6,000				6,000
26	Medical Advanced Technology	0				0
27	SO/LIC Advanced Development	32,669	12,000			44,669
	Irregular Warfare Support			12,000		
28	Combating Terrorism Technology Support	76,276	8,500			84,776
	Contextual Arabic Slang			3,500		
	Ruggedized Mobile Secure Body Scan			1,000		

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
	License Plate Recognition Initiative			1,500		
	Affordable Mid-sized UGV			2,500		
29	Counterproliferation Initiatives - Proliferation Prevention and Defense	213,240	1,500			214,740
	Radiation Hardened Nonvolatile Memory			1,500		
30	Ballistic Missile Defense Technology	118,569	(10,000)			108,569
	Program Decrease				(10,000)	
31	Joint DoD-DoE Munitions Technology Development	23,488				23,488
32	Advanced Aerospace Systems	86,385				86,385
33	Space Programs and Technology	224,551				224,551
34	Chemical and Biological Defense Program	232,302	25,000			257,302
	CBDP Initiative Advanced Technology Development			25,000		
35	Joint Electronic Advanced Technology	9,219	15,000			24,219
	Advanced Energy Storage Initiative			15,000		
36	Joint Capability Technology Demonstrations	194,352	(5,300)			189,052
	Computerized Assisted Threat Evaluation			5,000		
	Distributed Network Switching			4,700		
	Program Reduction				(15,000)	
37	Networked Communications Capabilities	40,000	(20,000)			20,000
	Program Reduction				(20,000)	
38	Biometrics Science and Technology	8,000				8,000
39	Human, Social and Culture Behavior Modeling (HSCB) Advanced Development	9,000	12,000			21,000
	Human Systems Integration			12,000		
40	Defense-Wide Manufacturing Science and Technology Program	10,000				10,000
41	Joint Robotics Program/Autonomous Systems	11,256				11,256
42	Logistics R&D Technology Demonstrations	18,736	5,500			24,236
	Critical Interconnect Technologies			5,000		
	Rapid ID of Technology Sources			500		
43	Depolyment and Distribution Enterprise Technology					0

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
44	Strategic Environmental Research Program	68,874	(4,000)			64,874
	Program Reduction				(4,000)	
45	Microelectronic Technology Development and Support	0	14,000			14,000
	Superlatice Nanotechnology			4,000		
	Processing Alpha Tool			5,000		
	Supply Chain DEV			5,000		
46	Joint Warfighting Program	11,060				11,060
47	Advanced Electronics Technologies	220,548				220,548
48	Synthetic Aperture Radar (SAR) Coherent Change Detection	6,500	(6,500)			0
	Program Decrease				(6,500)	
49	Advanced Concept Technology Demonstrations		4,000			4,000
	Simultaneous Field Radiation Technology			4,000		
50	High Performance Computing Modernization Program	187,587				187,587
51	Command, Control and Communications Systems	256,868				256,868
52	Land Warfare Technology / FCS	24,711				24,711
53	Classified DARPA Programs	188,188				188,188
54	Network-Centric Warfare Technology	151,641				151,641
55	Sensor Technology	196,462				196,462
56	Guidance Technology	127,777				127,777
57	Distributed Learning Advanced Technology Development	13,282				13,282
58	Software Engineering Institute	29,851				29,851
59	Dual Use Technology	0				0
60	Quick Reaction Special Projects/Challenge Program (IFF)	109,514	3,600			113,114
	Small Craft Integrated Common Operating System			1,600		
	Semiautonomous Robotic Manipulation			2,000		
61	Joint Experimentation	112,017	(5,500)			106,517
	Cultural and Societal Modeling and Simulation			3,000		
	Program Reduction				(10,000)	

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
	Joint Urban Fires Prototype (JUFP)			1,500		
62	Joint Wargaming Simulation Management Office	37,837	(17,800)			20,037
	Program Decrease				(17,800)	
63	Test & Evaluation Science & Technology	62,889				62,889
64	Technology Link	2,234				2,234
65	Special Operations Advanced Technology Development	29,935	17,900			47,835
	Expendable Air Drop Delivery System			5,000		
	Long Endurance Unattended Ground Sensors			3,200		
	Tactical Wireless Battlefield Solutions			2,700		
	Pulsed Energy Projectile			7,000		
	TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT	**3,151,818**	**49,900**	**133,200**	**(83,300)**	**3,201,718**
	ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES					0
66	Nuclear and Conventional Physical Security Equipment RDT&E	38,060				38,060
67	Physical Security Equipment	0				0
68	REFRACT LARCH	22,365				22,365
69	Joint Robotics Program	11,860				11,860
70	Advanced Sensor Applications Program					0
71	Environmental Security Technical Certification Program	33,199				33,199
72	Ballistic Missile Defense Terminal Defense Segment	962,585				962,585
73	Ballistic Missile Defense Midcourse Defense Segment	2,520,064	(160,000)			2,360,064
	European GMD Site				(160,000)	
74	Ballistic Missile Defense Boost Defense Segment	548,759	(250,000)			298,759
	Airborne Laser				(250,000)	
75	Chemical and Biological Defense Program	57,160				57,160
76	Ballistic Missile Defense Sensors	778,163	(50,000)			728,163
	Excessive Costs				(50,000)	

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
77	Ballistic Missile Defense System Interceptor	227,499	(50,000)			177,499
	Program Reduction				(50,000)	
78	Ballistic Missile Defense Test & TargEFs	586,150				586,150
79	Ballistic Missile Defense Products					0
80	Ballistic Missile Defense Systems Core	482,016	(50,000)			432,016
	BMDS Core				(50,000)	
81	Special Programs - MDA	323,250	(170,000)			153,250
	Program Decrease				(170,000)	
82	AEGIS BMD	1,059,103	78,000			1,137,103
	SM-3 Production Capability			20,000		
	SM-3 Interceptors			36,000		
	BSP Upgrade			22,000		
83	Space Tracking & Surveillance System	331,525	(75,000)			256,525
	Schedule				(75,000)	
84	Multiple Kill Vehicle	271,151	(42,000)			229,151
	Program Reduction				(42,000)	
85	Ballistic Missile Defense System Space Programs	27,666	(10,000)			17,666
	Space Test Bed				(10,000)	
86	Ballistic Missile Defense Command and Control Battle Management and Communications	258,913				258,913
87	Ballistic Missile Defense Hercules	53,658				53,658
88	Ballistic Missile Defense Joint Warfighter Support	48,787	6,000			54,787
	Program Increase			6,000		
89	Ballistic Missile Defense Joint National Integration Center (JNIC)	104,012				104,012
90	Ballistic Missile Defense Concurrent Test, Training and Operations					0
91	Regarding Trench	2,000				2,000
92	Humanitarian Demining	14,013				14,013
93	Coalition Warfare	14,047				14,047
94	Department of Defense Corrosion Program	4,983				4,983

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
95	Joint Capability Technology Demonstrations (L-36)	2,960				2,960
96	Human, Social and Culture Behavior Modeling (HSCB) Reasearch and Engineering	5,700				5,700
97	Joint Systems Integration Command (JSIC)	19,375				19,375
98	Joint FIRES Integration and Interoperability Team	16,596				16,596
99	Reduction Of Total Ownership Cost	25,225				25,225
100	Joint Electromagnetic Technology (JEF) Program	3,482	6,000			9,482
	Secure Miniaturized Free Space Optical Communications			6,000		
	TOTAL, ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES	**8,854,326**	**(767,000)**	**90,000**	**(857,000)**	**8,087,326**
	SYSTEM DEVELOPMENT & DEMONSTRATION					0
101	Deployment and Distribution Enterprise Technology	25,000				25,000
102	Defense Acquisition Challenge Program (DACP)	28,970				28,970
103	Nuclear and Conventional Physical Security Equipment RDT&E	3,281				3,281
104	Chemical and Biological Defense Program	247,935				247,935
105	MANPADS Defense Program	0				0
106	Joint Robotics Program	2,911				2,911
107	Advanced IT Services Joint Program Office (AITS-JPO)	9,832				9,832
108	Joint Tactical Information Distribution System (JTIDS)	16,527				16,527
109	Weapons of Mass Destruction Defeat Capabilities	15,394				15,394
110	Information Technology Development	11,297	1,000			12,297
	In Transit Visibility System			1,000		
111	Information Technology Development-Standard Procurement System	0				0
112	Financial Management System Improvements					0
113	Defense Integrated Military Human Resources System (DIMHRS)	79,300				79,300
114	Defense Integrated Milltary Human Resources System (DIMHRS)					0
115	Acquisition Domain					0
116	Business Transformation Agency R&D Activities	127,970				127,970

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
117	Homeland Personnel Security Initiative	1,800				1,800
118	Trusted Foundry	43,604				43,604
119	Defense Acquisition Executive (DAE) Pilot Program	5,838				5,838
120	Defense Message System					0
121	Global Combat Support System	18,129				18,129
122	Joint Command and Control Program (JC2)	70,283	(20,000)			50,283
	Net Enabled C2				(20,000)	
123	Electronic Commerce					0
124	BMMP Domain Management and Systems Integration					0
	TOTAL, SYSTEM DEVELOPMENT & DEMONSTRATION	**708,071**	**(19,000)**	**1,000**	**(20,000)**	**689,071**
	RDT&E MANAGEMENT SUPPORT					0
125	Special Technical Support					0
126	Generic Logistics R&D Technology Demonstartions	4,000				4,000
127	Joint Training Transformation (T2)	51,752				51,752
128	Capital Asset Management System-Military Equipment					0
129	Defense Readiness Reporting System (DRRS)	11,886				11,886
130	Joint Systems Architecture Development	14,437				14,437
131	Central Test and Evaluation Investment Development (CTEIP)	133,772	8,000			141,772
	Advanced SAM Hardware Simulator Development			8,000		
132	Assessments and Evaluations	1,645				1,645
133	Thermal Vicar	7,822				7,822
134	Joint Mission Environment Test Capability (JMEFC)	6,925				6,925
135	Technical Studies, Support and Analysis	31,263	1,000			32,263
	National Defense University Research Program			1,000		
136	USD (A&T) --Critical Technology Support	4,021				4,021
137	Foreign Material Acquisition and Exploitation	52,683				52,683

