

TITLE IV—RESEARCH, DEVELOPMENT,  
TEST AND EVALUATION

For Research, Development, Test and Evaluation funds are to be available for fiscal year 2009, as follows:

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST
-----			
RECAPITULATION			
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY.....	10,524,085	12,060,111	+1,536,026
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, NAVY.....	19,337,238	19,764,276	+427,038
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, AIR FORCE.	28,066,617	27,084,340	-982,277
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, DEFENSE-WIDE.....	21,499,229	21,423,338	-75,891
OPERATIONAL TEST AND EVALUATION, DEFENSE.....	188,772	188,772	---
GRAND TOTAL, RDT&E.....	79,615,941	80,520,837	+904,896

CONGRESSIONAL INTEREST ITEMS

Items for which additional funds have been provided as shown in the project level tables or in paragraphs using the phrase "only for" or "only to" are congressional interest items for purposes of the Base for Reprogramming Department of Defense form (DD Form 1414). Each of these items must be carried on the DD Form 1414 at the stated amount, as specifically addressed in these materials.

TECHNOLOGY AND INDUSTRIAL BASE CONSIDERATIONS

Section 2440 of Title 10 of the United States Code specifically addresses the need for consideration of industrial base when developing and implementing acquisition programs. The Secretary of Defense is directed to comply with 10 U.S.C. 2440 as it applies to the consideration of national technology and industrial base in the development and implementation of acquisition plans for each major defense acquisition program. Additionally, the Secretary of Defense is directed to provide a report to the congressional defense committees within 30 days of enactment of this Act on how the Department implements Section 2440 in the major defense acquisition programs.

KC-135 TANKER REPLACEMENT PROGRAM

On September 10, 2008, the Secretary of Defense informed the Congress that he was terminating the solicitation for the KC-135 tanker replacement program. After seven years of deliberation, the Department of Defense is no closer to providing the warfighter with a replacement for the aged KC-135s. The Department's latest decision could delay replacing the tankers for several more years. The timing of the Secretary's notification made it too late for the Congress to undertake a comprehensive review of alternatives and mandate a way forward that would be fair to all parties involved. The Department

of Defense needs to address this serious problem as quickly as possible. The Department of Defense should consider any practical option that would enable the replacement of the KC-135s expeditiously to include the possibility of awarding competitive contracts to more than one offeror.

In light of the termination, the bill provides \$62,500,000 in Operation and Maintenance, Air Force for modest upgrades to the KC-135s to ensure continued reliability of the fleet. In addition, funding is provided for program office operations, termination costs, and anticipated claims from the offerors.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION (RDT&E) PROGRAM ELEMENT CODES AND BUDGET JUSTIFICATION DOCUMENTS

Senate Report 110-155, accompanying the Fiscal Year 2008 Department of Defense Appropriations Act, recommended several improvements to enhance the information provided to Congress in the RDT&E budget documentation materials. This includes the provision of specific information about activities conducted and accomplishments achieved with prior year funding; information on planned activities and their costs for the budget year at the project level; the improvement of cross references among projects; provision of schedules that identify key events; updates to narratives that reflect prior years' events; and the implementation of a more informative display of programmatic, schedule and budgetary changes. Improvements to the quality of the RDT&E budget justification documents are expected to be made beginning with the fiscal year 2010 budget submission.

REPROGRAMMING GUIDANCE FOR ACQUISITION ACCOUNTS

The Department of Defense is directed to continue to follow the reprogramming guid-

ance specified in the House Report (H. Rept. 110-279) accompanying the Fiscal Year 2008 Department of Defense Appropriations Act. Specifically, the dollar threshold for reprogramming funds will remain at \$20,000,000 for procurement, and \$10,000,000 for research, development, test and evaluation. The Department shall continue to follow the limitation that prior approval reprogrammings are set at either the specified dollar threshold or 20 percent of the procurement or research, development, test and evaluation line, whichever is less. These thresholds are cumulative. Therefore, if the combined value of transfers into or out of a procurement (P-1) or research, development, test and evaluation (R-1) line exceeds the identified threshold, the Department of Defense must submit a prior approval reprogramming to the congressional defense committees. In addition, guidelines on the application of prior approval reprogramming procedures for congressional special interest items are established elsewhere in this explanatory statement.

INTELLIGENCE, SURVEILLANCE AND RECONNAISSANCE

The Secretary of Defense notified the House and the Senate Committees on Appropriations of a number of urgent Intelligence, Surveillance and Reconnaissance (ISR) needs for fiscal year 2009 that were not contained in the budget request. In order to respond to these emerging requirements, an increase of \$750,000,000 is provided in operation and maintenance, procurement, and research, development, test and evaluation accounts. The following table includes research, development, test and evaluation funds provided in support of this initiative.

(In thousands of dollars)

Line	Account	Item	
R-239	CRDDW	Global Observer	\$40,000

REPROGRAMMING REPORTING REQUIREMENTS

The Under Secretary of the Department of Defense, Comptroller is directed to continue to provide the congressional defense committees quarterly, spreadsheet-based DD1416 reports for service and defense-wide accounts in titles III and IV of this Act as required in

the statement of the managers accompanying the conference report on the Department of Defense Appropriations Act, 2006.

FUNDING INCREASES

The funding increases outlined in these tables shall be provided only for the specific purposes indicated in the table.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY

For Research, Development, Test and Evaluation, Army, funds are to be available for fiscal year 2009, as follows:

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST	
-----				
RESEARCH, DEVELOPMENT, TEST & EVAL, ARMY				
BASIC RESEARCH				
1	IN-HOUSE LABORATORY INDEPENDENT RESEARCH.....	19,832	19,832	---
2	DEFENSE RESEARCH SCIENCES.....	176,959	198,759	+21,800
3	UNIVERSITY RESEARCH INITIATIVES.....	76,980	89,930	+12,950
4	UNIVERSITY AND INDUSTRY RESEARCH CENTERS.....	105,622	130,722	+25,100
	TOTAL, BASIC RESEARCH.....	379,393	439,243	+59,850
-----				
APPLIED RESEARCH				
5	MATERIALS TECHNOLOGY.....	26,985	81,205	+54,220
6	SENSORS AND ELECTRONIC SURVIVABILITY.....	46,147	75,547	+29,400
7	TRACTOR HIP.....	18,192	18,192	---
8	AVIATION TECHNOLOGY.....	42,013	47,053	+5,040
9	ELECTRONIC WARFARE TECHNOLOGY.....	16,611	21,811	+5,200
10	MISSILE TECHNOLOGY.....	48,174	56,934	+8,760
11	ADVANCED WEAPONS TECHNOLOGY.....	19,664	23,264	+3,600
12	ADVANCED CONCEPTS AND SIMULATION.....	17,048	21,848	+4,800
13	COMBAT VEHICLE AND AUTOMOTIVE TECHNOLOGY.....	55,234	89,334	+34,100
14	BALLISTICS TECHNOLOGY.....	71,550	88,250	+16,700
15	CHEMICAL, SMOKE AND EQUIPMENT DEFEATING TECHNOLOGY....	2,295	8,935	+6,640
16	JOINT SERVICE SMALL ARMS PROGRAM.....	7,531	9,131	+1,600
17	WEAPONS AND MUNITIONS TECHNOLOGY.....	30,576	102,676	+72,100
18	ELECTRONICS AND ELECTRONIC DEVICES.....	45,278	100,018	+54,740
19	NIGHT VISION TECHNOLOGY.....	25,647	46,847	+21,200
20	COUNTERMINE SYSTEMS.....	21,815	32,415	+10,600
21	HUMAN FACTORS ENGINEERING TECHNOLOGY.....	17,348	42,348	+25,000
22	ENVIRONMENTAL QUALITY TECHNOLOGY.....	16,064	19,864	+3,800
23	COMMAND, CONTROL, COMMUNICATIONS TECHNOLOGY.....	24,014	41,354	+17,340
24	COMPUTER AND SOFTWARE TECHNOLOGY.....	5,495	6,295	+800
25	MILITARY ENGINEERING TECHNOLOGY.....	52,066	59,006	+6,940
26	MANPOWER/PERSONNEL/TRAINING TECHNOLOGY.....	16,412	16,412	---
27	WARFIGHTER TECHNOLOGY.....	21,948	36,252	+14,304
28	MEDICAL TECHNOLOGY.....	75,395	188,835	+113,440
	TOTAL, APPLIED RESEARCH.....	723,502	1,233,826	+510,324

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST	
-----				
29	ADVANCED TECHNOLOGY DEVELOPMENT WARFIGHTER ADVANCED TECHNOLOGY.....	46,793	73,593	+26,800
30	MEDICAL ADVANCED TECHNOLOGY.....	59,043	322,323	+263,280
31	AVIATION ADVANCED TECHNOLOGY.....	57,277	106,637	+49,360
32	WEAPONS AND MUNITIONS ADVANCED TECHNOLOGY.....	73,697	109,437	+35,740
33	COMBAT VEHICLE AND AUTOMOTIVE ADVANCED TECHNOLOGY.....	107,992	264,752	+156,760
34	COMMAND, CONTROL, COMMUNICATIONS ADVANCED TECHNOLOGY..	9,183	11,583	+2,400
35	MANPOWER, PERSONNEL AND TRAINING ADVANCED TECHNOLOGY..	6,853	6,853	---
36	ELECTRONIC WARFARE ADVANCED TECHNOLOGY .....	50,961	62,561	+11,600
37	TRACTOR HIKE.....	14,562	14,562	---
38	NEXT GENERATION TRAINING & SIMULATION SYSTEMS.....	18,881	25,381	+6,500
39	TRACTOR ROSE.....	11,575	11,575	---
41	EXPLOSIVES DEMILITARIZATION TECHNOLOGY.....	10,564	13,764	+3,200
42	MILITARY HIV RESEARCH.....	7,116	15,116	+8,000
43	COMBATING TERRORISM, TECHNOLOGY DEVELOPMENT.....	13,064	13,064	---
45	ELECTRONIC WARFARE TECHNOLOGY.....	23,996	33,196	+9,200
46	MISSILE AND ROCKET ADVANCED TECHNOLOGY.....	63,998	76,958	+12,960
47	TRACTOR CAGE.....	12,372	12,372	---
48	LANDMINE WARFARE AND BARRIER ADVANCED TECHNOLOGY.....	30,797	37,657	+6,860
49	JOINT SERVICE SMALL ARMS PROGRAM.....	8,809	8,809	---
50	NIGHT VISION ADVANCED TECHNOLOGY.....	39,916	70,916	+31,000
51	ENVIRONMENTAL QUALITY TECHNOLOGY DEMONSTRATIONS.....	15,519	15,519	---
52	MILITARY ENGINEERING ADVANCED TECHNOLOGY.....	7,654	35,974	+28,320
53	ADVANCED TACTICAL COMPUTER SCIENCE & SENSOR TECHNOLOGY	48,236	62,236	+14,000
-----				
	TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT.....	738,858	1,404,838	+665,980

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST	
-----				
DEMONSTRATION & VALIDATION				
54	UNIQUE ITEM IDENTIFICATION (UID).....	649	649	---
55	ARMY MISSILE DEFENSE SYSTEMS INTEGRATION.....	14,005	91,065	+77,060
56	ARMY MISSILE DEFENSE SYSTEMS INTEGRATION (SPACE).....	19,986	47,986	+28,000
57	AIR AND MISSILE DEFENSE SYSTEMS ENGINEERING.....	116,410	119,210	+2,800
59	LANDMINE WARFARE AND BARRIER - ADV DEV.....	29,234	14,234	-15,000
60	SMOKE, OBSCURANT AND TARGET DEFEATING SYS-ADV DEV.....	3,840	3,840	---
61	TANK AND MEDIUM CALIBER AMMUNITION.....	45,866	40,866	-5,000
62	ADVANCED TANK ARMAMENT SYSTEM (ATAS).....	108,012	79,612	-28,400
63	SOLDIER SUPPORT AND SURVIVABILITY.....	30,716	25,716	-5,000
65	NIGHT VISION SYSTEMS ADVANCED DEVELOPMENT.....	2,588	2,588	---
66	ENVIRONMENTAL QUALITY TECHNOLOGY.....	5,355	15,355	+10,000
67	WARFIGHTER INFORMATION NETWORK-TACTICAL.....	414,357	394,357	-20,000
68	NATO RESEARCH AND DEVELOPMENT.....	5,041	5,041	---
69	AVIATION - ADV DEV.....	7,455	9,855	+2,400
70	LOGISTICS AND ENGINEER EQUIPMENT - ADV DEV.....	44,141	44,141	---
71	COMBAT SERVICE SUPPORT CONTROL SYSTEM EVALUATION.....	17,788	17,788	---
72	MEDICAL SYSTEMS - ADV DEV.....	26,308	30,308	+4,000
73	SOLDIER SYSTEMS - ADVANCED DEVELOPMENT.....	36,558	41,758	+5,200
	TOTAL, DEMONSTRATION & VALIDATION.....	928,309	984,369	+56,060
-----				
ENGINEERING & MANUFACTURING DEVELOPMENT				
76	AIRCRAFT AVIONICS.....	71,562	71,562	---
77	ARMED, DEPLOYABLE OH-58D.....	135,652	135,652	---
78	ELECTRONIC WARFARE DEVELOPMENT.....	32,325	36,325	+4,000
80	TRACTOR CAGE.....	16,807	16,807	---
82	INFANTRY SUPPORT WEAPONS.....	42,414	58,254	+15,840
83	MEDIUM TACTICAL VEHICLES.....	1,949	1,949	---
84	SMOKE, OBSCURANT AND TARGET DEFEATING SYS-SDD.....	5,603	5,603	---
85	FAMILY OF HEAVY TACTICAL VEHICLES.....	2,901	4,501	+1,600
86	AIR TRAFFIC CONTROL.....	14,214	14,214	---
89	NON-LIGHT OF SIGHT LAUNCH SYSTEM.....	200,099	208,699	+8,600
90	NON-LINE OF SIGHT CANNON.....	89,841	89,841	---
91	FCS MANNED GRD VEHICLES & COMMON GRD VEHICLE.....	774,257	785,257	+11,000
92	FCS SYSTEMS OF SYSTEMS ENGR & PROGRAM MGMT.....	1,413,945	1,419,445	+5,500
93	FCS RECONNAISSANCE (UAV) PLATFORMS.....	34,379	57,379	+23,000

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST
94 FCS UNMANNED GROUND VEHICLES.....	96,918	103,318	+6,400
95 FCS UNATTENDED GROUND SENSORS.....	12,967	17,067	+4,100
96 FCS SUSTAINMENT & TRAINING R&D.....	539,145	558,145	+19,000
97 MODULAR BRIGADE ENHANCEMENT.....	64,900	111,400	+46,500
98 NIGHT VISION SYSTEMS - SDD.....	44,508	51,708	+7,200
99 COMBAT FEEDING, CLOTHING, AND EQUIPMENT.....	2,499	2,499	---
100 NON-SYSTEM TRAINING DEVICES - SDD.....	35,424	38,424	+3,000
101 AIR DEFENSE COMMAND, CONTROL AND INTELLIGENCE -SDD....	22,415	22,415	---
102 CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT.....	26,244	26,244	---
103 AUTOMATIC TEST EQUIPMENT DEVELOPMENT.....	23,582	18,582	-5,000
104 DISTRIBUTIVE INTERACTIVE SIMULATIONS (DIS) - SDD.....	16,095	17,775	+1,680
105 COMBINED ARMS TACTICAL TRAINER (CATT) CORE.....	29,468	30,668	+1,200
106 JOINT NETWORK MANAGEMENT SYSTEM.....	676	676	---
107 WEAPONS AND MUNITIONS - SDD.....	52,140	58,140	+6,000
108 LOGISTICS AND ENGINEER EQUIPMENT - SDD.....	37,718	38,518	+800
109 COMMAND, CONTROL, COMMUNICATIONS SYSTEMS - SDD.....	9,795	9,795	---
110 MEDICAL MATERIEL/MEDICAL BIOLOGICAL DEFENSE EQUIPMENT	34,971	45,371	+10,400
111 LANDMINE WARFARE/BARRIER - SDD.....	126,475	117,075	-9,400
113 ARTILLERY MUNITIONS .....	78,197	79,397	+1,200
114 COMBAT IDENTIFICATION.....	10,909	10,909	---
115 ARMY TACTICAL COMMAND & CONTROL HARDWARE & SOFTWARE...	67,535	65,535	-2,000
117 GENERAL FUND ENTERPRISE BUSINESS SYSTEM (GFEBs).....	60,308	50,308	-10,000
118 FIREFINDER.....	47,845	47,845	---
119 SOLDIER SYSTEMS - WARRIOR DEM/VAL.....	15,790	17,790	+2,000
120 ARTILLERY SYSTEMS .....	42,300	33,300	-9,000
121 PATRIOT/MEADS COMBINED AGGREGATE PROGRAM (CAP).....	431,270	431,270	---
122 NUCLEAR ARMS CONTROL MONITORING SENSOR NETWORK.....	6,260	6,260	---
123 INFORMATION TECHNOLOGY DEVELOPMENT.....	73,740	68,040	-5,700
124 JOINT AIR-TO-GROUND MISSILE (JAGM).....	118,517	118,517	---
TOTAL, ENGINEERING & MANUFACTURING DEVELOPMENT.....	4,964,559	5,102,479	+137,920

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST
-----			
RDT&E MANAGEMENT SUPPORT			
126 THREAT SIMULATOR DEVELOPMENT.....	21,416	25,176	+3,760
127 TARGET SYSTEMS DEVELOPMENT.....	13,498	13,498	---
128 MAJOR T&E INVESTMENT.....	64,618	64,618	---
130 RAND ARROYO CENTER.....	16,339	20,339	+4,000
131 ARMY KWAJALEIN ATOLL.....	174,601	174,601	---
132 CONCEPTS EXPERIMENTATION PROGRAM.....	28,271	34,031	+5,760
134 ARMY TEST RANGES AND FACILITIES.....	342,079	347,579	+5,500
135 ARMY TECHNICAL TEST INSTRUMENTATION AND TARGETS.....	74,624	80,974	+6,350
136 SURVIVABILITY/LETHALITY ANALYSIS.....	41,066	41,066	---
137 DOD HIGH ENERGY LASER TEST FACILITY.....	2,835	6,835	+4,000
138 AIRCRAFT CERTIFICATION.....	5,054	5,054	---
139 METEOROLOGICAL SUPPORT TO RDT&E ACTIVITIES.....	8,289	8,289	---
140 MATERIEL SYSTEMS ANALYSIS.....	17,028	17,028	---
142 SUPPORT OF OPERATIONAL TESTING.....	72,942	74,942	+2,000
143 ARMY EVALUATION CENTER.....	63,382	63,382	---
144 SIMULATION & MODELING FOR ACQ, RQTS, & TNG (SMART)....	5,325	5,325	---
145 PROGRAMWIDE ACTIVITIES.....	73,748	73,748	---
146 TECHNICAL INFORMATION ACTIVITIES.....	42,905	44,505	+1,600
147 MUNITIONS STANDARDIZATION, EFFECTIVENESS AND SAFETY...	20,857	48,057	+27,200
148 ENVIRONMENTAL QUALITY TECHNOLOGY MGMT SUPPORT.....	5,125	5,125	---
149 MANAGEMENT HEADQUARTERS (RESEARCH AND DEVELOPMENT)....	15,665	15,665	---
	-----	-----	-----
TOTAL, RDT&E MANAGEMENT SUPPORT.....	1,109,667	1,169,837	+60,170
OPERATIONAL SYSTEMS DEVELOPMENT			
151 MLRS PRODUCT IMPROVEMENT PROGRAM.....	59,749	59,749	---
153 AEROSTAT JOINT PROJECT OFFICE.....	356,434	356,434	---
154 ADV FIELD ARTILLERY TACTICAL DATA SYSTEM.....	15,860	16,660	+800
155 COMBAT VEHICLE IMPROVEMENT PROGRAMS.....	141,114	143,514	+2,400
156 MANEUVER CONTROL SYSTEM.....	37,151	37,151	---
157 AIRCRAFT MODIFICATIONS/PRODUCT IMPROVEMENT PROGRAMS...	452,787	460,937	+8,150
158 AIRCRAFT ENGINE COMPONENT IMPROVEMENT PROGRAM.....	332	332	---
159 DIGITIZATION.....	9,534	9,534	---
160 FORCE XXI BATTLE COMMAND, BRIGADE AND BELOW (FBCB2)...	38,418	23,418	-15,000
162 MISSILE/AIR DEFENSE PRODUCT IMPROVEMENT PROGRAM.....	37,871	37,871	---
163 OTHER MISSILE PRODUCT IMPROVEMENT PROGRAMS.....	1,527	5,227	+3,700

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST
164 TRACTOR CARD.....	19,601	19,601	---
165 JOINT TACTICAL COMMUNICATIONS PROGRAM (TRI-TAC).....	920	920	---
166 JOINT TACTICAL GROUND SYSTEM.....	1,957	1,957	---
167 JOINT HIGH SPEED VESSEL (JHSV).....	2,936	2,936	---
169 SECURITY AND INTELLIGENCE ACTIVITIES.....	---	3,200	+3,200
170 INFORMATION SYSTEMS SECURITY PROGRAM.....	38,090	41,290	+3,200
171 GLOBAL COMBAT SUPPORT SYSTEM.....	104,934	104,934	---
172 SATCOM GROUND ENVIRONMENT (SPACE).....	106,327	59,099	-47,228
173 WWMCCS/GLOBAL COMMAND AND CONTROL SYSTEM.....	12,922	12,922	---
174 JOINT COMMAND AND CONTROL PROGRAM (JC2).....	15,203	15,203	---
175 TACTICAL UNMANNED AERIAL VEHICLES.....	50,976	104,276	+53,300
177 DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS.....	---	3,600	+3,600
178 AVIONICS COMPONENT IMPROVEMENT PROGRAM.....	1,023	1,023	---
179 END ITEM INDUSTRIAL PREPAREDNESS ACTIVITIES.....	69,084	91,084	+22,000
TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT.....	1,574,750	1,612,872	+38,122
999 CLASSIFIED PROGRAMS.....	105,047	112,647	+7,600
TOTAL, RESEARCH, DEVELOPMENT, TEST & EVAL, ARMY.....	10,524,085	12,060,111	+1,536,026

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS  
[In thousands of dollars]

R-1	Budget Request	Recommendation
<b>1 IN-HOUSE LABORATORY INDEPENDENT RESEARCH</b>	<b>19,832</b>	<b>19,832</b>
<b>2 DEFENSE RESEARCH SCIENCES</b>	<b>176,959</b>	<b>198,759</b>
Perpetually Available and Secure Information Systems (PISIS)		3,200
Combat Mental Health Initiative		2,400
Technology Commercialization and Management Network		1,600
Cyber Threat Analytics		2,400
Nanocrystal Source Display		1,200
Fuel Logistics Reduction through Enhanced Engine Performance		1,200
Nanostructured Materials For Photovoltaic Applications		1,600
Sustainable Alternative Energy for DoD		2,400
Direct Methanol Fuel Cell Battery Recharger Program		2,400
Unsustained growth		-7,000
Center for Advanced Energy Storage Research and Technology		1,600
Fighting Drug Resistant Infections		2,000
Flexible Electronics Research Initiative		1,600
Global Military Operating Environment		2,000
Organic Semiconductor Modeling and Simulation		1,200
Toxic Particles		800
Urban Patterns and Signatures to Support Counter-Insurgency Operations		1,200
<b>3 UNIVERSITY RESEARCH INITIATIVES</b>	<b>76,980</b>	<b>89,930</b>
Electrofluidic Chromatophores for Adaptive Camouflage		1,750
DoD International Diabetes Research Initiative		2,000
Nanosystems through Optical Biosensors		1,600
Burn and Shock Trauma Institute		2,000
Columbia College Chicago Construct Program		800
Hi-Tech Eyes for the Battlefield		1,600
Low Temperature Vehicle Performance Research		1,600
Open Source Intelligence for Force Protection and Intelligence		1,600
<b>4 UNIVERSITY AND INDUSTRY RESEARCH CENTERS</b>	<b>105,622</b>	<b>130,722</b>
Center for Nanoscale Bio-Sensors as a Defense Against Biological Threats to America		800
Manufacturing and Industrial Technology Center		800
Nanotubes Optimized for Lightweight Exceptional Strength Composite Materials		2,400
Florida Collaborative Development of Advanced Materials for Strategic Applications		1,200
Ink-Based Desktop Electronic Material Technology		1,600
Western Hemisphere Security Analysis Center		1,600
NanoSensor StageGate Accelerator (NSSA)		1,200
Development of Enabling Chemical Technologies for Power from Green Sources		1,200
Norfolk State University Center for Modeling and Simulation		2,400