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
138	Defense Travel System					0
139	Joint Theater Air and Missile Defense Organization	53,653				53,653
140	Classified Program USD(P)					0
141	Foreign Comparative Testing	32,919				32,919
142	Nuclear Matters - Physical Security	4,513				4,513
143	Support to Networks and Information Integration	11,152				11,152
144	General Support to USD (Intelligence)	4,574				4,574
145	Chemical and Biological Defense Program	99,053				99,053
146	Small Business Innovation Research					0
147	Small Business Innovative Research - MDA					0
148	Small Business Innovative Research					0
149	Small Business Innovative Research					0
150	Small Business Innovative Research/Challenge Administration	2,162				2,162
151	Defense Technology Analysis	11,927				11,927
152	Defense Technology Analysis					0
153	Force Transformation Directorate	20,585	(8,000)			12,585
	General Reduction				(8,000)	
154	Defense Technical Information Center (DTIC)	51,800	(5,000)			46,800
	Defense Technical Information Center				(5,000)	
155	R&D In Support of DoD Enlistment, Testing and Evaluation	9,326				9,326
156	Development Test and Evaluation	18,712				18,712
157	Management Headquarters (Research and Development) DARPA	52,992				52,992
158	Budget and Program Assessments	5,750				5,750
159	CLASSIFIED Programs					0
160	SPECIAL PROGRAM					0
161	Support to Information Operations (IO) Capabilities	28,652				28,652
162	Information Technology Rapid Acquisition	5,197	10,000			15,197
	Commerical Information Technology Identification Demonstration			10,000		
163	Intelligence Support to Information Operations (IO)	9,932				9,932

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
164	Intelligence Support to Information Operations (IO)					0
165	Warfighting and Intelligence-Related Support	827				827
166	Pentagon Reservation	6,058				6,058
167	Management Headquarters - MDA	85,906				85,906
168	IT Software Dev Initiatives	888				888
169	Financing for Cancelled Account Adjustments					
	Classified Programs	52,340				52,340
	TOTAL, RDT&E MANAGEMENT SUPPORT	**889,124**	**6,000**	**19,000**	**(13,000)**	**895,124**
	OPERATIONAL SYSTEMS DEVELOPMENT					
170	Defense Information System for Security (DISS)	34,417				34,417
171	Partnership for Peace (PfP) Information Management System	2,000				2,000
172	Chemical and Biological Defense (Operational Systems Development)	7,716				7,716
173	Joint Integration and Interoperability	53,892				53,892
174	JS Analytical Support	7,744				7,744
175	Classified Programs	1,694				1,694
176	C4I Interoperability	76,179				76,179
177	Cryptologic Activities					
178	Joint/Allied Coalition Information Sharing	26,321				26,321
179	General Defense Intelligence Program					0
180	HUMINT (Controlled)					0
181	Management Headquarters GDIP, DIA					0
182	Classified Programs					0
183	SPECIAL PROGRAM					0
184	National Military Command System-Wide Support	713				713
185	Defense Info Infrastructure Engineering and Integration	5,548				5,548
186	Long Haul Communications (DCS)	16,487				16,487
187	Minimum Essential Emergency Communications Network (MEECN)	9,482				9,482

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
188	Public Key Infrastructure (PKI)	9,389				9,389
189	Key Management Infrastructure (KMI)	52,090				52,090
190	Information Systems Security Program	13,256				13,256
191	Information Systems Security Program	394,314				394,314
192	Information Systems Security Program	2,300				2,300
193	DISA Mission Support Operations					0
194	C4I for the Warrior	3,624				3,624
195	C4I for the Warrior					0
196	Global Command and Control System	47,237				47,237
197	Joint Spectrum Center	18,653				18,653
198	Net-Centric Enterprise Services (NCES)	43,424				43,424
199	Teleport Program	5,798				5,798
200	Special Applications for Contingencies	15,687	4,500			20,187
	Optical Wireless Mobile Networking			4,500		
201	National Geospatial - Intelligence Program					0
202	Defense Geospatial - Intelligence Program		8,000			8,000
	GEOSAR Enhancements			4,000		
	China Geospatial Data Project			4,000		
203	Critical Infrastructure Protection (CIP)	12,667				12,667
204	Foreign Counterintelligence Activities					0
205	Defense Joint Counterintelligence Activities	2,951				2,951
206	Defense Human Intelligence (HUMINT) Program (DHIP)					0
207	Policy R&D Programs	4,627	1,000			5,627
	SVS Critical Response Interactive Simulation System			1,000		
208	Intelligence Support to Information Operations (IO)					0
209	Net Centricity	10,243				10,243
210	Dragon U-2					0
211	Airborne Reconnaissance Systems					0
212	Manned Reconnaissance Systems					0

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
213	Distributed Common Ground Systems					0
214	Distributed Common Ground/Surface Systems					0
215	Distributed Common Ground/Surface Systems	15,800				15,800
216	Distributed Common Ground/Surface Systems					
217	MQ-1 Predator UAV	13,100				13,100
218	DIA Support to SOUTHCOM Intelligence Activities					
219	Combatant Command Intelligence Operations					
220	Hard and Deeply Buried TargEF (HDBT) Intel Support					0
221	Intelligence Planning and Review Activities					0
222	Tactical Cryptologic Activities		6,000			6,000
	PATENT HAMMER			1,000		
	Tactical SIGINT Technology			5,000		
223	Counterdrug Intelligence Support	0	2,950			2,950
	Automated RF Survey			2,950		
224	NASS, IO Technology Integration & Tool Dev					0
225	Aerial Common Sensor (ACS)					0
226	Industrial Preparedness	20,114	12,000			32,114
	Defense Supply Base Pilot			5,000		
	High Pressure Food Packaging			5,000		
	Improved Collapsible Urethane Fuel Storage Tanks			2,000		
227	Logistics Support Activities	2,846				2,846
228	Management Headquarters (JCS)	3,210				3,210
229	NATO Joint STARS	41,466				41,466
230	STORM	27,107				27,107
231	Small Business Innovative Research/Small Bus Tech Transfer Pilot Prog					0
232	Special Operations Aviation Systems Advanced Development	60,750	(10,000)			50,750
	iGPS Program Reduction				(10,000)	
233	Special Operations Tactical Systems Development	42,262	16,700			58,962
	Advanced Mission Planning Tools			5,000		

(Dollars in Thousands)

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
	Wavelet Packet Modulation Modules			5,900		
	SUPORT			5,800		
234	Special Operations Intelligence Systems Development	35,783	5,000			40,783
	Advanced Packaging and DF for JTWS			2,300		
	Power Source Integration Team			2,700		
235	SOF Operational Enhancements	53,418	10,000			63,418
	Trident Reach			10,000		
236	Special Operations CV-22 Development	23,473				23,473
237	Special Operations Aircraft Defense Systems	5,195				5,195
238	Operations Advanced Seal Delivery System (ASDS) Development	20,292				20,292
239	Mission Training and Preparation Systems (MTPS)	6,405				6,405
240	Unmanned Vehicles (UV)	1,500				1,500
241	MC130J SOF Tanker Recapitalization	12,701				12,701
999	Classified	3,430,960				3,430,960
	TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT	**4,694,835**	**56,150**	**66,150**	**(10,000)**	**4,750,985**
	TOTAL, RDT&E, DEFENSE WIDE	**20,559,850**	**(598,850)**	**393,950**	**(992,800)**	**19,961,000**

Items of Special Interest

Advanced energy storage technology initiative

The budget request contained $9.2 million in PE 63618D8Z for joint electronic advanced technology.

The committee is aware that the Scientific and Technical Intelligence Committee of the National Intelligence Council issued a report in April, 2006, which judged that the United States is increasingly dependent on foreign sources for energy storage for consumer and military applications. Further, the committee is aware of continuing requirements for innovative battery and non-battery power sources for a number of military applications. These military applications include power generation for soldiers, weapons, vehicles, and installations and require energy storage technologies that meet unique performance and system integration specifications. The committee notes a number of developmental technologies that have the potential for meeting the requirements of the military services. These include the following: metal separator plates for duel-use fuel cell applications; a soldier portable fuel cell power system; a solid hydrogen storage and fuel cell system; hydrogen fuel cell for a vehicle; an unmanned aerial vehicle fuel cell power source; fuel cell cost reduction and durability technology; fuel cell hybrid generation system; fuel cell manufacturing process; fuel cell power for continuity of operations; fuel cell tactical generators; hybrid fuel cells for unintended sensors; gallium nitride power technology; deployable fuel cell power system; acid alkaline direct methanol fuel cell technology; alternate carbon stationary fuel cells; solid oxide fuel cells; molten carbonate fuel cells; planar solid oxide fuel cell system; alternative energy fuel cell power generation; polymer nanocomposites for energy storage and pulsed power; remotely monitored fuel cell system; carbonate fuel cells; gaseous diffusion layer for soldier power; electrolytic super-capacitors; zink air batteries; high specific energy rechargeable batteries; lithium ion polymer batteries; lithium battery technology; lithium ion battery cell production; lithium ion battery integration; modular lithium ion energy storage for hybrid vehicles; lithium-iron disulfide batteries; battery system development; BB–2560 battery replacement; bipolar wafer-cell nickel-metal hydride aircraft battery; ceramic membranes; and self sealing plastic for military batteries. The committee recommends that such technologies be considered for potential research, development, testing and/or demonstration funding. The committee recommends that the Director of Defense Research and Engineering select a technology or technologies on the basis of technical merit, cost-effectiveness, and the potential of a particular technology to meet service needs.

The committee recommends $24.2 million, an increase of $15.0 million, in PE 63618D8Z for the advanced energy storage technology initiative.

Advanced Mission Planning Tools

The budget request contained $42.3 million for Special Operations Tactical Systems Development, but contained no funds to improve Flight Performance Models (FPMs) for Advanced Mission Planning Tools.

The committee is aware that existing FPM methodologies date back to the early 1990s and may not adequately support current and future mission planning requirements Special Operations Forces (SOF) aviation. The committee commends efforts to address this risk area. The committee notes one solution, which strengthens the link between aircraft performance prediction and mission planning. The committee has been informed that the same solution also includes an attempt to create a more open and modular development architecture to accommodate dynamic computational algorithms, and promises an improvement in the integration of other techniques to model aircraft performance. The committee supports such efforts as a means to dramatically reduce mission performance calculations.

As a result, the committee recommends an increase of $5.0 million in PE 11644BB for Advanced Mission Planning Tools for SOF aviation.

Airborne network gateway

The budget request contained $40.0 million in PE 63662D8Z for networked communications capabilities, containing $20.0 million for airborne network gateway.

The airborne network gateway project is sponsored by the Office of the Secretary of Defense to increase understanding of airborne tactical relays, to assess the maturity of data link, network, and voice communications, and to conduct field demonstrations to assess military utility. The committee believes this effort is redundant with the U.S. Air Force's Objective Gateway and feels any work in this area should be addressed by the service program so that it will more adequately meet service-defined needs.

The committee recommends $20.0 million, a decrease of $20.0 million, in PE 63662D8Z for the airborne network gateway.

Ballistic missile defense

The budget request contained $8.9 billion for the ballistic missile defense programs of the Missile Defense Agency (MDA).

The committee's recommendations for ballistic missile defense programs are based on: (1) the objective of deploying systems to defend the United States, our deployed troops and allies against real threats; (2) concerns about the effectiveness of MDA's operational testing activities; and (3) the amount of funding for missile defense programs relative to other national defense priorities.

In the conference report (H. Rept. 109–702) accompanying the John Warner National Defense Authorization Act for Fiscal Year 2007, the conferees stated that it is the policy of the United States that the Department of Defense accord priority within the missile defense program to the development, testing, fielding, and improvement of effective near-term missile defense capabilities, including the ground-based midcourse defense system, the Aegis ballistic missile defense system, the Patriot PAC–3 system, the Terminal High Altitude Area Defense system, and the sensors necessary to support those systems. For a number of years, the committee has been concerned that the missile defense program has been too focused on long-term research and development efforts at the expense of testing and deploying capabilities that defend the United States, deployed troops and our allies from current and near-term

threats. The committee's recommendations accord priority within the budget to programs that deliver more near-term capability to the warfighter at the expense of several long-term research programs.

The committee believes that missile defense capabilities should be operationally tested before deployment. Over the past several years, MDA has taken significant steps to improve its testing program. These changes resulted in a successful intercept test of the ground-based, midcourse defense (GMD) system in September 2006, the first successful intercept test since 2002. That said, challenges remain with regard to MDA's testing program. In a March, 2007 Government Accountability Office (GAO) report titled "Missile Defense Acquisition Strategy Generates Results but Delivers Less at Higher Cost," the GAO stated that while the September 2006 flight test exceeded its objectives, "it is too early to assess whether MDA will achieve its overall performance goals for the Block 2006 fielded configuration. The goal itself has been lowered in the past year, and MDA's models and simulations have not yet been anchored by sufficient flight tests to have confidence that predictions of performance are reliable." In testimony before the Subcommittee on Strategic Forces on March 27, 2007, the Director of Operational Test & Evaluation stated that "to be confident in my assessment of the effectiveness [of the ballistic missile defense system] I need validated models and simulations. . . . They don't exist today because MDA doesn't have enough flight data to anchor them."

Since 1985, the United States has spent over $107.0 billion on research, development and deployment of ballistic missile defenses. The committee believes that, during this period, MDA has been accorded higher priority than other pressing national security needs. While the committee recommends robust funding for missile defense programs, it also recommends slowing or restructuring programs that do not address the near-term threats to the United States, our deployed troops and allies.

The committee recommends $8.1 billion, a decrease of $764.2 million, for the activities of the Missile Defense Agency.

Aegis Ballistic Missile Defense

The budget request contained $1.1 billion in PE 63892C for the sea-based Aegis Ballistic Missile Defense (BMD) system.

Aegis BMD is intended to provide protection against short-, medium-, and intermediate-range ballistic missiles. The committee believes that Aegis BMD provides a near-term capability that will help defend our forward deployed forces and allies and notes that the recent Capabilities Mix Study completed by U.S. Strategic Command has indicated that combatant commanders require twice as many SM–3 interceptors than the 147 that are currently planned.

The committee recommends $1.1 billion, an increase of $78.0 million, in PE 63892C for Aegis BMD. Of the recommended increase, $22.0 million is for accelerating ballistic missile defense signal processor upgrades; $20.0 million for facility upgrades that will increase the capacity to manufacture four or more missiles per month of the SM–3 Block IB missile in fiscal year 2010; and $36.0 million is for long-lead procurement of an additional 12 SM–3 Block IB missiles.

Arrow Weapons System

The budget request contained $73.5 million in PE 63881C for continued work on the joint United States-Israeli Arrow Weapons System.

The committee continues to support the Arrow system, which provides Israel the capability to defend itself against short- and medium-range ballistic missiles.

The committee recommends $73.5 million in PE 63881C for the joint U.S.-Israeli Arrow Weapons System, the amount of the budget request.

Ballistic Missile Defense Command and Control, Battle Management and Communication

The budget request contained $259.0 million in PE 63895C for the Ballistic Missile Defense Command and Control, Battle Management (C2BMC) system.

The committee notes that the C2BMC system became operational in 2006 and provided the combatant commanders' command, control, battle management, and communication tools to optimize the ballistic missile defense system. The committee is concerned that C2BMC suites have still not been installed at the U.S. Central Command (USCENTCOM), U.S. European Command (USEUCOM), and U.S. Forces Korea (USFK) headquarters. Given the importance of this capability to the warfighter, the committee recommends that the MDA provide USCENTCOM, USEUCOM, and USFK some C2BMC capability in fiscal year 2008.

The committee recommends $259.0 million in PE 63895C for the BMD C2BMC system, the amount of the budget request.

Ballistic Missile Defense joint warfighter support

The budget request contained $48.7 million in PE 63898C for Ballistic Missile Defense joint warfighter support, a decrease of $5.6 million from the fiscal year 2007 budget request.

The committee believes that this program, located at the Joint National Integration Center near Colorado Springs, Colorado, is critical to ensuring that the warfighter is able to effectively train and operate the Ballistic Missile Defense system and is concerned by the decision to decrease funding.

The committee recommends $54.7 million, an increase of $6.0 million, in PE 63898C for BMD joint warfighter support.

Ballistic Missile Defense sensors

The budget request contained $778.2 million in PE 63884C for Ballistic Missile Defense (BMD) sensors.

The committee notes that program-wide support costs for the sensors segment have grown by over one hundred percent from their fiscal year 2007 level. The committee believes the increase in program-wide costs to be excessive and recommends a level more consistent with past years.

The committee recommends $728.2 million, a decrease of $50.0 million, in PE 63884C for BMD sensors.

Ballistic Missile Defense system core

The budget request contained $482.0 million in PE 63890C for Ballistic Missile Defense (BMD) core programs.

The committee questions the continued need for the Missile Defense Agency (MDA) to have its own intelligence office. While the Office of Intelligence and Security performs necessary security functions, the committee believes that the MDA should rely on the Intelligence Community to conduct intelligence support and provide the Director and the various MDA elements with up-to-date information on missile threats. This point is even more relevant given the fact that MDA will re-locate the majority of its personnel and programs to Redstone Arsenal in Huntsville, Alabama, over the next several years, where it will be co-located with the Defense Intelligence Agency's Missile and Space Intelligence Center, one of the nation's primary resources for intelligence on ballistic missiles. The committee is also concerned about large increases in the requested funds for BMD core programs when the requested funding for other important programs has been reduced.

The committee recommends $432.0 million, a decrease of $50.0 million in PE 63890C for ballistic missile defense core programs. Furthermore, the committee recommends that no funds be provided for the intelligence activities of the Office of Intelligence and Security and that the office's responsibilities be re-focused on security and counterintelligence-related activities.

Ballistic Missile Defense system space programs

The budget request contained $27.6 million in PE 63895C for the Ballistic Missile Defense (BMD) system space programs.

Section 222 of the John Warner National Defense Authorization Act for Fiscal Year 2007 (Public Law 109–364) requires the Director of the Missile Defense Agency to submit a report to the congressional defense committees prior to the testing or deployment of space-based interceptors. Since the committee has yet to receive such a report, the committee recommends no funds for the space test bed.

The committee recommends $17.6 million, a decrease of $10.0 million, in PE 63895C for BMD system space programs, and recommends that no funds be provided for the space test bed.

Ballistic Missile Defense technology

The budget request contained $118.5 million in PE 63175C for Ballistic Missile Defense (BMD) technology.

The committee notes the importance of nearer-term missile defense priorities, and recommends $108.5, a decrease of $10.0 million in PE 63175C BMD technology.

Boost defense segment

The budget request contained $548.7 million in PE 63883C for the boost defense segment, primarily for work associated with the Airborne Laser (ABL).

Over the past several years, the Missile Defense Agency (MDA) has said that a decision on whether it moved forward with either the ABL or the Kinetic Energy Interceptor (KEI) as the primary boost phase defense system would be made by fiscal year 2008. However, earlier this year, the date for the ABL's lethal shoot-down demonstration slipped for the fourth time, and has been pushed to September 2009. Given the high-risk nature of the ABL program and its history of past delays and cost increases, the com-

mittee has little confidence that this date will not slip into 2010 or possibly later. The committee does not believe it is prudent to continue to spend over $500.0 million a year on a high-risk program that will provide very little near-term capability. Therefore, the committee believes that a decision must be made whether to move forward with either ABL or KEI.

In March 2006, the MDA submitted a report to Congress titled "Assessment of Boost and Ascent Phase Missile Defense Capabilities," which was required by section 231 of the National Defense Authorization Act for Fiscal Year 2006 (Public Law 109–163). This report has led the committee to question whether ABL is a viable operational system. The committee is also concerned about the potential costs associated with the ABL. The MDA estimates that total research and development costs for the first ABL aircraft through the current 2009 lethal shoot-down demonstration will cost $5.1 billion. Additionally, according to estimates by the Congressional Budget Office, future ABL aircraft could cost $1.5 billion per aircraft, based on an initial fielding run of seven aircraft. If we continue to move forward on the present course, the nation could potentially spend over $20.0 billion on ABL to obtain very limited capability.

The committee is also concerned that it will be some time before any militarily significant ABL capability will reach the field. The MDA has stated that it would take at least three, but potentially more, ABL aircraft to maintain a full ABL orbit. Assuming that there are no further delays in the ABL program, it is unlikely that we would see the first full ABL orbit, 3–5 aircraft, until the 2018–2020 timeframe. Given the threats the nation faces, the committee believes that it would be more prudent to invest in more mature near-term missile defense systems.

The committee recommends $298.8 million in PE 63883C, a decrease of $250.0 million to restructure ABL into a technology demonstration program and to leave open the option of a lethal shoot-down demonstration in the future should the technology prove viable.

European missile defense site

The budget request contained $2.5 billion in PE 63882C for the ballistic missile defense (BMD) midcourse defense segment. Of this amount, approximately $216.0 million is for the establishment of a ground-based, midcourse (GMD) interceptor site in Europe.