R-1	Budget Request	Recommendation
Unexecutable growth		-5,000
Academic Support and Research Compliance for Knowledge Gathering		2,000
Center for Education in Nanoscience and Nanotechnology		640
Center for Information Assurance		800
Large Area Monitoring Network (LAMNET)		6,000
MEMS Antenna for Wireless Comms		2,400
Nanoscale Biosensors		2,500
Novel Methods for Detecting and Inhibiting Corrosion		1,360
Visualization for Training and Simulation in Urban Terrains		1,200
<b>5 MATERIALS TECHNOLOGY</b>	<b>26,985</b>	<b>81,205</b>
Unjustified Program Growth		-2,000
Future Affordable Multi-Utility Materials for the Army Future Combat Systems		6,400
Ultrasonic Consolidation for Armor Applications		1,200
Next Generation Protective Seat		2,400
Control System for Laser Powder Deposition		500
Improvised Explosive Device (IED) Simulation in Different Soils		500
Ultra-Endurance Coating		3,600
Nickel Boron Coating Technology for Army Weapons		2,400
Dual Stage Variable Energy Absorber		2,400
Unmanned Ground Vehicle Advanced Technology Development		2,500
One-Step JP-8 Bio-Diesel Fuel		1,600
Modeling and Testing of Next Generation Body Armor		2,000
Project Kryptolite Force Implementation Phase		1,200
Development of Improved Lighter-Weight IED/EFP Armor Solutions		1,000
Nanomanufacturing of Multifunctional Sensors		1,000
Advanced Conductivity Program (ACP)		3,500
Affordable Light-Weight metal matrix composite armor		1,600
Ballistic Armor Research		3,200
Capability Expansion of Spinel Transparent Armor Manufacturing		5,120
Composite Applied Research and Technology for FCS and Tactical Vehicle Survivability		3,000
Lattice Block Structures for AM2 Matting Replacement		2,500
Lightweight Anti-Ballistic Protection for Aircraft		400
Lightweight Transparent Armor for Force Protection		2,000
Moldable Fabric Armor		1,200
Novel Extremity Body Armor		600
Renewable Jet Fuel from Lignocellulosic Feedstocks		3,200
Ultrasonic Impact Technology		1,200
<b>6 SENSORS AND ELECTRONIC SURVIVABILITY</b>	<b>46,147</b>	<b>75,547</b>
Self-Deploying Autonomous Sensor Platforms for Situational Awareness		4,000
Adaptive Infrastructure for SOF Experimentation		2,400
Wearable Gyro-Compensated Personnel Tracking During GPS Interference		800
Semi-Autonomous or Unattended Psychological Operations and Reconnaissance Tool (SUPPORT)		2,400

R-1	Budget Request	Recommendation
Next Generation Wearable Video Capture System		800
Lookout Small Scale Radar		2,000
Intelligent Fault Protected Laser Diodes		800
Advanced Detection of Explosives (ADE)		2,400
Large Aluminum Nitride Crystals for Effective Deep Ultraviolet Sources		800
Command and Control, Communications and Computers (C4) Module		1,200
Advanced Magnetic Nanosensors for Defense Applications		4,800
Advanced UV Light Diode Sensor Development		1,600
Hydrogen Batteries for the Warfighter		3,000
Nanophotonic Devices		1,600
Terahertz Spectrometer		800
<b>8 AVIATION TECHNOLOGY</b>	<b>42,013</b>	<b>47,053</b>
Aircraft Structural Condition Monitoring (ASCM)		1,600
Helicopter Reliability and Failure Analysis Center		880
Intensive Quenching for Advanced Weapon Systems		960
Composite Small Main Rotor Blades		1,600
<b>9 ELECTRONIC WARFARE TECHNOLOGY</b>	<b>16,611</b>	<b>21,811</b>
Counter-IED Force Protection Program		2,000
Integrated Information Technology Policy Analysis Research		1,600
Battlefield Connectivity		1,600
<b>10 MISSILE TECHNOLOGY</b>	<b>48,174</b>	<b>56,934</b>
D-NET: Electrically Charged Mesh (ECM) Defense Net Troop Protection System		2,560
Materials Applications Research Center		800
Center of Excellence in Integrated Sensor Systems (CEISS)		600
Large Energy National Shock Tunnel (LENS XX) Hypervelocity Ground Testing		1,600
Mariah II Hypersonic Wind Tunnel Development		3,200
<b>11 ADVANCED WEAPONS TECHNOLOGY</b>	<b>19,664</b>	<b>23,264</b>
Remote Video Weapons Sight, USSOCOM SBIR		2,000
Army Missile and Space Technology Initiative		1,600
<b>12 ADVANCED CONCEPTS AND SIMULATION</b>	<b>17,048</b>	<b>21,848</b>
Advanced Live, Virtual and Constructive (LVC) Training Systems		1,600
Boston University Photonics Center		3,200
<b>13 COMBAT VEHICLE AND AUTOMOTIVE TECHNOLOGY</b>	<b>55,234</b>	<b>89,334</b>
Nanofluids for Advanced Military Mobility		800
Extended Lifecycle Management Environment		1,000
Superlattice Semiconductors for Mobile SS Lighting and Solar Power Applications		2,400
Institute for Advanced Materials and Manufacturing Strategies (IAMMS)		1,200
DoD Hydrogen PEM Fuel Cell Medium/Heavy Duty Vehicle Demonstration Program		1,600
Turbo Fuel Cell Engine		2,500
Fire Resistant Fuels		3,200

R-1	Budget Request	Recommendation
Improved EFP and IED Protection, Testing, Modeling and Proving Using Lithia Alumina Silica (LAS) Glass Ceramics		2,400
Illinois Center for Defense Manufacturing		2,000
Rapid Up-Armor Synthesis and Crashworthiness Design for Improved Soldier Survivability		1,200
Tactical Metal Fabrication System (TACFAB)		2,000
Ultra Light Weight Transmission for FCS		1,600
Advanced Manufacture of Lightweight Components		2,400
Center for Advanced Vehicle Technology and Fuel Development		800
Condition Based Maintenance and Mission Assuredness for Ground Vehicles		2,400
Ground Vehicle Reliability Modeling for Condition-Based Maintenance		800
HEV Battery System for Future Combat System		1,600
Integrated Vehicle Health Monitoring System		1,600
Military Fuels Research Program		1,600
Remote Unmanned Vehicle Checkpoint System		1,000
<b>14 BALLISTICS TECHNOLOGY</b>	<b>71,550</b>	<b>88,250</b>
Advanced Composite Armor for Force Protection		1,600
Eye-Safe Standoff Fusion Detection of CBE Threats		2,000
5.56mm Aluminum Cartridge Case, Lake City Army Ammunition Plant		1,000
Globally Accessible Manufacturing and Maintenance Activity		1,600
Beneficial Infrastructure for Rotorcraft Risk Reduction Demonstrations		800
Super High Accuracy Range Kit (SHARK)		3,600
Laser Based Explosives, Chem/Bio Standoff and Point Detector		4,000
Next Generation Lightweight Drive System for Army Weapons Systems		1,600
Small Unmanned Aerial Vehicles and Sensors		500
<b>15 CHEMICAL, SMOKE AND EQUIPMENT DEFEATING TECHNOLOGY</b>	<b>2,295</b>	<b>8,935</b>
Systems Biology Biomarkers Toxicology Initiative		2,640
Rapid and Accurate Pathogen Identification/Detection (RAPID) Program		1,600
Enhanced Vapor Aeration capabilities (EVAC)		2,400
<b>16 JOINT SERVICE SMALL ARMS PROGRAM</b>	<b>7,531</b>	<b>9,131</b>
Extreme Light Sources, University of Florida		1,600
<b>17 WEAPONS AND MUNITIONS TECHNOLOGY</b>	<b>30,576</b>	<b>102,676</b>
MATRIC-Project National Shield Integration Center		2,000
Wyoming Valley Integrated Command Operations Program (ICOP)		1,600
Kinetic Energy Enhanced Lethality and Protection Materials		2,000
Regional Integrated Command Center (RICC)		800
Remotely Operated Weapons Systems		5,000
Advanced Technologies, Energy and Manufacturing Science		5,000
Developmental Mission Integration		4,000
Rapid Prototyping for Special Projects		3,200
Mitigation of Energetic Single Point Failures		2,400

R-1	Budget Request	Recommendation
Green Armaments/Rangesafe		2,400
Armament Systems Engineering - ASEI2		3,200
Advanced Rarefaction Weapon Engineered System		2,400
Northern Ohio Integrated Command Operations Program		1,600
Threat Detection and Neutralization Project		3,200
Specialized Compact Automated Mechanical Clearance Platform		1,600
Effects Based Decision Support Services		8,000
Advanced Materials and Process For Armament Structures (AMPAS)		2,400
Rapid Response Force Protection System		2,400
Hospital Emergency Planning and Integration (HEPI)		800
Accelerated Materials Development and Characterization for Army		2,500
Army Center of Excellence in Acoustics		4,400
Center for Borane Technology		2,000
Electro Conversion of Energetic Materials		3,600
Exploding Foil Initiators (EFI) with Nanomaterial-Based Circuits		1,600
Heavy Metals Total Life-Cycle Initiative		800
High Power Electrolytic Super-Capacitors Based On Conducting Polymers		800
Munitions Evaluation for Composite Electric Armor		1,200
Ripsaw Unmanned Ground Vehicle (UGV) Weaponization		1,200
<b>18 ELECTRONICS AND ELECTRONIC DEVICES</b>	<b>45,278</b>	<b>100,018</b>
Extremely High Frequency (EHF) Transmitter for WIN-T Satellite Communications		2,000
Bio-Battery		800
Advanced Portable Power Institute		1,600
Compact Eyesafe Tactical Laser		1,200
Advanced Tactical 2KW External Combustion Power Sources for Cogeneration Applications		2,400
Highly Reliable, Maintenance Free Remote Solar Power System		640
Miniature Cooling Unit for Electronic Devices		800
Fuel Cell Power System		800
Manufacturing Technology Development of Advanced Solid State Lasers		2,400
Micro-Machined Switches in Support of Transformational Communications Architecture		2,400
Large Format Li-Ion Battery		800
Integrated Lightweight Tracker System		1,600
High-Frequency, High-Power Electronic and Optoelectronic Devices on Aluminum Nitride		3,200
Soldier Portable Power Pack (SP3) for the 21st Century Warrior		1,700
Novel Zinc Air Power Sources for Military Applications		1,600
SOCOM Lightweight Unmanned Ground Robot		1,600
Advanced Energy Storage Development for Renewable Energy Generation		1,200
Co-Generation of Power and Air Conditioning		800
Soldier Fuel Cell System		2,400
ONAMI Miniature Tactical Energy Systems Development Program Increase		5,600

R-1	Budget Request	Recommendation
Solid Oxide Fuel Cell Powered Tactical Smart Charger		1,600
Advanced Soldier Portable Power Systems Technologies		1,600
Ceramic Membrane Battery Systems		1,200
Cogeneration for Enhanced Cooling and Heating of Advanced Tactical Vehicles		2,400
Maryland Proof of Concept Alliance for Defense Technologies		3,500
Military Jet-Fueled Fuel Cell Generator		800
Renewable Energy for Military Applications		1,600
Self Powered, Lightweight, Flexible Display Unit on a Plastic Substrate		1,600
Stabilized Enzyme Biofuel Cell (SEBC) for Unmanned Ground Sensors		800
Tactical Asset Visibility Enhancement		500
Thermoelectric Power Generation Materials and Devices		1,200
<b>19 NIGHT VISION TECHNOLOGY</b>	<b>25,647</b>	<b>46,847</b>
Next Generation Communications System		1,200
Lightweight Polymer Designs for Soldier Combat Optics		1,200
Miniaturized Sensors for Small and Tactical Unmanned Aerial Vehicles (MINISENS)		1,200
Uncooled Metal-Oxide Semiconductor Field-Effect Transistor (MOSFET) Embedded Micro-cantilevers		2,400
Night Vision Technology Research		9,600
Small Business Infrared Material Manufacturing-Silicon Alternative Substrates		5,600
<b>20 COUNTERMINE SYSTEMS</b>	<b>21,815</b>	<b>32,415</b>
Spectroscopic Materials Identification Center		800
Hawaii Undersea Chemical Military Munitions Assessment Plan		4,000
Standoff Improvised Explosive Device Detection Program		4,800
UXO Detection and Classification in Volcanic Soil Using an Integrated Fully Polametic GPR and Chemical Sensor Technology		1,000
<b>21 HUMAN FACTORS ENGINEERING TECHNOLOGY</b>	<b>17,348</b>	<b>42,348</b>
LWI Training-based Collaborative Research		25,000
<b>22 ENVIRONMENTAL QUALITY TECHNOLOGY</b>	<b>16,064</b>	<b>19,864</b>
Range Scrap Disposal, Hawthorne Army Depot		800
MLRS Disposal System		3,000
<b>COMMAND, CONTROL, COMMUNICATIONS</b>		
<b>23 TECHNOLOGY</b>	<b>24,014</b>	<b>41,354</b>
Portable Non-Magnetic Compass/Positioning/Timing Device		1,600
Innovative Wireless Technologies for Sensor Networks		700
21st Century Command, Control, and Communications Technology		640
Automated Language and Cultural Analysis for National Security		2,000

R-1	Budget Request	Recommendation
Dynamically Managed Data Dissemination (DMDD)		1,200
On-The-Move Telescoping Mast		2,400
Intelligent Distributed Command and Control (IDC2)		2,400
Tactical Booster for Mobile Network Centric Warfare		1,600
Ruggedized Cylinders for Expandable Mobile Shelters		2,400
Modular Universal TOC Packages for Vehicles and Shelters		2,400
<b>24 COMPUTER AND SOFTWARE TECHNOLOGY</b>	<b>5,495</b>	<b>6,295</b>
Lightweight Soldier Sensor Computing		800
<b>25 MILITARY ENGINEERING TECHNOLOGY</b>	<b>52,066</b>	<b>59,006</b>
Nano-Crystalline Cement for High Strength, Rapid Curing Concrete with Improved Blast Resistance		1,440
Cellulose Nanocomposite Panels for Enhanced Blast and Ballistic Protection		2,400
Airborne Threats		1,500
Geosciences/ Atmospheric Research (CG/AR)		1,600
<b>27 WARFIGHTER TECHNOLOGY</b>	<b>21,948</b>	<b>36,252</b>
Protective Textile Fabric		800
Advanced Thermal Processing of Packaged Combat Rations		1,680
Solid State Shelter Lighting System		384
Chemical and Biological Protective Hangars		2,240
Photovoltaic Tent Fabric		2,800
Injection Molded Ceramic Body Armor		800
Wearable Personal Area Network Technology		2,400
Biosecurity for Soldier Food Safety		1,600
Lightweight 1-2 Person Low-Pressure Inflatable Tents		800
Modular Ballistic System for Force Protection		800
<b>28 MEDICAL TECHNOLOGY</b>	<b>75,395</b>	<b>188,835</b>
Battlefield Research Accelerating Virtual Environments for Military Individual Neuro Disorder (BRAVEMIND)		800
Battlefield Treatment of Hemorrhagic Shock		800
Biological and Immunological Infectious Agent and Cancer Vaccine Research		800
Cancer Prevention through Remote Biological Sensing		1,600
Center for Injury Biomechanics		3,200
Center for Ophthalmic Innovation (Note: Department of Defense Military Health System Enhancement)		2,400
Plug-In Architecture for DoD Medical Imaging		800
Cold Springs Harbor Laboratory-Women's Cancer Genomics Center (Note: Department of Defense Military Health System Enhancement)		2,800
Combat Stress Intervention Program (CSIP)		2,400
Consortium for Bone and Tissue Repair and Regeneration		800
Control of Vector-Borne Diseases		1,200
Copper Air Quality Program		2,000
Disposable Unit Dose Drug Pumps for Anesthesia and Antibiotics		1,750
Extended Duration Silver Wound Dressing-Clinical Trials		1,600
Lehman Injury Research Center (Ryder Trauma Center) (Note: Includes Funding for Jackson Health System)		6,000
Medical Resources Conservation Technology System		2,400

R-1	Budget Request	Recommendation
Military Interoperable Digital Hospital Testbed		10,000
Minimizing Health Effects of Air Toxins on Military Personnel		1,600
Nanofabricated Bioartificial Kidney, Pancreas and Liver		2,500
Nano-Imaging Agents for Early Disease Detection		1,600
National Eye Evaluation and Research Network (NEER) - Clinical Trials of Orphan Retinal Degenerative Diseases		800
Neural Controlled Prosthetic Device for Amputees		1,600
Neuroimaging of Brain Disorders		800
Neuroscience Research Consortium to Study Spinal Cord Injuries		800
Neutron/Hadron Particle Therapy		1,200
New Vaccines to Fight Respiratory Infection		4,000
Plant-based Vaccine Research (Mitchell Memorial Cancer Center)		2,000
Plasma Technology Laboratory		800
Prevention of Compartment Syndrome, Ultrafiltration Catheter		1,600
Rapid Vaccine Discovery Technology		1,600
Self-Powered Prosthetic Limb Technology		2,400
Synchrotron-based Scanning Research Neuroscience and Proton Institute		5,000
Use of Drugs to Reduce Hearing Loss from Acute Acoustic Trauma		1,280
Wound Infection Treatment Program		2,400
Behavior and Neuroscience, Functional Magnetic Resonance Imaging Research Project		800
Expanding Access to Proven Lifestyle Modification Treatments Focused on Preventing and Reversing Chronic Diseases		1,750
Vision Integrating Strategies in Ophthalmology and Neurochemistry (VISION)		3,200
Advanced Functional Nanomaterials for Biological Processes		2,000
Carbon Nanotube Production		1,200
Center for Aerospace Human Factors Research and Innovation		800
Complementary & Alternative Medicine Research for Military Operations & Healthcare		5,000
Development of Drugs for Malaria and Leishmaniasis in US Military and Civilian Personnel		3,400
Engineering Replacement Tissues		1,600
Expansion and Development Upper and Lower Bionic Limbs		2,000
Facilitating Use of Advanced Prosthetic Limb Technology		1,600
Freeze Dried Blood Technology Clinical Research		2,000
Military Photomedicine Program		2,800
Mosquito Borne Disease Prevention : Malaria & Dengue Fever		800
Optical Neural Techniques for Combat / Post-Trauma Healthcare		1,600
Peer Reviewed Orthopaedic Extremity Trauma Research		5,000
Respiratory Biodefense Initiative		1,600
Soldier Survival in Extreme Environments		2,960
<b>29 WARFIGHTER ADVANCED TECHNOLOGY</b>	<b>46,793</b>	<b>73,593</b>
Chemical and Biological Threat Protection Coating		2,400
Precision Guided Airdropped Equipment		3,680
Compact, Day and Night CMOS Camera for Mini and Micro UAVs		2,000

R-1	Budget Request	Recommendation
Improved Lightweight Integrated Communication and Hearing Protection Device		800
Flame and Thermal Protection for Individual Soldier		3,200
Ballistic Precision Aerial Delivery System (BPADS)		1,000
Aerial Firefighting - Precision Container Aerial Delivery System (PCADS)		2,320
Ration Packaging Materials and Systems for MREs		3,600
Compact MVCC Soldier Cooling System		1,600
Multi-layer Coextrusion for High Performance Packaging		2,400
J50 Unsustained Growth		-3,000
High Pressure Processing Prototype for Meals-Ready-to-Eat (MRE)		1,600
Laser Studied and Enhanced Reactive Materials: Self-Decontaminating Polymers for Chemical-Biological Defense		1,600
Novel Flame Retardant Nylon Fabrics		1,200
Technology and Human Systems Integration		2,400
<b>30 MEDICAL ADVANCED TECHNOLOGY</b>	<b>59,043</b>	<b>322,323</b>
Advanced Medical Multi-Missions and CASEVAC Roles (Note: VTOL man rated UAV/UGV)		800
Advanced Restoration Therapies in Spinal Cord Injuries		2,000
Alliance for NanoHealth (Note: Department of Defense Military Health System Enhancement)		3,200
Anti-Terror Medical Technology Program		2,800
Angiogenesis and Tissue Engineering Research		1,200
Automated and Portable Field System for the Rapid Detection and Diagnosis of Diseases		1,600
National Oncogenomics and Molecular Imaging Center		3,200
Brain Interventional-Surgical Hybrid Initiative		1,600
Brain, Biology, and Machine Applied Research		1,600
Cellular Therapy for Battlefield Wounds (Phase II)		1,600
Center for Integration of Medicine and Innovative Technology		8,000
Center of Cardiac Surgery Robotic Computerized Telemanipulation (Note: As part of a Comprehensive Approach to Advanced Heart care)		1,600
Center of Genetic Origins of Cancer (Note: Department of Defense Military Health System Enhancement)		2,400
Center for Untethered Health Care		1,000
Chronic Tinnitus Treatment Program		1,000
Clinical Looking Glass Project (Note: to Enhance the capabilities of the Fort Drum, New York Military Health System)		800
Composite Tissue Allotransplantation Research and Clinical Program		1,600
Corneal Wound Repair		5,500
Extremity War Injury Research Foundation		800
Fibrin Adhesive Stat (FAST) Dressing		3,000
Host Pathogen Interaction Study		3,200
Human Genomics, Molecular Epidemiology, and Clinical Diagnostics for Infectious Diseases (Note: Department of Defense Military Health System Enhancement)		1,160
Infectious and Inflammatory Disease Center at the Burham Institute for Medical Research (Note: Department of Defense Military Health System Enhancement)		2,400
Institute for the Advancement of Bloodless Medicine		1,600
Institute of Surgical and Interventional Simulation (ISIS)		4,400

R-1	Budget Request	Recommendation
Integrated Functional Materials		800
Joint Collaborative Medical Information System (JCMIS)		3,200
Limb Tissue Regeneration after Battlefield Injuries using Bone Marrow Stem Cells		3,000
Limb Regeneration Through Biometrics Technology		800
Linear Accelerator Cancer Research		800
Mary Bird Perkins Cancer Center (Note: A treatment Planning Research Laboratory for High Performance Computing and Radiation Dose Effects for the Department of Defense)		2,400
Mass Scale Biosensor Threat Diagnostic for In-Theater Defense Utilization (FIU)		1,600
Maine Institute for Human Genetics and Health		1,600
Midwest Traumatic Injury Rehabilitation Center		1,460
Military Low Vision Research		1,600
MUSC Cancer Genomics Research Collaborative		800
Neuroimaging and Neuropsychiatric Trauma in Warfighters		5,000
Assistive Technology Research Center at the National Rehabilitative Hospital		2,400
National Warfighter Health Sustainment Study		800
National Center of Ophthalmology Training and Education at Wills Eye Center		1,000
Oncology Group Pediatric Cancer Research (CH)		1,600
Prader Willi Syndrome (PWS) Research		1,600
Prostate and Ovarian Cancer Biomarkers (Note: Department of Defense Military Health System Enhancement)		1,200
Proteomics Project (CH-LA)		1,200
Rehabilitation and Assistive Technologies to Enhance the Life of Individuals with Disabilities		800
Remote Bio-Medical Detector		2,000
Rural Health (CERMUSA) (Note: to serve remote and rural military retiree populations)		2,400
Rugged Electronic Textile Vital Signs Monitoring		3,000
Smart Prosthetics Research		1,600
Southeast Nebraska Cancer Center-National Functional Genomics Center		1,200
Spinal Muscular Atrophy (SMA) Research Program		3,200
Strattice Dermal Matrix Research		2,400
Technologies for Metabolic Monitoring (TMM)		800
Telepharmacy Remote Medicine Device Unit (TRMDU)		1,400
Trauma Hemostat		800
Ultra High Speed MEMS Electromagnetic Cell Sorter (UHSMECS)		2,400
Ultra-High Resolution Display for Army Medicine (UHRDARM)		4,000
UMDJ Cancer Initiative		2,400
Warfighter Cancer Care Engineering		2,400
Wireless Electronic Patient Records		3,200
National Functional Genomics Center		6,000
Returning Soldier Adjustment Assessment Remote Monitoring System		3,120
Controlled Release of Anti-Inflammatory and Tissue Repair Agents from Prosthetic Devices and Burn Treatment		6,000
Green Environmentally Sustainable Laboratories and Clean Rooms (USAMRMC)		800
Battlefield Exercise and Combat Related Spinal Cord Injury Research (Miami Project)		800
Battlefield Nursing Program		1,600