In the committee's report (H.Rept. 109–452) accompanying the National Defense Authorization Act for Fiscal Year 2007, the committee stated that it believed it was premature to invest in the third site until the existing block 2004/2006 GMD configuration completed integrated end-to-end testing. The committee notes that the Missile Defense Agency (MDA) has still not fully completed successful end-to-end testing of the block 2004/2006 GMD configuration. Furthermore, while the United States has begun negotiations with Poland and the Czech Republic about the potential deployment of missile defense capabilities on their territories, the committee notes that no formal agreements have been reached. The committee is reluctant to authorize funds for a project that could cost over $4.0 billion when Congress has not yet received an agreement outlining the terms under which those funds would be ex-

pended. Accordingly, the committee recommends no funds for construction of the third site.

With respect to long-lead procurement for third site interceptors, the committee recommends $42.7 million, to continue long-lead procurement of ten additional GMD interceptors. The committee notes that the fiscal year 2008 budget justification materials indicate that these interceptors could be used at a European site or for expanded inventory at Fort Greely, Alaska. That said, the committee is aware that MDA plans to deploy a two-stage version of the current ground-based interceptor in Europe, and notes its concern with MDA's proposed testing plan and risk reduction strategy for that missile.

The committee strongly supports the need to work closely with our North Atlantic Treaty Organization (NATO) allies to defend against ballistic missile threats. However, the committee has concerns with the Administration's current approach to proceed with the deployment on a bilateral basis without NATO's full support. The committee recommends that the Administration focus its efforts in the coming months on placing its proposal within a strong NATO foundation. Furthermore, the committee also believes that any future missile defense system deployed in Europe should be part of a larger system that can protect all of NATO's European allies, and must be fully interoperable with the missile defense system that NATO is developing to defend against short- and medium-range threats.

The committee directs the Secretary of Defense and the Secretary of State to submit a report to the Senate Committee on Armed Services and the House Committee on Armed Services by January 31, 2008. The report shall include the Administration's plans for obtaining NATO's support for its proposal; how the proposed system will interoperate with the NATO missile defense system; its plan for providing missile defense protection for areas of Southern Europe; how other missile defense capabilities, such as Aegis Ballistic Missile Defense, Terminal High Altitude Area Defense, and Kinetic Energy Interceptor, could contribute to the defense of Europe; the reasons for moving to a two-stage booster; the risk reduction strategy for that booster; the suitability of deploying the two-stage booster at Ft. Greely and Vandenberg Air Force Base; and the plan for testing the two-stage booster prior to deployment.

The committee believes that in the absence of the necessary international agreements, it is premature to fund construction of the European ground-based interceptor site or European radar site. To preserve the opportunity to move forward with the research and development components of this initiative, the committee has recommended $150.0 million for fiscal year 2008. Should the necessary international agreements with host countries be reached and further engagement with NATO be demonstrated in fiscal year 2008, the committee notes that the Department has the option of submitting a reprogramming request to Congress in fiscal year 2008 to fund site preparation activities. The committee recommendation of $150 million does not preclude the Department from spending the funds necessary for site surveys, studies, analysis and design. The committee also notes the importance it attaches to receiving, in a timely manner, the independent assess-

ment of European missile defense options as described in section 225 of this Act.

The committee recommends $2.3 billion, a decrease of $160.0 million, in PE 63882C for the ground-based midcourse defense system.

Kinetic Energy Interceptor

The budget request contained $227.5 million in PE 63886C for the Kinetic Energy Interceptor (KEI) program.

The KEI program successfully met its fiscal year 2006 knowledge points with no major delays. These successes involved the direct downlink from overhead and terrestrial sensors, and the static firings of the first and second stages of the booster. The KEI program is on schedule to conduct its first booster flight test during the fourth quarter of fiscal year 2008. Given the committee's decision with regard to the Airborne Laser, the committee recommends that the Department of Defense designate KEI as its prime boost phase defense system. Furthermore, the committee notes that KEI will also have the capability to intercept ballistic missiles in their midcourse phase of flight and could serve as an eventual replacement for the existing ground-based interceptor. The Missile Defense Agency is also examining future options for providing a mobile KEI capability. The committee believes that there is an inherent flexibility in having mobile missile defense systems and recommends that the future KEI development efforts be focused on the development of mobile options. However, given the importance of nearer-term missile defense priorities, the committee has recommended a reduction of the KEI program, with the understanding that the program will continue towards a booster flight test demonstration in 2008.

The committee recommends $177.5 million in PE 63886C for the KEI, a decrease of $50.0 million.

Missile defense cooperation with Japan and Australia

The committee strongly supports the Department of Defense's on-going missile defense cooperative efforts with Japan and Australia. The committee encourages the Department to build on and expand such engagements with other allies in the Asia-Pacific region, and around the world, as a key part of the nation's comprehensive strategy for responding to the threat posed by the proliferation of ballistic missiles and weapons of mass destruction.

Multiple Kill Vehicle

The budget request contained $271.1 million in PE 63894C for the Multiple Kill Vehicle (MKV).

The committee notes that the request is more than double the amount of funding in fiscal year 2007. The committee believes the amount of the request to be excessive for a program that is orientated toward longer-term threats. The committee also notes that the current family of exo-atmospheric kill vehicles are capable of dealing with the near- to mid-term threats that the nation is likely to face from rogue nations such as Iran and North Korea. Additionally, in budget justification materials, the Missile Defense Agency (MDA) notes that it plans to replace the unitary warhead on the SM–3 Block IIA missile, which the United States is co-developing

with Japan, with the MKV. The committee is concerned that MDA has taken this decision without fully consulting with the Japanese Government and that this decision has the potential to delay the fielding the SM–3 Block IIA missile, a system that the committee believes is vital to the security of the United States and our allies around the world.

The committee recommends $229.1 million, a decrease of $42.0 million, in PE 63894C for the Multiple Kill Vehicle.

Space Tracking and Surveillance System

The budget request contained $331.5 million in PE 63893C for the Space Tracking and Surveillance System (STSS).

STSS is a space-based demonstration program designed to measure the ability of low-earth orbit satellites to track ballistic missiles from space. Missile Defense Agency (MDA) plans to launch two initial satellites in 2007 to demonstrate this capability. The committee believes that it is premature to move forward with a follow-on program until the two experimental satellites have demonstrated an initial capability to acquire, track, discriminate, and report ballistic missiles events. Furthermore, the committee requests that the Air Force, in coordination with the MDA, examine the applicability of the STSS demonstration system and the proposed follow-on system's ability to perform against the space situational awareness mission requirements. The committee supports fielding the two initial STSS demonstration satellites and evaluating the need for follow-on satellites.

The committee recommends $256.5 million, a decrease of $75.0 million, in PE 63893C for the Space Tracking and Surveillance System.

Special programs—Missile Defense Agency

The budget request contained $323.3 million in PE 63891C for special programs—Missile Defense Agency (MDA).

The committee recommends $153.3 in PE 63891C, a decrease of $170.0 million for special programs—MDA.

Terminal High Altitude Area Defense

The budget request contained $858.2 million in PE 63881C for the Terminal High Altitude Area Defense (THAAD) system, which is designed to protect against short-, medium-, and intermediate-range ballistic missiles.

The committee believes that THAAD will provide an improved capability to protect our deployed forces and our allies against ballistic missile threats. The committee supports the Missile Defense Agency's (MDA) recent decision to procure two additional THAAD firing units over the Future Years Defense Program, but notes that this is still inadequate to meet the current requirements of the combatant commanders. While THAAD recently completed its third successful intercept test, the committee is concerned about the recent decision by MDA to cancel three THAAD intercept tests, primarily for budgetary reasons. The committee notes again that the Director of Operational Test and Evaluation and the Government Accountability Office have indicated that MDA has not conducted sufficient flight testing to properly anchor its models. The com-

mittee recommends that MDA reconsider its decision to cancel the three THAAD flight tests.

The committee is also aware that several allied nations have expressed interest in the possibility of acquiring THAAD. The committee supports efforts to provide THAAD to our allies. However, the committee notes its concern that national disclosure policy has delayed the Department of Defense's ability to provide Israel THAAD-related information. The committee encourages the Secretary of Defense to take the necessary actions to ensure that our allies, such as Israel, will have access to this critical defensive capability. Finally, the committee encourages MDA to begin examining options for expanding the capabilities of THAAD in the future.

The committee recommends $858.2 million in PE 63881C for the Terminal High Altitude Area Defense system, the amount of the budget request.

Warfighter Involvement Program

The committee is aware that in January 2002 the Secretary of Defense exempted the Missile Defense Agency (MDA) from the normal requirements process. In order to address warfighter requirements, the U.S. Strategic Command (USSTRATCOM) and the MDA have established the Warfighter Involvement Program (WIP). The committee believes that it is essential that warfighter's requirements drive the missile defense development process and believes that the WIP has generally been a step in the right direction. However, the committee continues to have concerns about the role the warfighter is playing in the missile defense development process.

The committee directs the Commander, U.S. Strategic Command to submit a report to the Senate Committee on Armed Services and the House Committee on Armed Services on the WIP by October 31, 2007. The report shall address the role that USSTRATCOM played in the missile defense development process prior to the initiation of the WIP; the key elements of the WIP; the role USSTRATCOM plays in decisions by the MDA to initiate new missile defense programs; the role USSTRATCOM plays in the testing of the missile defense system, and the process for resolving disputes if there is a disagreement between the MDA and USSTRATCOM.

Basic research for combating weapons of mass destruction

The budget request contained $5.0 million in PE 61000BR for basic research into capabilities for combating weapons of mass destruction.

The committee is aware that the Counterproliferation Program Review Committee's May, 2006, report indicates that basic research for combating weapons of mass destruction is not funded sufficiently.

The committee recommends $10.0 million, an increase of $5.0 million, in PE 61000BR, for the Defense Threat Reduction Agency basic research initiative to further basic research for combating weapons of mass destruction.

Budget exhibits and program elements

The conference report (H. Rept. 109–360) accompanying the National Defense Authorization Act for Fiscal Year 2006, directed that the Comptroller General examine the fidelity of the Department of Defense's (DOD) research, development, test, and evaluation (RDT&E) program's budget justification materials' program element code structure and budget exhibits in providing complete and accurate information for congressional oversight.

The Government Accountability Office (GAO) found that the program element code structure as used by the Department does not provide adequate visibility into the types of development activities being conducted, is inconsistently applied among services and defense agencies, and often fails to comply with the DOD's own regulations and directives. Approximately one-third of RDT&E programs are improperly categorized as to major force program.

The GAO also found that DOD budget justification materials are difficult to understand or compare in many cases because the materials frequently lack information about the accomplishments from the previous year and the planned activity for the next year; often provide information that is vague; often incorrectly categorize programs and projects by budget activity; lack the required information; sometimes fail to provide cross references between projects; have inconsistent formats across the military services; often aggregate large and/or dissimilar projects within the same program, limiting visibility and oversight of movement of funds among projects within program elements; and frequently exclude key schedule data for projects and programs. As a result the budget justification materials do not provide consistent and complete data with the adequate levels of detail needed to understand DOD's planned efforts to provide the transparency needed to provide responsible oversight.