R-1	Budget Request	Recommendation
Personal Status Monitor		2,000
Intensive Care Unit to Intensive Care Hospital		2,400
Total Quality System for FDA Regulated Activities Database		1,440
Accelerating Treatment for Trauma Wounds		1,200
Feeding Tube for Battlefield Trauma Patients (Phase II)		1,600
Gulf War Illness Peer-Reviewed Research Program		8,000
Neurofibromatosis (NF) Research		10,000
Military Adult Stem Cell Collection and Storage Project		800
Medical Errors Reduction Initiative		400
Neurotoxin Exposure Treatment Parkinsons Research Program		25,000
101st Airborne Injury Prevention & Performance Enhancement Research Initiative		2,000
Advanced Lower Limb Prostheses for Battlefield Amputees		1,600
Advanced Regenerative Medicine Therapies for Combat Injuries		3,000
Advanced Surface Technologies for Prosthetic Development		1,600
Battlefield Tracheal Intubation		4,200
Biodefense Tech Transfer Initiative (only for militarily relevant technology)		1,500
Bioelectrics Research for Casualty Care and Management		1,600
Biosensor, Communicator and Controller System		5,000
Blood, Medical & Food Safety Via Eco-Friendly Wireless Sensing		1,000
Blood Safety and Decontamination Technology		1,600
Combat Wound Initiative at WRAMC		1,600
Control of Inflammation and Tissue Repair		3,200
Health Sciences Regenerative Medicine Center		3,000
Hibernation Genomics		2,000
Integrated Patient Quality Program		1,600
International Heart Institute/US Army Vascular Graft Research Project		1,000
Medical Modeling and Simulation Through Synthetic Digital Genes		1,000
Military Burn Trauma Research Program		4,000
Military Nutrition Research: Personnel Readiness and Warfighter Performance		1,600
Modular Stethoscope For Harsh Environments		1,200
National Biodefense Training		5,000
Novel Approaches to Reduce the Severity of Battlefield Combined Tissue Injury		1,600
Online Medical Training for Military Personnel		2,800
Portable Autonomous Fluid-less Near-infrared Non-invasive Alcohol Testing Devices		500
Safe Airway Access in Combat		2,000
Smart Prosthetic Hand Technology		1,600
Solutions for Infection Control in Military Hospitals		2,000
Staph Vaccine		4,000
Trauma Care, Research and Training		2,400
Weight Measurements and Standards for Military Personnel		2,000
<b>31 AVIATION ADVANCED TECHNOLOGY</b>	<b>57,277</b>	<b>106,637</b>
Defense Helicopter Power Dense Transmission		1,280
Drive System Composite Structural Component Risk Reduction Program		2,400

R-1	Budget Request	Recommendation
Autonomous Cargo Acquisition for Rotorcraft Unmanned Aerial Vehicles		2,400
Brownout Sensor Visualization and Hazard Avoidance System		800
Heavy Fuel Burning Engines for UAVs		2,000
Cutting Tools and Materials for Aerospace		800
Non-Hazardous Infrared Anti-Reflective Coatings for Army Aircraft Sensors		1,200
Reconfigurable Tooling System		1,600
Mission Execution Technology Implementation		3,200
Power Dense Transmissions		1,280
Fuel Cells for Mobile Robotic Systems Project		800
Universal Control Full Authority Digital Engine Control (FADEC)		3,200
UAV-Resupply BURRO		1,200
Inter Turbine Burner for Turbo Shaft Engines		3,200
Improved Black Hawk De-Icing		800
Technologies for Military Equipment Replenishment		3,600
Army Aviation Weapon Technology		800
Enhanced Rapid Tactical Integration and Fielding Systems (ERTIFS)		1,600
Helicopter Vulnerability Reduction		2,400
Next Generation Ice Protection Technologies		1,600
Parts on Demand for CONUS Operations		5,000
QuickMEDS		800
UAS Sense and Avoid Concept Evaluation for Airspace Integration		2,400
Vectored Thrust Ducted Propeller Compound Helicopter		5,000
<b>32 WEAPONS AND MUNITIONS ADVANCED TECHNOLOGY</b>	<b>73,697</b>	<b>109,437</b>
Unjustified Program Growth		-2,500
Advanced Lightweight Gunner Protection Kit		1,200
Lens-Less Micro Seeker System for Small Steerable Projectiles		1,600
Micro Electrical Mechanical Systems (MEMS) Technology and Plastic Armor Applications		1,600
Rapid Insertion of Developmental Technology		2,400
Enhanced Jamming Resistant Technology for INS/GPS Precision Guided Munitions		1,600
Lightweight Munitions and Surveillance System for Unmanned Air and Ground Vehicles		2,800
Advanced Medium Caliber Tungsten Penetrators		1,600
Titanium Powder Advanced Forged Parts Program		1,600
Nanotechnology Fuze-On-A-Chip		2,800
Advanced Prototyping with Non-Traditional Suppliers		3,200
Precision Molding Manufacturing Technology for Infrared Aspheric Optics		2,320
Advanced Fuzing Technologies		3,600
Development of Truck Deployed Explosive Containment Vessel		1,600
Hybrid Luminescent Ammunition		800
Lightweight Cannon Recoil Reduction		1,920
Nanotechnology Manufacturing Center		2,000
Novel Guidance Kit - Phase 2 (NGK2) for M864 Projectile		4,000
Raman Chemical ID System		1,600

R-1	Budget Request	Recommendation
<b>COMBAT VEHICLE AND AUTOMOTIVE ADVANCED</b>		
<b>33 TECHNOLOGY</b>	<b>107,992</b>	<b>264,752</b>
Advanced Performance Transparent Armor for Tactical Wheeled Vehicles		1,200
Logistical Fuel Processors for Army Development Program		2,800
No-Idle Climate Control for Military Vehicles		1,600
JAMMA Lightweight, Armored, Hybrid, Power Generating, Tactical Vehicle		2,000
Tactical RPG Airbag Protection System (TRAPS) Enhancement		800
Model-Based Engineering Environment		800
Lithium Ion Battery Exchange Program		2,400
Medium Sized Unmanned Ground Vehicles Platform		2,000
Advanced Lithium Ion Phosphate Battery System for Army Combat Hybrid HMMWV and Other Army Vehicle Platforms		2,000
Dynamometer Facility Upgrade Program at TARDEC		3,200
Antiballistic Windshield Armor		3,600
Fire Shield		3,200
Commercially Viable Si/C Power Semiconductors Using Superlattice Technology		2,560
Stryker Second Source Tire Research		800
N-STEP-Enabled Manufacturing Cell for Future Combat Systems		2,400
Plug-In Hybrid Vehicle Electrification Program		3,200
Light Weight Medical Evacuation Unit		1,600
End-to-End Vehicle Survivability Technology		1,600
Diminishing Manufacturing Sources and Material Shortages Case Resolution Program		2,400
3D2 Advanced Battery Technology		4,000
Vehicle Armor Structure Development and Testing for Future Combat Systems and Joint Light Tactical Vehicle		800
MRAP Supportability System (MSS)		4,000
Magneto-Rheological (MR) Suspensions for Tactical Wheeled Vehicles		2,400
Advanced Lightweight Multi-Functional Multi-Threat Composite Armor Technology		2,400
Hydraulic Hybrid Vehicles (HHV) for the Tactical Wheel Fleet		800
Base Security Systems		1,200
Auxiliary Power Unit (APU) for the Abrams M1/A2 Tank		2,400
C4ISR Auxiliary Power Unit (APU) for Soldier Tactical Applications		1,600
Tactical Wheeled Vehicle Structures for Improved Survivability and Performance		8,000
Advanced Composites for Light Weight, Low Cost Transportation Systems using 3+ Ring Extruder		2,400
Advanced Thermal Management System		2,400
Ceramic and Metal Matrix Composite (MMC) Armor Development Using Ring Extruder Technology		800
Next Generation Diesel Engine for Ground Vehicles		4,000
Wireless Analysis and Visualization Engines for Sensors (WAVES)		800
Joint Combat Support Trailer		3,200
Advanced Digital Hydraulic Hybrid Drive System		2,000
Advanced Drivetrains for Enhanced Mobility and Safety		1,600
Advanced Corrosion Protection for Military Vehicles		2,400

R-1	Budget Request	Recommendation
Advanced Hybrid Electric Vehicle Technologies for Fuel Efficient Blast Protected Vehicles		1,200
Alternative Energy Research		20,000
Applied Power Management Control and Integration		800
Combat Vehicle Electrical Power-21st Century (CVEP-21)		800
Crosshairs Hostile Fire Indicating System		2,000
Enhanced Military Vehicle Maintenance System Demonstration Project with Anniston Army Depot and Auburn University		1,600
FCV Advanced Suspension System		1,600
Ground Vehicle Integration Technologies		2,400
Ground-forces Readiness Enabler for Advanced Tactical Vehicles (GREAT-V)		800
Hull Humvee Protection Program		2,000
Hybrid Electric (Heavy Truck) Vehicle		2,400
Implementation of an Advanced Tactical Wheeled Armored Vehicle System		3,000
Light Tactical Vehicle Ambulance Shelter		2,400
Light Weight Structural Composite Armor for Blast and Ballistic Protection		1,600
Lightweight Partial Hybrid Electric Military Transport Vehicle		1,600
Michigan Technological University's Project for Diverse Sensing for Synergistic Force Protection in Urban Threat Environments		800
Next Generation Non-Tactical Vehicle Propulsion		1,600
Novel Onboard Hydrogen Storage System Development		800
Payload and Advanced Development for Next Generation Robot Platform		2,000
Power and Energy Research Equipment Upgrades		6,000
Robotics Vehicle Secure Communications		2,000
Unmanned Ground Vehicle Initiative (UGVI)		12,000
<b>COMMAND, CONTROL, COMMUNICATIONS ADVANCED</b>		
<b>34 TECHNOLOGY</b>	<b>9,183</b>	<b>11,583</b>
Vertical/Horizontal Integration of Space Technologies and Applications (VISTA)		2,400
<b>36 ELECTRONIC WARFARE ADVANCED TECHNOLOGY</b>	<b>50,961</b>	<b>62,561</b>
Applied Communications and Information Networking (ACIN)		3,200
Maritime C4ISR System		800
Advanced Wireless Technologies		1,200
Networked Dynamic Spectrum Access Investigation Enhanced MBITR		2,400
Portable Emergency Broadband System		4,000
<b>38 NEXT GENERATION TRAINING &amp; SIMULATION SYSTEMS</b>	<b>18,881</b>	<b>25,381</b>
Joint Fires and Effects Training System (JFETS)		2,000
Joint Medical Simulation Technology Research and Development Center (JMSTRDC)		1,600
Experiential Technologies for Urban Warfare and Disaster Response		500
Mobile Medic Training Program		800
Vigilant Sentinel Auto-ID and Access Control System		1,600

R-1	Budget Request	Recommendation
<b>41 EXPLOSIVES DEMILITARIZATION TECHNOLOGY</b>	<b>10,564</b>	<b>13,764</b>
Transportable Cryofracture/Plasma Arc		1,600
Press-Loaded Explosive Projectile Washout Line		800
Unserviceable Ammunition Demilitarization via Chemical Dissolution		800
<b>42 MILITARY HIV RESEARCH</b>	<b>7,116</b>	<b>15,116</b>
HIV Research		8,000
<b>45 ELECTRONIC WARFARE TECHNOLOGY</b>	<b>23,996</b>	<b>33,196</b>
Advanced Communications ECM Demo		1,600
Non-communications ECM Technology Demo		1,200
Advanced IED Jammer Research and Development Program		2,000
ALQ-211 Networked EW Controller		1,600
Highly Mobile Remote Controlled IED Countermeasures		800
Aerial Canopy MASINT System		2,000
<b>46 MISSILE AND ROCKET ADVANCED TECHNOLOGY</b>	<b>63,998</b>	<b>76,958</b>
Rapid Response System for Active Protection of Ground and Air Vehicles		4,160
Advanced Commercial Technology Insertion for Aviation and Missile Research, Development, and Engineering		2,400
Army Responsive Tactical Space System Exerciser (ARTSSE)		2,000
Heavy Fuel High Efficiency Turbine Engine		2,000
High Fidelity Virtual Simulation and Analysis		1,600
Long Range Hypersonic Interceptor		800
<b>LANDMINE WARFARE AND BARRIER ADVANCED TECHNOLOGY</b>		
<b>48 TECHNOLOGY</b>	<b>30,797</b>	<b>37,657</b>
Enhanced Landmine and IED Detection System		960
Advanced Demining Technology		5,900
<b>50 NIGHT VISION ADVANCED TECHNOLOGY</b>	<b>39,916</b>	<b>70,916</b>
Hyperspectral Sensor for Improved Force Protection (Hyper-IFP)		1,600
Brownout Situational Awareness Sensor		1,600
Personal Miniature Thermal Viewer		1,600
Night Vision Advanced Technology Research		12,000
Enhanced Digital Electronic Night-Vision (EDEN)		1,600
InfraRed Goggle Upgrade System (IRGUS)		800
Mini-LRAS3 Scout Surveillance System		1,600
Passive IR Sensor for Persistent Wide Area Surveillance		2,000
Short Range Electro Optic (SREO)		1,600
Smart Data Project: Real-Time Geospatial Video Sensor Intelligence		800
Smart Sensor Supercomputing Center		5,800
<b>52 MILITARY ENGINEERING ADVANCED TECHNOLOGY</b>	<b>7,654</b>	<b>35,974</b>
Enhanced Holographic Imager		2,480
Direct Methanol Fuel Cell Development		800
Synthetic Automotive Virtual Environments		2,400
Defense Applications of Carbonate Fuel Cells		1,600
Complete Molten Carbonate Fuel Cell Demonstrator - Parks Reserve Forces Training Area		1,600