The committee therefore directs the Secretary of Defense to address the deficiencies with the current RDT&E budget justification displays. Commencing with the fiscal year 2009 budget request, DOD RDT&E budget justification materials shall:

(1) Ensure that program nomenclature titles reflect the content of the program request;

(2) Ensure that project titles and program titles be the same when there is only one project in the program element;

(3) Provide a summary table on the first page of the "R–2" of all projects within the program elements with the project identification code, name, and dollar amount for each project;

(4) Provide, in the case of all projects in budget activities four, five, and seven, project schedules and reflect year-over-year changes from the previous year's request; and

(5) Provide for, in the case of the Department of the Army, separate program elements for all projects shown in program elements 35204A and 23744A in the fiscal year 2008 budget request.

Commencing with the fiscal year 2010 budget request, the committee directs the Secretary of Defense to further modify the budget item justification materials, in addition to changes made for the fiscal year 2009 justification materials, as follows:

(1) Budget item justification shall comply with DOD's regulations and directives and shall be standardized among the military departments and agencies;

(2) Budget item justification shall separate the current accomplishments and planned program into two sections;

(3) Budget item justification shall report program changes at both the program and project level;

(4) Budget item justification shall identify financial and programmatic relationships and dependencies between projects regardless of budget activity or resource component. At a minimum, the program element and the project number shall be identified for dependencies between projects and this information shall be listed in all exhibits; and

(5) Budget item justification, for budget activities four, five, and seven, shall display program historical and projected milestones such as engineering milestones, acquisition milestones, test and evaluation events, and other key milestones, as applicable, so that current phase milestones and changes from the prior year can be determined.

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.

Advanced technology development

The budget request contained $232.3 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) Advanced development of individual and collective protection systems to include air filtration systems and self-decontaminating surfaces; and

(2) Advanced development of biological and chemical agent detection systems, including computational tools and wide-spectrum bio ID sensors.

The committee recommends $257.3 million, an increase of $25.0 million, in PE 63384BP for the chemical and biological advanced technology development initiative.

Applied research

The budget request contained $305.3 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) Multipurpose biodefense microarray and immunoarray diagnostic tools; and

(2) Enhanced multifunctional particles, self-decontaminating surfaces/polymer-based coatings for fabrics and other substrates; and

(3) Novel delivery systems for prophylaxis/therapeutics against biological warfare agents.

The committee recommends $325.3 million in PE 62384BP, an increase of $20.0 million, PE 62384BP for the chemical and biological applied research initiative.

Basic research

The budget request contained $72.0 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) Superstructural particle evaluation and characterization with targeted reaction analysis of emerging prophylactics for chemical and biological agent protection.

The committee recommends an increase of $8.0 million in PE 61384BP for the chemical and biological basic research initiative.

Contextual Arabic analysis program

The budget request contained $76.3 million in PE 63122D8Z for combating terrorism technology support, but contained no funds for machine translation tools to accurately translate blog and slang language on Arabic websites, blogs and chat rooms.

The committee notes the need for improved technologies to enhance contextual translation tools and refine dictionary sets, as well as the need for a corpus of information including specific taxonomies, definition sets, and collections of parallel translations for terms commonly used in the electronic domain that could be integrated into such translation tools.

The committee recommends an increase of $3.5 million in PE 63122D8Z to enhance a pilot project under development by the technical support working group, including validation testing and operational evaluation.

Defense Technical Information Center

The budget request contained $51.8 million in PE 65801KA for the Defense Technical Information Center (DTIC).

DTIC provides centralized information acquisition, processing, storage, retrieval, and dissemination of scientific and technical information for the Department of Defense. The DTIC's knowledge management and information technology applications improve information sharing among the service components and agencies, as well as with the other federal scientific organizations and industrial and academic organizations involved in scientific, technical, and engineering inquiry. The committee notes the important useful contributions that the DTIC has made to enhancing efficiencies and information sharing within the Department, but encourages DTIC to implement a customer-funded vice appropriations approach to work reimbursement.

The committee recommends $46.8 million, a decrease of $5.0 million in 65801KA to DTIC.

Enterprise license agreement

In the committee report (H. Rept. 109–89) accompanying the National Defense Authorization Act for Fiscal Year 2006, the committee directed the Department of Defense (DOD) to report on issues concerning enterprise licensing of commercial software. The results of that report reinforce the committee's belief that savings may be achieved and security enhanced in the procurement of commercial software applications by including specified provisions in the original procurement agreements issued by the Department. These provisions would require that the delivered software meet DOD configuration standards and that vendors would be required to update the software to meet any necessary Department-driven configuration changes. The committee notes that the Air Force entered into such an innovative agreement in June 2004 that has accomplished these results.

The committee believes the successful Air Force model should be implemented throughout the Department. Therefore, the committee urges the Under Secretary of Defense for Acquisition, Technology, and Logistics to apply a similar approach for the entire Department.

Foliage penetration reconnaissance and surveillance

The budget request contained $21.3 million in PE 11641BB for Special Operations technology development, but contained no funds for the development and demonstration of the foliage penetration reconnaissance and surveillance system.

The committee supports initiatives to employ innovative, multi-sensor tactical sensors in dynamic maritime environments and is aware of efforts sponsored by the Naval Service Warfare Center to fuse hyperspectral imaging and synthetic aperture radar applications. The committee recognizes such efforts as promising significant advancements in target discrimination, especially in littoral and riverine environments. The committee supports further development and testing of these efforts as well as attempts to reduce related size and weight requirements.

The committee therefore recommends an increase of $5.85 million in PE 11641BB to test, develop, and miniaturize the multi-sensor foliage penetration reconnaissance and surveillance system for maritime applications.

Human systems integration

The budget request contained $9.0 million in PE 63670D8Z for Human, Social and Cultural Behavior modeling advanced development, but contained no funds for Human Systems Integration (HSI).

The committee has reviewed the April, 2007 Department of Defense report on HSI, applauds its content, and supports the recommendations contained therein advocating for a more joint and comprehensive approach in this area. The committee recognizes the need to improve the overall performance of weapons systems, and accepts the view of the Department that HSI is but one contribution in a larger approach to effect a reduction in Total Ownership

Costs in weapons systems development, training, and military operations. As a result, the committee encourages further attention to this enterprise and includes a legislative provision (section 231) requiring the Secretary of Defense to designate a senior official to coordinate and develop HSI-related activities and methodologies.

The committee recommends $21.0 million, and increase of $12.0 million, in PE 63670D8Z for the joint HSI effort.

Information assurance activities

The committee notes that maintaining freedom of action in cyberspace is increasingly important to military operations, as well as overall national security. The committee is aware that certain inadequacies exist across the government, which inhibit the systematic and effective conduct of cyberspace operations in the face of increasing state and non-state activity in this medium. While the Department of Defense (DOD) is working to improve its capabilities to conduct effective cyberspace operations, the committee is concerned that the Department may lack the resources, authorities, training and policy to conduct effective cyberspace operations to protect military systems, gain and maintain dominance and coordinate appropriately with interagency partners.

Therefore, the committee directs the Secretary of Defense to submit a report on the DOD cyberspace policy and operations to the congressional defense committees within 180 days after the enactment of this Act. A classified annex shall be submitted as required. The report shall provide:

(1) A review of the legal authorities, which govern the DOD's conduct of cyberspace operations, and recommendations to ensure effective cyberspace operations.

(2) A review of DOD's policies for cyberspace operations including, but not limited to: information sharing, intelligence, mission assurance, hardware and software assurance, risk management, computer network operations, and integration of related classified and unclassified programs.

(3) An overview of the DOD's cyberspace organization, strategy, missions, programs, and capabilities.

(4) An assessment of the operational challenges the Department faces in protecting, defending, and operating in cyberspace, to include an assessment of the impact of the military's reliance on commercial communications infrastructures.

(5) An assessment and recommendation to improve DOD's ability to coordinate: intra-and interdepartmental cyberspace operations, especially with the law enforcement and intelligence communities and with the commercial sector and international allies. This assessment shall include specific consideration of the establishment of a single joint organization for cyberspace operations within the Department and recommendations to improve interagency participation in joint operations.

(6) An overview of the current and future training and education requirements, and recruiting and retention strategy required for the Department to conduct effective cyberspace operations. The overview shall include consideration of the development of a joint cyberspace corps of military and civilian personnel.

(7) An overview of current funding for cyberspace operations to include: a review of specific line items related to cyberspace operations; unfunded requirements and current research and development efforts; and an assessment of the need for a major force program for cyberspace operations.

Innovation for national security

The committee notes that a number of prominent studies have detailed the growth in global science and technology investment and intellectual capital, relative to that of the United States. At the same time, as articulated in the 2006 Quadrennial Defense Review, the national security situation has changed dramatically. Present and future adversaries are likely to use asymmetric means and agile application of technology against the United States.

In the face of these new threats, the committee is concerned that a strategic framework, which fails to build U.S. intellectual capital advantage, could increase risks to future U.S. national security. The committee commends the Department of Defense (DOD) for its recent efforts to attract and retain top-quality scientists and engineers through the National Defense Education Program. The committee is concerned, however, with the continued decline in the budget requests for DOD science and technology efforts, particularly basic research. This decline in DOD basic research comes at a time when the President has launched the American Competitiveness Initiative, aimed at increasing federal basic research funding and creating a new generation of scientists and engineers. Additionally, the Directors of the Office of Management and Budget (OMB) and the Office of Science and Technology Policy (OSTP) stated in a July 23, 2006 memorandum on the Administration's fiscal year 2008 research and development priorities that "high impact basic and applied research of the Department of Defense should be a significant priority." Despite these recommendations, the budget request for defense basic and applied research fell below zero percent real growth for fiscal year 2008.

Therefore, the committee directs the Secretary of Defense to submit a report addressing DOD's responses to the recommendations of the National Academy of Sciences report, "Rising Above the Gathering Storm," and the OMB/OSTP memorandum. The report shall include: (1) DOD's efforts to identify, support, and expand basic research in fields critical to meeting DOD's future technological needs; (2) DOD's estimate of the impacts of technology globalization to national security; and (3) steps that must be taken to ensure that the DOD's future scientific and technological workforce requirements, including those of the defense industrial base, can be satisfactorily met over the next 20 years. The report shall also outline a long-term, strategic plan for how the Department believes a sustained increase in funding for DOD basic research could be effectively utilized. The Secretary shall submit the report to the congressional defense committees by the distribution date of the fiscal year 2009 budget request.

In-transit visibility system

The budget request contained $11.3 million in PE 65013BL for information technology development, but contained no funds for facility and terminal management security.

The committee expects that the system employed will have the following features, including, but not limited to: creation and issuance of transportation worker identification credential compliant security passes; scanning capability for bar-coded security passes; picture identification verification; destination assignment within the facility; creation of customizable report; exact date and time record of entry; storage of video feed to disk or tape; and file share with local, state and/or federal law enforcement agencies. The system should provide for biometric closing and video loading identification. The system should be fully secured with secure socket layer technology and should be protected from brute force hacking attacks and from cross side server scripting. The system should not require investment in client/server architecture or installation of software.

The committee recommends $12.3 million, an increase of $1.0 million, in PE 65013BL to implement a complete gate and facility security and terminal management security module that works in real time.

Irregular Warfare Support

The budget request contained $32.7 million in PE 63121D8Z for SO/LIC Advanced Development, containing $2.1 million for Irregular Warfare Support (IWS).

The committee recognizes the importance of enhancing the counterterrorism and counterinsurgency capabilities of the Department of Defense (DOD) and understands that the IWS initiative leverages efforts within the Department and within other agencies to provide technical and operational capabilities in support of DOD activities and to facilitate greater awareness of the cultural and ideological challenges facing military personnel. The committee urges the Department to continue these efforts and explore additional approaches to irregular warfare capabilities, including an increased understanding of the specific cultural, social, ideological, economic, and political contexts for ongoing counterterrorism and counterinsurgency operations. The committee expects such efforts to include academic research in Jihadi ideology and strategic thought as well as enhanced efforts to produce, collect, centralize, and operationalize cultural knowledge.

The committee expects such efforts to also include unconventional countermeasures to improvised explosive devices, innovations in the development of explosive ordnance disposal capabilities, consideration of a role for foreign nationals in the U.S. Armed Forces, and non- lethal technologies and weaponry.

Therefore, the committee recommends an increase of $12.0 million in PE 63121D8Z for IWS to strengthen the DOD's capability to conduct effective counterterrorism and counterinsurgency operations, explore additional approaches as noted above, and to identify both intra- and interagency solutions to conduct successful operations.

Joint Capability Technology Demonstration

The budget request contained $194.4 million in PE 63648D8Z for joint capability technology demonstrations (JCTD).

The committee commends the Department of Defense's efforts to improve its business model for transitioning capabilities relevant to

the warfighter in a more cost effective, timely, and efficient manner. The committee notes and agrees that new projects executed under the new JCTD model should focus more on joint and coalition needs and relevant capability requirements as defined by the combatant commanders. The committee also notes that eventually all new projects entering the JCTD process will be aligned with the traditional planning, programming, budgeting, and execution (PPBE) process to allow better transition into acquisition. The current JCTD program consists of several legacy advanced concept and technology demonstrations (ACTD) projects. The committee believes that these legacy projects do not fit the joint warfighter centric approach and are not aligned with the PPBE cycle. The committee is concerned that the Department will have difficulty transitioning some of these legacy projects into programs of record.

The committee recommends a decrease of $15.0 million, in PE 63648D8Z for joint capability technology demonstrations. The committee urges the Secretary of Defense to identify and apply the reductions to those programs that do not have strong Combatant Commander support and are at greatest risk of not being adopted by a program of record.

Joint command and control

The budget request contained $70.3 million in PE 33158K for the net-enabled command capability (NECC).

The NECC is intended to be the Department of Defense's principal command and control information technology system, enabling advanced collaborative information sharing through vertical and horizontal interoperability. As the net-centric migration path for the Global Command and Control System Family of Systems, the NECC will support force-level planning, execution, monitoring, and assessment of joint and multinational operations. The NECC will use net-centric enterprise services, core enterprise services, and will be able to exchange information across multiple security domains.

The committee believes that due to recent activity delays, the Defense Information Systems Agency will not be able to execute the full fiscal year 2008 request in the time remaining. Accordingly, the committee recommends $50.3 million in PE 33158K for joint command and control, a decrease of $20.0 million for the net-enabled command and control program.

Joint Experimentation program

The budget request contained $112.0 million in PE 63828D8Z for Joint Experimentation.

The Joint Experimentation program intends to improve joint-force mission requirements by partnering the services and defense agencies with the combatant commanders to address time-sensitive joint operational requirements. The committee believes this is an important objective, but notes that this effort is not adequately tied into the wider research and development requirements process, which has the potential to lead to unwarranted duplication of effort and inadequate oversight. Transferring the program element to the Director for Defense Research and Engineering (DDR&E) has the potential to remedy these concerns, but the committee notes that the DDR&E will need to better integrate Joint Experimentation

into the overall suite of research and development programs to prevent overlapping activities and inefficient spending. The committee recommends a decrease of $10.0 million in PE 63828D8Z for the Joint Experimentation program.

Joint Wargaming Simulation Management Office

The budget request contained $37.8 million in PE 63832D8Z for the Joint Wargaming Simulation Management Office (JWSMO).

Modeling and simulation (M&S) capabilities are important tools that provide a powerful complement to traditional forms of experimental development, often helping to reduce cost in time, funding, and manpower. The committee observes and is concerned that each service has its own distinct M&S capability, as well as those used by the functional commands. Additionally, the defense agencies, national laboratories, and other federal entities are also developing M&S capabilities to fit their unique needs. The committee notes that it is imperative that all M&S efforts be coordinated in order to reduce duplicative systems, harmonize requirements, and leverage the talents of the entire M&S workforce to provide a common architecture that can be effectively employed across the defense enterprise.

The committee is concerned that the JWSMO, formerly the Defense Modeling and Simulation Coordination Office, which was established to fill just that role, has not adequately carried out its coordination mission with the services and agencies to ensure commonality, reuse, and interoperability of existing and new M&S technologies.

Accordingly, the committee recommends $20.0 million, a decrease of $17.8 million, in PE 63832D8Z for the JWSMO.

License plate recognition initiative

The budget request contained $76.3 million in PE 63122D8Z for combating terrorist technology support, but contained no funds for license plate recognition systems.

The committee recognizes that license plate recognition systems can be powerful tools for homeland security and counter-drug applications, as well as traditional law enforcement. Many states are already making use of some such systems, which have up to 98 percent accuracy, and can reduce a month's workload to 24 hours. Privacy concerns are also ameliorated, as the system focuses on license plates and not the driver, and thus can tap into existing databases of license plate information.

The committee recommends an increase of $1.5 million in PE 63122D8Z to deploy systems with select military police units operating on and around military installations to test and validate data sharing linkages with the law enforcement, including development of tactics, techniques, and procedures for information sharing and privacy protection.

Medical Free Electron Laser

The budget request contained no funds in PE 62227D8Z for the Medical Free Electron Laser (MFEL) program.

The committee is concerned that the MFEL program was not contained in the budget request. Our armed forces benefit every day from the developments of the MFEL program. MFEL is a peer-

reviewed and merit-based program that has a proven track record of delivering combat casualty care technology and medical interventions. Most laser-based medical procedures used in surgery at military level three to level five hospitals for Operation Enduring Freedom and Operation Iraqi Freedom casualties have a research base and lineage from the MFEL program. The MFEL program developed, deployed, and has several ongoing programs in advanced diagnosis and treatment procedures for complex and sometimes unique medical challenges on the battlefield. These challenges include medical imaging, burn management, cauterization, and tissue repair.

The committee does not understand why such a successful program was not funded in the budget request. Not only will this action preclude new advances, but it will also terminate several successful interventions in mid-stream. The committee believes it is important to note that these medical advances will ultimately benefit all Americans.

Accordingly, the committee urges the Director, Defense Research and Engineering, to make available the necessary funds in fiscal year 2008 to support MFEL activities currently in progress. The committee further urges the Secretary of Defense to continue funding the MFEL program in the future budget requests.

The committee recommends an increase of $18.0 million in PE 62227D8Z for the MFEL program.

National Defense Education Program

The budget request contained $44.4 million in PE 61120D8Z for the National Defense Education Program (NDEP), containing $2.0 million for Materials World Modules (MWM); $13.0 million for Pre-engineering Modules; $24.0 million for Science, Mathematics and Research for Transformation (SMART); and $5.4 million for National Security Science and Engineering Faculty Fellowships (NSSEFF).

The committee understands the Department of Defense's efforts to shape its current and future technical workforce through fostering interest, recruitment, and retention across all levels of the science, technology, engineering, and mathematics (STEM) education pipeline. The committee notes that MWM currently supports high school students. The committee further notes that the Director, Defense Research and Engineering proposes a new K–12 program under NDEP called Pre-engineering Modules intended to address middle school students.

The committee is concerned that while the Department has provided evidence of effectiveness for MWM and has articulated plans to implement MWM throughout several states over the next few years, their fiscal year 2008 budget request contained $2.0 million for MWM, a decrease of more than half of the fiscal year 2007 budget request. The projected budget request for 2009 contained no funds for MWM. The committee further notes the budget request contained $13.0 million for Pre-engineering Modules, but failed to clearly identify the requirements for that level of funding, even after several attempts by the committee to ascertain the rationale.

Accordingly, the committee recommends $6.5 million dollars, an increase of $4.5 million, for MWM, $27.0 million, an increase of $3.0 million, for SMART $7.4 million, an increase of $2.0 million,

for NSSEFF, and recommends $3.5 million, a decrease of $9.5 million, for Pre-engineering Modules.

Office of Force Transformation

The budget request contained $20.6 million in PE 65799D8Z for the Office of Force Transformation (OFT).

The committee notes OFT is expecting to sponsor research, prototyping, and operational experimentation intended to support transformational activities. While the committee strongly supports Department of Defense efforts in these areas, the committee believes that OFT's activities overlap significantly with similar efforts with the Defense Advanced Research Projects Agency, the service laboratories, and other defense agency experimentation programs.

The committee recommends $12.0 million, a decrease of $8.0 million, in PE 65799D8Z for the Office of Force Transformation. The committee encourages the Department to leave funding intact for the development of active protection systems.

Posture review of critical infrastructures

The committee understands the interdependent nature of critical Department of Defense (DOD) and national civilian infrastructures and is concerned that vulnerabilities in one may constitute a vulnerability in the other. The committee understands that mission essential DOD assets and infrastructures are reliant on civilian infrastructure to carry out warfighting activities and can be affected by accidents and natural disasters as much as terrorist events. The committee notes, for example, DOD information and technology systems are not only reliant on commercial bandwidth in many cases, but also on the underlying commercial power grid.