R-1	Budget Request	Recommendation
Nanotechnology for Potable Water and Waste Treatment		1,000
Human Terrain Geographic Decision Support		3,000
University Center for Disaster Preparedness and Emergency Response		1,600
Army Applications of Direct Carbon Fuel Cells		800
Conversion of Municipal Solid Waste to Renewable Diesel Fuel		1,600
Gas Engine Driven Air Conditioning (GEDAC) Demonstration		2,400
C-RAM Armor Development		800
Biomass-to-Liquid Using Synthetic Enzymes		2,000
Quiet, Low-Impact Alternative Energy Technology		2,240
Advanced Tactical Fuels for the U.S. Military		4,000
<b>ADVANCED TACTICAL COMPUTER SCIENCE &amp; SENSOR TECHNOLOGY</b>		
<b>53</b>	<b>48,236</b>	<b>62,236</b>
Advanced Radar Transceiver IC Development		800
VideoArgus		2,000
Foliage Penetrating, Reconnaissance, Surveillance, Tracking, and Engagement Radar (FORESTER)		3,200
Embedding Iris Recognition Technology On-board Warfighter Personal Equipment		800
Software Lifecycle Affordability Management Phase II (SLAM II)		800
CERDEC Airborne and Ground Wideband Digital Communications and Antenna Testbed		1,600
HYPERSAR		2,400
Radar Tag Emitters		2,400
<b>55 ARMY MISSILE DEFENSE SYSTEMS INTEGRATION</b>	<b>14,005</b>	<b>91,065</b>
Standoff Hazardous Agent Detection and Evaluation System		2,800
Biological Air Filtering System Technology		1,600
Advance Stand off Technologies for National Security		1,200
Remote Explosive Analysis and Detection System (READS)		2,240
High Detail Architecture Analysis Tool (HDAAT)		1,440
Processing DNA Data Using Classical Discrimination Techniques (PRODDUCT)		2,000
Radiation Hardening Initiative		2,400
Advanced Hypersonic Weapon Technology Demonstration		2,400
Advanced Electronics Rosebud Integration		3,200
Thermal and Electrical Nanoscale Transport (TENT)		1,600
Composite Structure Design		1,600
Micro-Systems Nanotechnology for Advanced Technology Development		1,000
Deployable Space and Electronic Warfare Analysis Tools		800
Compact Pulsed Power Initiative		3,000
Advanced Fuel Cell Research Program		3,000
Adaptive Lightweight Materials for Missile Defense		1,600
Advanced Cavitation Power Technology		4,400
Advanced Environmental Control Systems		5,500
Advanced Strap Down Seeker		5,000
Alternative Power Technology for Missile Defense		4,000
Detection Algorithms and Software for Force Protection		1,600
Detection, Mitigation and Neutralization of High Explosive, Dielectrically Enhanced Sensor Systems (DESS)		3,500
		1,200

R-1	Budget Request	Recommendation
Future TOC Hardware/Software Integration		2,000
Heat Dissipation for Electronic Systems and Enclosures		2,000
High Speed Digital Imaging		4,500
High Temperature Polymers for Missile System Applications		3,200
Orion High Altitude Long Loiter (HALL) UAV		5,000
Vertical Integration for Missile Defense Surveillance Data		3,280
<b>56 ARMY MISSILE DEFENSE SYSTEMS INTEGRATION (SPACE)</b>	<b>19,986</b>	<b>47,986</b>
High Fidelity Imaging System (HiFIS)		800
High Altitude Airship		3,200
Geospatial Airship Research Platform		2,800
Army Responsive Tactical Space (ARTS)		2,400
High Altitude Integration Testbed (HIT)		3,000
High Altitude Shuttle System for Battlespace Coverage		800
Low Cost Interceptor		2,400
Missile Attack Early Warning System (MAEWS)		2,000
Multipurpose Nanosat Missile System (MNMS) formerly Integrated		
Nanosat Delivery System (INDS)		6,000
Nanocomposite Enhanced Radar and Aerospace Materials		1,200
Positron Sensors and Energy Applications		3,000
Small Agile Satellites		400
<b>57 AIR AND MISSILE DEFENSE SYSTEMS ENGINEERING</b>	<b>116,410</b>	<b>119,210</b>
Air, Space and Missile Defense Architecture Analysis Program (A3P)		1,200
Border Security and Defense Systems Research		1,600
<b>59 LANDMINE WARFARE AND BARRIER - ADV DEV</b>	<b>29,234</b>	<b>14,234</b>
AMDS program delays		-15,000
<b>61 TANK AND MEDIUM CALIBER AMMUNITION</b>	<b>45,866</b>	<b>40,866</b>
Follow-on Cartridge Integration Test forward funding		-5,000
<b>62 ADVANCED TANK ARMAMENT SYSTEM (ATAS)</b>	<b>108,012</b>	<b>79,612</b>
Stryker Common Active Protection System (APS) Radar		1,600
S-PIP change to acquisition strategy		-30,000
<b>63 SOLDIER SUPPORT AND SURVIVABILITY</b>	<b>30,716</b>	<b>25,716</b>
REF - forward funding		-5,000
<b>66 ENVIRONMENTAL QUALITY TECHNOLOGY</b>	<b>5,355</b>	<b>15,355</b>
Battlefield Asset Recovery Decontamination System (BARDS)		1,600
Plasma Energy Pyrolysis System (PEPS) Clean Fuels		800
Program Increase		4,000
Battlefield Plastic Biodiesel		1,600
Renewable Energy Testing Center		1,600
Demonstration/Evaluation Project at Travis Air Force Base (Note: To develop a greenhouse gas inventory and footprint utilizing a web-based Environmental Management Information System (EMIS))		400
<b>67 WARFIGHTER INFORMATION NETWORK-TACTICAL</b>	<b>414,357</b>	<b>394,357</b>
Authorization adjustment		-20,000

R-1	Budget Request	Recommendation
<b>69 AVIATION - ADVANCED DEVELOPMENT</b>	<b>7,455</b>	<b>9,855</b>
New High Temperature Domestic Sourced PES Foam Fabrication/Certification for DOD Aerospace Applications		2,400
<b>72 MEDICAL SYSTEMS - ADVANCED DEVELOPMENT</b>	<b>26,308</b>	<b>30,308</b>
Leishmania Skin Test		800
Garment-Based Physiological Monitoring Systems		1,600
Wireless Medical Monitoring System (WiMed)		1,600
<b>73 SOLDIER SYSTEMS - ADVANCED DEVELOPMENT</b>	<b>36,558</b>	<b>41,758</b>
Unjustified Program Growth		-3,000
Acid Alkaline Direct Methanol Fuel Cell Technology		2,800
Individual Airburst Weapon System		1,000
High Explosive Air Burst (HEAB) 25mm Ammunition		4,400
<b>78 ELECTRONIC WARFARE DEVELOPMENT</b>	<b>32,325</b>	<b>36,325</b>
Hostile Fire Indicator		4,000
<b>82 INFANTRY SUPPORT WEAPONS</b>	<b>42,414</b>	<b>58,254</b>
Headborne Energy Analysis and Diagnostic System (HEADS)		1,600
Next Generation High Performance Ballistic Materials and Technologies Providing 7.62mm Small Arms Protection for US Armed Forces Helmets		1,440
Composite Bottles for Survival Egress Air		2,000
Lightweight Caliber .50 Machine Gun (LW50MG)		8,000
Next-generation Combat Helmet Development		2,800
<b>85 FAMILY OF HEAVY TACTICAL VEHICLES</b>	<b>2,901</b>	<b>4,501</b>
VIPER Mobile Power Development Project		800
Enhanced Ku-Band/L-Band Antenna System		800
<b>89 NON-LIGHT OF SIGHT LAUNCH SYSTEM (NLOS-LS)</b>	<b>200,099</b>	<b>208,699</b>
FCS Restructure: NLOS-LS National Security Agency Requirements		8,600
<b>FCS MANNED GROUND VEHICLES &amp; COMMON GROUND</b>		
<b>91 VEHICLE</b>	<b>774,257</b>	<b>785,257</b>
FCS Restructure: Manned Ground Vehicle Work Delayed From Fiscal Year 2008		11,000
<b>92 FCS SYSTEMS OF SYSTEMS ENGR &amp; PROGRAM MGMT</b>	<b>1,413,945</b>	<b>1,419,445</b>
FCS Restructure: Work for Preliminary Design Review Delayed From Fiscal Year 2008		5,500
<b>93 FCS RECONNAISSANCE (UAV) PLATFORMS</b>	<b>34,379</b>	<b>57,379</b>
Authorization Adjustment - Increased Level of Effort		12,000
FCS Restructure: UAV Work Delayed From Fiscal Year 2008		11,000
<b>94 FCS UNMANNED GROUND VEHICLES</b>	<b>96,918</b>	<b>103,318</b>
Authorization Adjustment - Increased Level of Effort		6,400
<b>95 FCS UNATTENDED GROUND SENSORS</b>	<b>12,967</b>	<b>17,067</b>
FCS Restructure: Work Delayed From Fiscal Year 2008		4,100

R-1	Budget Request	Recommendation
<b>96 FCS SUSTAINMENT &amp; TRAINING R&amp;D</b>	<b>539,145</b>	<b>558,145</b>
FCS Restructure: Network National Security Agency Work Delayed From Fiscal Year 2008		19,000
<b>97 MODULAR BRIGADE ENHANCEMENT</b>	<b>64,900</b>	<b>111,400</b>
Authorization Adjustment - Increased Level of Effort		8,000
FCS Restructure: Testing Delayed from Fiscal Year 2008		21,500
FCS Restructure: Evaluation Task Force Support		12,000
FCS Restructure: TRADOC Support of Infantry Brigade Combat Team Studies		5,000
<b>98 NIGHT VISION SYSTEMS - SDD</b>	<b>44,508</b>	<b>51,708</b>
Common Remote Stabilized Sensor System (CRS3)		2,800
Soldier Worn Gunshot Detection System		2,400
Automatic Aim-Point Targeting Technology with Enhanced Imaging		2,000
<b>100 NON-SYSTEM TRAINING DEVICES - SDD</b>	<b>35,424</b>	<b>38,424</b>
Center of Excellence for Military Operations in Urban Terrain and Cultural Training		3,000
<b>103 AUTOMATIC TEST EQUIPMENT DEVELOPMENT</b>	<b>23,582</b>	<b>18,582</b>
NGATS excessive growth		-5,000
<b>104 DISTRIBUTIVE INTERACTIVE SIMULATIONS (DIS)</b>	<b>16,095</b>	<b>17,775</b>
Joint Training Integration and Evaluation Center (JTIEC)		1,680
<b>105 COMBINED ARMS TACTICAL TRAINER (CATT) CORE</b>	<b>29,468</b>	<b>30,668</b>
Light Utility Helicopter Simulator		1,200
<b>107 WEAPONS AND MUNITIONS - SDD</b>	<b>52,140</b>	<b>58,140</b>
HYBRID Propellant for Medium and Large Caliber Ammunition		3,200
Lightweight Multi-Functional Material Technology for Combat Munitions Logistics		800
Extended Range Modular Sniper Rifle System		2,000
<b>108 LOGISTICS AND ENGINEER EQUIPMENT - SDD</b>	<b>37,718</b>	<b>38,518</b>
CAMEL - Water transport system		800
<b>MEDICAL MATERIEL/MEDICAL BIOLOGICAL DEFENSE</b>		
<b>110 EQUIPMENT</b>	<b>34,971</b>	<b>45,371</b>
Rotary Valve Pressure Swing Absorption Oxygen Generator		800
Plasma Sterilizer		3,200
Lightweight Trauma Module		2,400
Pharmaceutical Advanced Packaging		1,600
LSTAT Advanced Medical Technologies		2,400
<b>111 LANDMINE WARFARE/BARRIER - SDD</b>	<b>126,475</b>	<b>117,075</b>
Authorization Adjustment - Funding Ahead of Need		-12,200
Magneto Inductive Remote Activation Munition System (MI-RAMS) Frequency and Digital Enhancements		2,800