The committee strongly believes that the Department needs to articulate how it is working with other federal agencies, such as the Department of Homeland Security and the Department of Energy, to better coordinate responsibilities for the identification of dependencies and associated vulnerabilities with potential impact on critical infrastructure. To address this concern, the committee directs the Assistant Secretary of Defense for Homeland Defense and Americas' Security Affairs to outline DOD's approach to understanding critical infrastructure vulnerabilities and dependencies on sectors and communities outside of DOD's responsibility, which directly or indirectly support DOD operations, and submit a report to the congressional defense committees within 180 days after the date of enactment of this Act. The approach presented in the report shall focus on the identification and prioritization of DOD's mission critical functions, the location of assets providing those functions, and ongoing efforts to determine vulnerabilities (all-hazards) to those assets deemed critical to mission assurance. The report also shall address any efforts coordinated with the other departments and agencies overseeing the supporting infrastructure, and shall develop mitigation strategies for post-event remediation and replacement of such capabilities.

Rapid identification of commercial information technologies for military requirements

The budget request contained $5.2 million in PE 33169D8Z for information technology rapid acquisition, but contained no funds

for a demonstration project to rapidly identify commercial information technology (IT) solutions to satisfy military requirements.

The committee is concerned with the apparent inability of the Department of Defense to incorporate innovative IT solutions in a widespread manner. The committee urges the Secretary of Defense to pursue a more aggressive and comprehensive approach to such solutions in section 841 of this Act.

Therefore, to execute the rapid identification and acquisition of commercial IT technologies, the committee recommends $15.2 million, an increase of $10.0 million, in PE 33169D8Z.

Secure free space optical communications

The budget request contained $3.5 million in PE 33191D8Z for the joint electromagnetic technology program, but contained no funds for secure miniaturized free space optical communications.

The committee is aware of the ongoing advances being achieved by leveraging several enabling commercial technologies, as well as specific defense capabilities, which were previously developed within the Advanced Sensor Applications Program. The committee recognizes that these ongoing advances are applied to the Department of Defense's requirements for a mobile, wireless communications capability to and from sensor and user assets, it will greatly increase the warfighters' ability to communicate securely and covertly over higher bandwidths with a low probability of interception.

The committee recommends $9.5 million, an increase of $6.0 million in PE 33191D8Z to complete final development of a secure, covert communications capability utilizing a low probability of interception free space optical system.

Small craft common operational picture

The budget request contained $109.5 million in PE 63826D8Z for quick reaction special projects, but contained no funds for a small craft integrated common operational picture.

The committee supports the Navy's efforts in the integration of advanced situational awareness technology into all facets of small craft operations. Demonstrations of augmented reality-based situational awareness systems have been shown to dramatically improve situational awareness and enhance vehicle control, resulting in increased operator effectiveness and improvement in mission performance.

The committee recommends an increase of $1.6 million in PE 63826D8Z to provide a flexible solution that merges both navigational and tactical capabilities to improve situational awareness aboard small craft.

Strategic Environmental Research and Development Program

The budget request contained $68.9 million in PE 63716D8Z for Strategic Environmental Research and Development Program (SERDP).

The budget request reflected an increase of $2.2 million for munitions management (MM) and an increase $1.9 million for sustainable infrastructure. While the committee understands that SERDP addresses environmental issues pertaining to training and testing sustainability and reduction of environmental liabilities, the committee is concerned that the request for MM and sustainable infra-

structure increased 12 to 15 percent respectively, from fiscal year 2007 without clearly justifying the increased funding request.

The committee recommends $64.9 million, a decrease of $4.0 million, in PE 63716D8Z for SERDP.

Synthetic Aperture Radar Coherent Change Detection

The budget request contained $6.5 million in PE 63745D8Z for synthetic aperture radar (SAR) coherent change detection (CCD).

The committee notes that this effort appears to be duplicative with other service programs that are advancing the capability of SAR CCD. The committee further notes that the budget justification materials for this program indicates that planned phase four efforts would deploy the capability on a Class III unmanned aerial vehicle (UAV). Currently, there are no efforts within the Department that support development of Class III UAVs.

The committee recommends no funds in PE 65799D8Z for SAR CCD.

Vacuum electronics

The committee notes the continued importance of vacuum electronics (VE), not only to the Department of Defense (DOD), but to applications throughout the federal government. The committee believes a healthy national industrial capacity is necessary to provide VE components for systems where solid state electronics fail to provide the required power, frequency, or electromagnetic pulse protection. Further, VE components operating in legacy systems that support the warfighter need to be maintained. In the report required by section 212 of the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005 (Public Law 108–375), the Department indicated that $4.5 million for applied research was an adequate funding level necessary to maintain a healthy VE industrial base. The committee notes the fiscal year 2008 budget request and the projected 2009 request for VE applied research were $3.4 million and $3.3 million, respectively.

The committee supports the funding levels indicated in the 2005 report and recommends that the Department provide such funding for VE in the fiscal year 2009 budget request and in future years. Accordingly, the committee understands that the Department is currently re-evaluating the appropriate defense funding levels for VE and encourages the Department to incorporate those decisions in their future year defense budget requests.

OPERATIONAL TEST AND EVALUATION, DEFENSE

Overview

The budget request contained $180.3 million for Operational Test and Evaluation, Defense.

The committee recommends $180.3 million, no change to the budget request.

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

Line	PROGRAM TITLE	FY 2008 Authorization Request	Committee Change	Committee Increase	Committee Decrease	FY 2008 Committee Authorization
	OPERATIONAL TEST & EVAL, DEFENSE					
1	Test & Evaluation Science & Technology	0				0
2	Central Test and Evaluation Investment Development (CTEIP)	0				0
3	Operational Test and Evaluation	48,627				48,627
4	Live Fire Testing					0
5	Live Fire Test and Evaluation	11,133				11,133
6	Development Test and Evaluation					0
7	Operational Test Activities and Analyses	120,504				120,504
						0
	TOTAL, OPERATIONAL TEST & EVAL, DEFENSE	**180,264**	**0**	**0**	**0**	**180,264**
	General Reduction Economic Assumptions(Sec 8095)					
	General Reduction Currency Fluctuations (Sec 8096)					
	TOTAL, RESEARCH AND DEVELOPMENT	**75,117,194**	**(1,820,871)**	**2,707,836**	**(4,528,707)**	**73,296,323**

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 2008

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 2008

SUBTITLE B—PROGRAM REQUIREMENTS, RESTRICTIONS, AND LIMITATIONS

Section 211—Operational Test and Evaluation of Future Combat Systems Network

This section would require the Secretary of the Army to conduct a large-scale, realistic, operational test and evaluation of the Future Combat Systems (FCS) communications and sensor network prior to initiating low-rate initial production or full-rate production of FCS manned ground vehicles. This section would also require the Director of Operational Test and Evaluation to report to Congress within 120 days of the test's completion with the results of the test. The production limitation on manned ground vehicles does not apply to the non-line-of-sight cannon (NLOS–C) system.

Section 212—Limitation on Systems Development and Demonstration of Joint Light Tactical Vehicle Program

This section would restrict the obligation of authorized funds for the Joint Light Tactical Vehicle (JLTV) program beyond its Design Readiness Review until the congressional defense committees receive a progress report on the program's compliance with section 2366a of title 10, United States Code.

The committee strongly supports the JLTV program. The committee recognizes the JLTV program is a required and ambitious attempt to replace high mobility multi-purpose wheeled vehicles (HMMWVs) across the Army, Marine Corps, Air Force and Special Operation Forces. The committee also understands that JLTV must meet full spectrum Key Performance Parameters including mobility, transportability, net-readiness, force protection, survivability, payload capacity and operational availability and notes this is what makes JLTV different than the Mine Resistant Ambush Protected (MRAP) vehicle being fielded today to meet a specific theater requirement to defeat mines and Improvised Explosive Devices. The committee understands that JLTV would provide significantly better protection, performance and payload capacity over the Up-Armored HMMWVs and MRAP without compromising mobility, protection, capability, or transportability.

It is the challenge to address the JLTV full spectrum requirements, which causes the committee concern and creates skepticism regarding the Army and Marine Corps' desire to accelerate the pro-

gram. Specifically, the committee is concerned that the JLTV may enter the acquisition phase of System Development and Demonstration (SDD) with insufficient knowledge of technology maturity, requirements, and affordability. The committee notes that it may not be prudent for the Department of Defense to impose a firm fixed price contract for JLTV during the early stage of the SDD acquisition phase. The committee believes the JLTV program is too important for it to fall victim to cost growth and unnecessary schedule delays that have plagued other Department of Defense major defense acquisition programs that have entered into SDD prematurely.

The section would require the Secretary of Defense to provide a progress report on JLTV within 30 days prior to the date of the JLTV Design Readiness Review and would prohibit obligation of funding for the JLTV System Demonstration phase of SDD until the congressional defense committees review this report. This limitation is based on the assumption that the Army and Marine Corps will fully comply with section 2366a of title 10, United States Code prior to Milestone B and entering the Systems Integration phase of SDD. Further, this section would require the JLTV progress report to be structured in accordance with the certification required by section 2366a of title 10, United States Code.

Section 213—Requirement to Obligate Funds for Development and Procurement of a Competitive Propulsion System for the Joint Strike Fighter

This section would require the Secretary of Defense to obligate sufficient annual amounts to develop and procure a competitive propulsion system for the Joint Strike Fighter, in order to conduct a competitive propulsion source selection, from funds appropriated for fiscal year 2008 or any fiscal year thereafter, pursuant to an authorization of appropriations or otherwise made available for research development, test, and evaluation and procurement for the Joint Strike Fighter program.

Section 214—Limitation on Use of Funds for Manufacturing Science and Technology Program

This section would require the Director of Defense Research and Engineering to ensure that any funds obligated or expended from PE 63680D8Z are awarded using full and open competition, meet all statutory and policy guidance for the manufacturing technology program, and are awarded only upon execution of a technology transition agreement with a prospective technology user.

The committee notes that the Director plans to fund cross-cutting manufacturing initiatives with the funds appropriated to this account, in addition to the amounts appropriated for manufacturing technology within the defense components. As such, the committee feels strongly that the use of competitive procedures should be maximized in order to foster innovation and avoid duplication of effort with on-going component manufacturing technology programs. The committee believes that the Director should solicit proposals for the new manufacturing initiatives to be funded within this account and award such projects on the basis of merit, rather than transfer the funds appropriated to the defense components for obli-

gation onto existing contractual vehicles without further competition.

SUBTITLE C—MISSILE DEFENSE PROGRAMS

Section 221—Oversight of Missile Defense Agency Programs by the Director of Operational Test & Evaluation

This section would require the Director of the Missile Defense Agency (MDA) to report all operational test and evaluation data to the Director of Operational Test and Evaluation (DOT&E), and ensure that the DOT&E has access to all information within the Department of Defense that the DOT&E considers necessary to review in order to carry out the duties as required in this provision.

Section 222—Fielding of Ballistic Missile Defense Capabilities and Future Roles and Missions of Missile Defense Agency

This section would allow funds to be authorized for research, development, test, and evaluation for the Missile Defense Agency (MDA) to be used for the fielding of ballistic missile defense capabilities for fiscal year 2009. This section would also require the Director of the MDA to seek operation and maintenance funds for operations and support-related activities in the fiscal year 2009 budget request, and would require the Director of the MDA to develop a plan for using procurement funds where practicable for missile defense fielding activities in the future. Furthermore, this section would require an independent study to be conducted by a federally funded research and development center to examine the future roles and missions of the Missile Defense Agency (MDA), and make recommendations with regard to the future structure of the agency.

In its annual report on the missile defense program released in March 2007, the Government Accountability Office (GAO) recommended that MDA request procurement funding rather than research, development, test, and evaluation funds to acquire and field new assets. The committee concurs with GAO's recommendation and believes that MDA needs to begin using procurement funds to acquire and field missile defense assets. However, the committee understands that it will be difficult for MDA to implement this recommendation in one year. Therefore, the committee has agreed to allow MDA a one-year extension to use research and develop funds for fielding activities through fiscal year 2009. However, this section will require the Department of Defense to request operation and maintenance funds for MDA in the fiscal year 2009 budget request, and to develop a plan for using procurement funds where practicable for missile defense fielding activities in the future. The committee understands that it will need to work with the Department and MDA to identify the applicability of these requirements to each individual element of the ballistic missile defense system. While the committee recognizes the need to retain some flexibility to allow the missile defense program to respond to changing threats, it also believes that this needs to be done in a way that increases transparency and accountability.

The committee believes this issue is a subset of the larger problem of the military services being unwilling to assume the responsibility for acquiring, fielding, and sustaining missile defense capa-

bilities. As a result, MDA, which is fundamentally a research and development organization, has assumed primary responsibility for what are essentially service-related activities. The committee believes that the senior leadership of the Department needs to make a decision to either require the military services to acquire, field, and sustain missile defense capabilities, or transform MDA from a research and development organization into one more focused on providing combat support.

Section 223—Limitation on Use of Funds for Replacing Warhead on SM–3 Block IIA Missile

This section would prohibit the Department of Defense from replacing the planned unitary warhead on the SM–3 Block IIA missile with the multiple kill vehicle until the Secretary of Defense certifies that the United States and Japan have reached agreement to replace the unitary warhead on the SM–3 Block IIA, and that this proposal will not result in a deployment delay of the missile.

Section 224—Two-year Extension of Comptroller General Assessments of Ballistic Missile Programs

This section would extend the requirement to fiscal year 2010 for the Comptroller General to provide an assessment of the extent to which the Missile Defense Agency achieved the goals established for each ballistic missile defense program of the Department of Defense.

Section 225—Independent Study on Deploying Missile Defense System in Europe

This section would require an independent study to be conducted by a federally funded research and development center to examine the political, technical, operational, force structure, and budgetary aspects of deploying a long-range missile defense system in Europe. This study should examine other technical options for providing missile defense protection for Europe. These options should include an examination of existing missile defense systems such as Aegis Ballistic Missile Defense system and Terminal High-Altitude Area Defense system, as well as explore new concepts such as a mobile launch platform.

Section 226—Sense of Congress Concerning Full Support for Development and Fielding of a Layered Ballistic Missile Defense

This section would express the sense of Congress that it fully supports efforts to develop and deploy a layered ballistic missile defense system. It also notes that it is the policy of the United States to accord priority within the missile defense program towards nearer-term missile defense systems.

SUBTITLE D—OTHER MATTERS

Section 231—Responsibility for Human Systems Integration Activities

This section would require the Secretary of Defense to designate, within 60 days after date of enactment of this Act, a senior Depart-

ment of Defense (DOD) official to develop, coordinate, and manage human systems integration activities throughout the Department.

This section would require the Secretary to supervise the planning, management and coordination of such activities after designating the senior official. The responsibilities of the Secretary's designee shall include the development of a DOD Instruction and a DOD Directive, if necessary.

This section would further require the senior official to identify and recommend resource requirements of these activities, as appropriate.

Section 232—Expansion of Authority for Encouragement of Technology Transfer

This section would amend section 2514 of title 10, United States Code, to allow the Department of Defense laboratories and research and development centers to provide facilities, services, and equipment to private industry in order to promote accelerated development of critical technologies and technology transition initiatives that support the Department. Section 2514 of title 10, United States Code, currently authorizes the Secretary of Defense to transfer technology between laboratories and research and development centers to other federal agencies and non-federal entities in order to improve the use and availability of dual-use technologies for commercial utilization.

Section 233—Army Venture Capital Fund Demonstration

This section would provide new authority to the Army venture capital fund demonstration to invest in companies with renewable energy technologies. Further, this section would authorize an additional $10.0 million within Research, Development, Test and Evaluation, Army, to be available to the Army venture capital fund for investment in renewable energy technologies.

The committee understands that under the existing authorities provided for the Army venture capital fund demonstration by section 8150 of the Department of Defense and Emergency Supplemental Appropriations for Recovery from and Response to Terrorist Attacks on the United States Act, 2002 (Public Law 107–117) as extended and revised in section 8105 of the Department of Defense Appropriations Act for Fiscal Year 2003 (Public Law 107–248), the venture capital fund demonstration operates with the availability of unobligated balances remaining in expiring Research, Development, Test and Evaluation, Army, accounts. The new funding and expanded authority that would be provided by this section is not intended to alter the existing funding mechanism or existing authority.

The committee understands that the Army venture capital fund demonstration, working in concert with the Department of the Army, has invested in companies with near-term technology solutions in the area of portable power and energy for the individual soldier that have resulted in technology improvements and cost savings to the Army. The committee believes this business model has the potential to help the Army make further progress towards meeting the Department of Defense goal of using 25 percent renewable energy by fiscal year 2025.

Section 234—Independent Tests for Combat Helmet Pad Suspension Systems

This section would require the Secretary of Defense to appoint the necessary Department of Defense representative to conduct independent, objective, transparent ballistic and non-ballistic impact testing of product representatives of all qualified combat helmet pad suspension systems in all combat helmets currently fielded to armed forces personnel. This section would require the Secretary of Defense to report back to the congressional defense committees the results of these tests by September 30, 2008. The committee expects the tests would be conducted using a certified and qualified independent laboratory outside the government system. In addition, the tests would also include an operational user assessment of the qualified pad suspension systems that would consider key performance parameters of form, fit, function, cost, schedule, performance, and vendor production capacity. In addition, the committee also expects lessons learned from Operation Iraqi Freedom and Operation Enduring Freedom, as well as feedback from soldiers, sailors, airmen, and marines be considered as part of this test and evaluation and operational assessment. The committee recognizes that pad suspension systems provide needed force protection from blunt trauma and non-ballistic impacts.

Section 235—Report on Implementation of Manufacturing Technology Program

This section would require the Secretary of Defense to submit a report by March 1, 2008, to the congressional defense committees on the implementation of technologies or processes developed under the Manufacturing Technology Program required by section 2521 of title 10, United States Code. This report would include the following elements: the Manufacturing Technology project under which the technology was developed, the federal and non-federal performing activities, the project duration, the total government funding required to mature and implement the technology, the total amount of industry cost share, and the total cost avoidance or cost savings associated with technology implementation. This report would include technologies implemented in manufacturing processes for military and commercial applications and would be limited to manufacturing technologies funded by the program since 2002.

Section 236—Assessment of Sufficient Test and Evaluation Personnel

This section would require the Director, Operational Test and Evaluation, to assess the sufficiency of the Director's professional staffing levels. The Office of the Director, Operational Test and Evaluation is currently required by section 139, title 10, United States Code, to maintain sufficient staff to perform all duties assigned to the Director. This section would require the Director to include the findings of such an assessment in the next operational test and evaluation activities annual report to be submitted to the congressional defense committees not later than 10 days after the transmission of the budget for the next fiscal year under section 1105 of title 31, United States Code.

Section 237—Repeal of Requirement for Separate Reports on Technology Area Review and Assessment Summaries

This section would repeal section 253(c) of the National Defense Authorization Act for Fiscal Year 2006 (Public Law 109–163), which currently requires the Secretary of Defense to submit a report to the congressional defense committees on each Technical Area Review and Assessment (TARA) conducted during that year. The committee notes that the Department is restructuring its science and technology planning process that no longer directly supports the traditional TARA reports. The committee expects the Secretary to readily provide this data to the congressional defense committees upon such a request.

TITLE III—OPERATION AND MAINTENANCE

OVERVIEW

The President's budget request contains approximately $235.3 billion in operation and maintenance funds to ensure the U.S. military can train, deploy, and sustain U.S. forces in operations at home and throughout the world. Although this request appears to increase spending by $2.7 billion over levels authorized and appropriated for fiscal year 2007, it fails to account for $5.4 billion in additional expenses the Department of Defense expects due to inflation and rising fuel costs. In effect, the President's budget request for fiscal year 2008 represents a $2.7 billion reduction when compared with fiscal year 2007 readiness expenditures.

It is critical for the United States to provide the resources necessary to properly train and equip its men and women in uniform, to care for service members and their families, and to prepare the military to fight today's battles while deterring and defending against future threats. The committee believes the proposed funding level cannot fully address the Department of Defense's operation and maintenance needs while the military is engaged in Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF).

Because readiness is the foundation of U.S. military policy, the committee is gravely concerned with the declining readiness of U.S. ground and air forces. After five and one-half years at war, the cumulative effort of fighting in multiple locations over a sustained period has negatively affected the military's readiness posture and impacted the services' ability to respond to emergent requirements. Military leaders face significant and sometimes insurmountable challenges as they seek to fulfill today's equipment and training needs.

Equipment readiness, particularly for Army and Marine Corps ground forces, has been severely impacted by current operations in Iraq and Afghanistan. Army readiness has dropped to levels not seen since the 1970s. Some units deployed to locations other than Iraq and Afghanistan are operating without complete sets of equipment or adequate resources to train or execute their full-spectrum missions. The recent extension of Army deployments from 12 months to 15 months will be an additional burden on an already overstretched Army and will place further stress on unit readiness.