R-1	Budget Request	Recommendation
<b>113 ARTILLERY MUNITIONS</b>	<b>78,197</b>	<b>79,397</b>
Advanced Cargo Projectile Technology		1,200
<b>ARMY TACTICAL COMMAND &amp; CONTROL HARDWARE AND</b>		
<b>115 SOFTWARE</b>	<b>67,535</b>	<b>65,535</b>
Common Software growth		-2,000
<b>117 GENERAL FUND ENTERPRISE BUSINESS SYSTEM (GFEBS)</b>	<b>60,308</b>	<b>50,308</b>
Unjustified growth		-10,000
<b>119 SOLDIER SYSTEMS - WARRIOR DEM/VAL</b>	<b>15,790</b>	<b>17,790</b>
Optimized M-25 Soldier Fuel Cell System		2,000
<b>120 ARTILLERY SYSTEMS</b>	<b>42,300</b>	<b>33,300</b>
Unjustified Program Growth		-9,000
<b>123 INFORMATION TECHNOLOGY DEVELOPMENT</b>	<b>73,740</b>	<b>68,040</b>
Health Informatics Initiative		2,500
FBS unjustified growth		-10,000
Electric Commodity Project		800
Health Information Technology Demonstration Project at Madigan Army Medical Center and Puget Sound VA Medical Center		1,000
<b>126 THREAT SIMULATOR DEVELOPMENT</b>	<b>21,416</b>	<b>25,176</b>
Electronic Combat and Counter Terrorism Threat Developments to Support Joint Forces		3,760
<b>130 RAND ARROYO CENTER</b>	<b>16,339</b>	<b>20,339</b>
Rand Arroyo Center Program Adjustment		4,000
<b>132 CONCEPTS EXPERIMENTATION PROGRAM</b>	<b>28,271</b>	<b>34,031</b>
Gunfire Detection Systems for Unmanned Aerial Vehicles		800
Arabic Language Training Program		960
Automated Communications Support System for Warfighters, Intelligence Community, Linguists, and Analysts		1,600
Moving Vehicle BAT Face Recognition Surveillance System		1,200
Technology for Rapid Foreign Language Acquisitions for Specialized Military and Intelligence Purposes		1,200
<b>134 ARMY TEST RANGES AND FACILITIES</b>	<b>342,079</b>	<b>347,579</b>
Cold Regions Test Center Distributed Test Coordination Cell		1,500
Test Support Infrastructure Darning and Trafficability Study		4,000
<b>135 ARMY TECHNICAL TEST INSTRUMENTATION AND TARGETS</b>	<b>74,624</b>	<b>80,974</b>
Mobile Optical Tracking System (MOTS) All Sky Imager (MASI)		1,200
Dugway Lidar and Modeling Improvements		2,400
Enhanced Robotic Manipulators for Defense Applications		750
Joint Urban Environment Test Capability		2,000
<b>137 DOD HIGH ENERGY LASER TEST FACILITY</b>	<b>2,835</b>	<b>6,835</b>
DOD High Energy Laser Test Facility		4,000

R-1	Budget Request	Recommendation
<b>142 SUPPORT OF OPERATIONAL TESTING</b>	<b>72,942</b>	<b>74,942</b>
MATTRACKS		2,000
<b>146 TECHNICAL INFORMATION ACTIVITIES</b>	<b>42,905</b>	<b>44,505</b>
Knowledge, Innovation and Technology Sharing Program		1,600
<b>MUNITIONS STANDARDIZATION, EFFECTIVENESS AND</b>		
<b>147 SAFETY</b>	<b>20,857</b>	<b>48,057</b>
Joint Munitions and Lethality Mission Integration		1,600
Joint Munitions and Lethality Warfighter Technology Insertion		2,400
Advanced Cluster Energetics		3,200
Medium Caliber Metal Parts Upgrade		2,600
Domestically Produced Atomized Magnesium for Defense		800
Virtual Opportunity and Information Center		1,000
Hybrid Protective Armor Systems		4,000
Domestic Production of Nanodiamond for Military Operations		1,600
Defense Materials Technology Center		3,000
Depleted Uranium Sensing and Treatment for Removal (DUSTR) Program		4,000
Titanium Extraction, Mining and Process Engineering Research (TEMPER)		3,000
<b>154 ADVANCED FIELD ARTILLERY TACTICAL DATA SYSTEM</b>	<b>15,860</b>	<b>16,660</b>
Fire Support Technology Improvement Program		800
<b>155 COMBAT VEHICLE IMPROVEMENT PROGRAMS</b>	<b>141,114</b>	<b>143,514</b>
Ground Combat Systems Electronic Enhancements		2,400
<b>AIRCRAFT MODIFICATIONS/PRODUCT IMPROVEMENT</b>		
<b>157 PROGRAMS</b>	<b>452,787</b>	<b>460,937</b>
Operator Situational Awareness System - MEDEVAC		1,750
CH-47 Chinook Helicopter Accessory Gear Box (AGB) Improvement		800
OH-58D Kiowa Warrior Vehicle Health and Usage Management System (VHUMS) Demonstration		2,400
CH-47 Integrated Vehicle Health Management System (IVHMS)		3,200
<b>160 FORCE XXI BATTLE COMMAND, BRIGADE AND BELOW (FBCB2)</b>	<b>38,418</b>	<b>23,418</b>
JBC-P lack of acquisition strategy		-15,000
<b>163 OTHER MISSILE PRODUCT IMPROVEMENT PROGRAMS</b>	<b>1,527</b>	<b>5,227</b>
Close Combat Missile Modernization (Javelin)		3,700
<b>169 SECURITY AND INTELLIGENCE ACTIVITIES</b>	<b>0</b>	<b>3,200</b>
Mobile Object Search Toolkit for Intelligence Analysts		3,200
<b>170 INFORMATION SYSTEMS SECURITY PROGRAM</b>	<b>38,090</b>	<b>41,290</b>
Information Assurance Development		1,600
Biometrics DNA Applications		1,600
<b>172 SATCOM GROUND ENVIRONMENT (SPACE)</b>	<b>106,327</b>	<b>59,099</b>
Excess to Requirement		-47,228

R-1	Budget Request	Recommendation
<b>175 TACTICAL UNMANNED AERIAL VEHICLES</b>	<b>50,976</b>	<b>104,276</b>
Sky Warrior - Army Requested Transfer from OP,A line 61		49,300
Shadow Tactical Unmanned Aerial System Flight in the National Airspace		4,000
<b>177 DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS</b>	<b>0</b>	<b>3,600</b>
Effect Based Approach to Operations		1,600
Heuristic Internet Protocol Packet Inspection Engine (HIPPIE)		2,000
<b>179 END ITEM INDUSTRIAL PREPAREDNESS ACTIVITIES</b>	<b>69,084</b>	<b>91,084</b>
Solid State Processing of Titanium Alloys for Defense Materiel Armaments		1,440
Spring Suspended Airless Tires for Convoy Protection		2,800
Smart Machine Platform Initiative		4,000
Network Centric Prototype Manufacturing		4,000
Vehicle Common Armor Manufacturing Process (VCAMP)		2,000
Advanced Modeling Technology for Large Structure Titanium Machining Initiative		800
Legacy Aerospace Gear Drive Re-Engineering Initiative		2,000
Manufacturing Metrology for Weapon System Production and Sustainment (M2WSPS)		1,760
Near-Net Shaped Direct-Sintered Silicon Carbide Torso Plates		1,600
Superior Weapons Systems Through Castings		1,600
<b>999 CLASSIFIED PROGRAMS</b>	<b>105,047</b>	<b>112,647</b>
Asymmetric Threat Response and Analysis Program (ATRAP)		2,400
Silver Fox and Manta UAS		2,000
Constant Look Operational Support Environment (CLOSE)		1,600
BLOS Network for MASINT Sensors		800
Blast Damage Assessment Risk Analysis and Mitigation Application - Enhancements (BRAMA-E)		800

## AERIAL CANOPY SENSOR DELIVERY SYSTEM

The Department of Defense Appropriations Act, 2008, provided in Research, Development, Test and Evaluation, Defense-Wide, \$1,000,000 in Line 27, SO/LIC Advanced Development, for Aerial Canopy Sensor Delivery System. U.S. Special Operations Command and the Army now concur that the proper account for funding this program is Research, Development, Test and Evaluation, Army, Line 45, Electronic Warfare Technology. The Secretary of Defense is directed to initiate a reprogramming action to provide the funds to the Army for proper execution.

WARFIGHTER INFORMATION NETWORK—  
TACTICAL (WIN-T)

The budget request for fiscal year 2009 contains \$414,357,000 for Warfighter Information Network—Tactical (WIN-T) research and development. Within that amount, \$330,438,000 is to continue research and development efforts for WIN-T Increment 3, full networking on the move. There is concern with the lack of definitized requirements and program costs for Increment 3. Additionally, the re-

vised program acquisition baseline is not expected to be completed until almost two years after the Nunn-McCurdy breach, creating an uncertain basis for the budget request. Therefore, the amount proposed in the budget request has been reduced by \$20,000,000. Additionally, the Comptroller General is directed to continue his review of the WINT program under the guidelines set forth in Senate Report 110-155.

## TUNGSTEN/COBALT ALLOY CARCINOGEN STUDY

There is concern with the potential carcinogenic nature of tungsten/cobalt alloys and the Army is encouraged, in conjunction with the research community, to undertake a study to determine if tungsten/cobalt alloys are a probable human carcinogen in either the manufacturing or employment of ammunition and other defense equipment.

## ROCK ISLAND ARSENAL

The Rock Island Arsenal is undertaking efforts to demonstrate small scale, clean energy conversion technology to provide an uninterrupted source of energy for potential use at Department of Defense facilities.

The Army is encouraged to determine what environmental, economic, and safety benefits might be achieved by this energy initiative.

NEUROTOXIN EXPOSURE TREATMENT  
PARKINSON'S RESEARCH PROGRAM

The United States Army Medical Research and Materiel Command (USAMRMC) is advancing research in investigating the underlying biologic mechanisms and therapeutic interventions of neuro-degenerative effects caused by deployment, environmental and occupational exposures. Therefore, \$25,000,000 is recommended for the continuation of this vital research and other neurological disorders through collaborative work between the military, a non-profit organization and an academic laboratory with distinguished scientific credentials in this field.

RESEARCH, DEVELOPMENT, TEST AND  
EVALUATION, NAVY

For Research, Development, Test and Evaluation, Navy, funds are to be available for fiscal year 2009, as follows:

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST	
RESEARCH, DEVELOPMENT, TEST & EVAL, NAVY				
BASIC RESEARCH				
1	UNIVERSITY RESEARCH INITIATIVES.....	103,707	108,907	+5,200
2	IN-HOUSE LABORATORY INDEPENDENT RESEARCH.....	17,298	17,298	---
3	DEFENSE RESEARCH SCIENCES.....	407,271	421,171	+13,900
	TOTAL, BASIC RESEARCH.....	528,276	547,376	+19,100
APPLIED RESEARCH				
4	POWER PROJECTION APPLIED RESEARCH.....	79,913	99,113	+19,200
5	FORCE PROTECTION APPLIED RESEARCH.....	131,310	187,410	+56,100
6	MARINE CORPS LANDING FORCE TECHNOLOGY.....	36,480	42,980	+6,500
7	MATERIALS, ELECTRONICS AND COMPUTER TECHNOLOGY.....	---	7,300	+7,300
8	COMMON PICTURE APPLIED RESEARCH.....	77,054	85,554	+8,500
9	WARFIGHTER SUSTAINMENT APPLIED RESEARCH.....	93,862	116,102	+22,240
10	RF SYSTEMS APPLIED RESEARCH.....	54,830	59,870	+5,040
11	OCEAN WARFIGHTING ENVIRONMENT APPLIED RESEARCH.....	47,278	51,678	+4,400
12	JOINT NON-LETHAL WEAPONS APPLIED RESEARCH.....	6,084	6,084	---
13	UNDERSEA WARFARE APPLIED RESEARCH.....	58,658	65,458	+6,800
14	MINE AND EXPEDITIONARY WARFARE APPLIED RESEARCH.....	47,869	54,869	+7,000
	TOTAL, APPLIED RESEARCH.....	633,338	776,418	+143,080
ADVANCED TECHNOLOGY DEVELOPMENT				
15	POWER PROJECTION ADVANCED TECHNOLOGY.....	60,360	82,160	+21,800
16	FORCE PROTECTION ADVANCED TECHNOLOGY.....	55,099	113,859	+58,760
17	COMMON PICTURE ADVANCED TECHNOLOGY.....	104,578	90,378	-14,200
18	WARFIGHTER SUSTAINMENT ADVANCED TECHNOLOGY.....	112,520	137,880	+25,360
19	RF SYSTEMS ADVANCED TECHNOLOGY.....	37,058	56,058	+19,000
20	MARINE CORPS ADVANCED TECHNOLOGY DEMONSTRATION (ATD)...	100,787	103,667	+2,880
21	JOINT NON-LETHAL WEAPONS TECHNOLOGY DEVELOPMENT.....	11,020	13,020	+2,000
22	WARFIGHTER PROTECTION ADVANCED TECHNOLOGY.....	12,129	53,929	+41,800
23	UNDERSEA WARFARE ADVANCED TECHNOLOGY.....	81,490	83,890	+2,400
24	NAVY WARFIGHTING EXPERIMENTS AND DEMONSTRATIONS.....	70,216	66,416	-3,800
25	MINE AND EXPEDITIONARY WARFARE ADVANCED TECHNOLOGY....	33,426	34,626	+1,200
	TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT.....	678,683	835,883	+157,200

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST
26 DEMONSTRATION & VALIDATION AIR/OCEAN TACTICAL APPLICATIONS.....	66,133	67,733	+1,600
27 AVIATION SURVIVABILITY.....	5,917	13,717	+7,800
28 DEPLOYABLE JOINT COMMAND AND CONTROL.....	5,905	7,105	+1,200
29 ASW SYSTEMS DEVELOPMENT.....	28,799	37,199	+8,400
30 TACTICAL AIRBORNE RECONNAISSANCE.....	4,298	4,298	---
31 ADVANCED COMBAT SYSTEMS TECHNOLOGY.....	4,367	7,167	+2,800
32 SURFACE AND SHALLOW WATER MINE COUNTERMEASURES.....	119,164	123,429	+4,265
33 SURFACE SHIP TORPEDO DEFENSE.....	49,171	51,731	+2,560
34 CARRIER SYSTEMS DEVELOPMENT.....	120,511	148,111	+27,600
35 SHIPBOARD SYSTEM COMPONENT DEVELOPMENT.....	4,003	26,903	+22,900
36 PILOT FISH.....	86,017	86,017	---
37 RETRACT LARCH.....	93,078	93,078	---
38 RETRACT JUNIPER.....	159,175	159,175	---
39 RADIOLOGICAL CONTROL.....	1,094	1,094	---
40 SURFACE ASW.....	29,574	48,374	+18,800
42 ADVANCED SUBMARINE SYSTEM DEVELOPMENT.....	141,720	151,400	+9,680
43 SUBMARINE TACTICAL WARFARE SYSTEMS.....	10,212	13,812	+3,600
44 SHIP CONCEPT ADVANCED DESIGN.....	31,111	38,311	+7,200
45 SHIP PRELIMINARY DESIGN & FEASIBILITY STUDIES.....	14,627	24,867	+10,240
46 ADVANCED NUCLEAR POWER SYSTEMS.....	158,270	158,270	---
47 ADVANCED SURFACE MACHINERY SYSTEMS.....	---	2,000	+2,000
48 CHALK EAGLE.....	352,858	352,858	---
49 LITTORAL COMBAT SHIP (LCS).....	371,008	369,308	-1,700
50 COMBAT SYSTEM INTEGRATION.....	54,401	64,401	+10,000
51 CONVENTIONAL MUNITIONS.....	8,124	8,124	---
52 MARINE CORPS ASSAULT VEHICLES.....	316,052	256,052	-60,000
54 MARINE CORPS GROUND COMBAT/SUPPORT SYSTEM.....	59,049	65,449	+6,400
55 JOINT SERVICE EXPLOSIVE ORDNANCE DEVELOPMENT.....	115,086	115,086	---
56 COOPERATIVE ENGAGEMENT.....	38,316	43,116	+4,800
57 OCEAN ENGINEERING TECHNOLOGY DEVELOPMENT.....	7,737	7,737	---
58 ENVIRONMENTAL PROTECTION.....	19,632	20,832	+1,200
59 NAVY ENERGY PROGRAM.....	5,611	10,311	+4,700
60 FACILITIES IMPROVEMENT.....	4,086	18,886	+14,800
61 CHALK CORAL.....	117,543	117,543	---

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST	
62	NAVY LOGISTIC PRODUCTIVITY.....	2,846	17,846	+15,000
63	RETRACT MAPLE.....	138,091	138,091	---
64	LINK PLUMERIA.....	60,444	60,444	---
65	RETRACT ELM.....	139,139	139,139	---
66	SHIP SELF DEFENSE.....	11,001	11,001	---
67	LINK EVERGREEN.....	75,995	75,995	---
68	SPECIAL PROCESSES.....	60,678	60,678	---
69	NATO RESEARCH AND DEVELOPMENT.....	10,129	10,129	---
70	LAND ATTACK TECHNOLOGY.....	40,028	18,042	-21,986
71	NONLETHAL WEAPONS.....	46,902	49,302	+2,400
72	JOINT PRECISION APPROACH AND LANDING SYSTEMS.....	99,929	77,429	-22,500
73	SINGLE INTEGRATED AIR PICTURE (SIAP) SYSTEM ENGINEER..	41,807	41,807	---
75	DIRECTED ENERGY AND ELECTRIC WEAPON SYSTEMS.....	---	4,560	+4,560
76	TACTICAL AIR DIRECTIONAL INFRARED COUNTERMEASURES ....	63,244	66,844	+3,600
79	SPACE & ELECTRONIC WARFARE (SEW) ARCHITECTURE/ENGINE..	47,518	48,318	+800
	TOTAL, DEMONSTRATION & VALIDATION.....	3,440,400	3,533,119	+92,719
	ENGINEERING & MANUFACTURING DEVELOPMENT			
80	OTHER HELO DEVELOPMENT.....	58,210	58,210	---
81	AV-8B AIRCRAFT - ENG DEV.....	29,924	29,924	---
82	STANDARDS DEVELOPMENT.....	71,920	67,020	-4,900
83	MULTI-MISSION HELICOPTER UPGRADE DEVELOPMENT.....	70,329	70,329	---
84	AIR/OCEAN EQUIPMENT ENGINEERING.....	5,750	5,750	---
85	P-3 MODERNIZATION PROGRAM.....	3,589	3,589	---
86	WARFARE SUPPORT SYSTEM.....	8,611	12,611	+4,000
87	TACTICAL COMMAND SYSTEM.....	128,742	102,742	-26,000
88	ADVANCED HAWKEYE.....	484,159	484,159	---
89	H-1 UPGRADES.....	3,795	3,795	---
90	ACOUSTIC SEARCH SENSORS.....	45,790	39,790	-6,000
91	V-22A.....	68,763	68,763	---
92	AIR CREW SYSTEMS DEVELOPMENT.....	16,192	16,192	---
93	EA-18.....	128,906	130,106	+1,200
94	ELECTRONIC WARFARE DEVELOPMENT.....	106,932	90,932	-16,000
95	VHXX EXECUTIVE HELO DEVELOPMENT.....	1,047,835	835,000	-212,835
96	JOINT TACTICAL RADIO SYSTEM - NAVY (JTRS-NAVY).....	834,650	848,150	+13,500

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST
97 SC-21 TOTAL SHIP SYSTEM ENGINEERING.....	678,936	598,036	-80,900
98 SURFACE COMBATANT COMBAT SYSTEM ENGINEERING.....	188,500	200,900	+12,400
99 LPD-17 CLASS SYSTEMS INTEGRATION.....	985	985	---
100 SMALL DIAMETER BOMB (SDB).....	19,574	19,574	---
101 STANDARD MISSILE IMPROVEMENTS.....	234,653	237,653	+3,000
102 AIRBORNE MCM.....	39,882	41,882	+2,000
103 NAVAL INTEGRATED FIRE CONTROL-COUNTER AIR SYSTEMS ENG.	10,533	13,333	+2,800
104 ADVANCED ABOVE WATER SENSORS.....	153,558	139,158	-14,400
105 SSN-688 AND TRIDENT MODERNIZATION.....	143,453	143,453	---
106 AIR CONTROL.....	8,191	8,191	---
107 SHIPBOARD AVIATION SYSTEMS.....	42,843	45,643	+2,800
108 COMBAT INFORMATION CENTER CONVERSION.....	14,792	17,792	+3,000
109 NEW DESIGN SSN.....	167,357	190,357	+23,000
111 SUBMARINE TACTICAL WARFARE SYSTEM.....	58,592	66,592	+8,000
112 SHIP CONTRACT DESIGN/ LIVE FIRE T&E.....	72,932	81,132	+8,200
113 MINE DEVELOPMENT.....	2,008	2,008	---
115 LIGHTWEIGHT TORPEDO DEVELOPMENT.....	50,732	52,332	+1,600
116 JOINT SERVICE EXPLOSIVE ORDNANCE DEVELOPMENT.....	10,858	10,858	---
117 PERSONNEL, TRAINING, SIMULATION, AND HUMAN FACTORS....	5,263	5,263	---
118 JOINT STANDOFF WEAPON SYSTEMS.....	22,510	22,510	---
119 SHIP SELF DEFENSE (DETECT & CONTROL).....	35,999	44,999	+9,000
120 SHIP SELF DEFENSE (ENGAGE: HARD KILL).....	36,238	46,938	+10,700
121 SHIP SELF DEFENSE (ENGAGE: SOFT KILL/EW).....	57,574	63,974	+6,400
122 INTELLIGENCE ENGINEERING.....	13,750	13,750	---
123 MEDICAL DEVELOPMENT.....	7,833	39,833	+32,000
124 NAVIGATION/ID SYSTEM.....	49,007	49,007	---
125 DISTRIBUTED SURVEILLANCE SYSTEM.....	---	2,000	+2,000
126 JOINT STRIKE FIGHTER (JSF).....	1,532,748	1,749,348	+216,600
127 INFORMATION TECHNOLOGY DEVELOPMENT.....	30,238	30,238	---
128 INFORMATION TECHNOLOGY DEVELOPMENT.....	72,497	91,897	+19,400

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST
130 CH-53K.....	570,484	570,484	---
131 C/KC-130 AVIONICS MODERNIZATION PROGRAM (AMP).....	24,407	24,407	---
132 JOINT AIR-TO-GROUND MISSILE (JAGM).....	62,324	62,324	---
133 MULTI-MISSION MARITIME AIRCRAFT (MMA).....	1,132,026	1,132,026	---
134 TACTICAL CRYPTOLOGIC SYSTEMS.....	16,678	18,278	+1,600
<b>TOTAL, ENGINEERING &amp; MANUFACTURING DEVELOPMENT.....</b>	<b>8,682,052</b>	<b>8,704,217</b>	<b>+22,165</b>
<b>RDT&amp;E MANAGEMENT SUPPORT</b>			
135 THREAT SIMULATOR DEVELOPMENT.....	24,959	24,959	---
136 TARGET SYSTEMS DEVELOPMENT.....	80,337	80,337	---
137 MAJOR T&E INVESTMENT.....	42,391	52,191	+9,800
138 STUDIES AND ANALYSIS SUPPORT - NAVY.....	8,084	8,084	---
139 CENTER FOR NAVAL ANALYSES.....	49,745	49,745	---
141 SMALL BUSINESS INNOVATIVE RESEARCH.....	---	400	+400
142 TECHNICAL INFORMATION SERVICES.....	713	15,613	+14,900
143 MANAGEMENT, TECHNICAL & INTERNATIONAL SUPPORT.....	51,568	51,568	---
144 STRATEGIC TECHNICAL SUPPORT.....	3,597	3,597	---
145 RDT&E SCIENCE AND TECHNOLOGY MANAGEMENT.....	69,913	69,913	---
147 RDT&E SHIP AND AIRCRAFT SUPPORT.....	195,017	195,017	---
148 TEST AND EVALUATION SUPPORT.....	356,254	346,254	-10,000
149 OPERATIONAL TEST AND EVALUATION CAPABILITY.....	12,195	12,195	---
150 NAVY SPACE AND ELECTRONIC WARFARE (SEW) SUPPORT.....	2,708	2,708	---
151 SEW SURVEILLANCE/RECONNAISSANCE SUPPORT.....	25,358	25,358	---
152 MARINE CORPS PROGRAM WIDE SUPPORT.....	24,687	30,287	+5,600
153 TACTICAL CRYPTOLOGIC ACTIVITIES.....	1,998	1,998	---
154 SERVICE SUPPORT TO JFCOM, JNTC.....	5,148	5,148	---
<b>TOTAL, RDT&amp;E MANAGEMENT SUPPORT.....</b>	<b>954,672</b>	<b>975,372</b>	<b>+20,700</b>
<b>OPERATIONAL SYSTEMS DEVELOPMENT</b>			
157 HARPOON MODIFICATIONS.....	68,214	68,214	---
158 UNMANNED COMBAT AIR VEHICLE (UCAV) ADVANCED COMPONENT.....	275,823	275,823	---
159 STRATEGIC SUB & WEAPONS SYSTEM SUPPORT.....	80,120	78,774	-1,346
160 SSBN SECURITY TECHNOLOGY PROGRAM.....	34,131	34,131	---
161 SUBMARINE ACOUSTIC WARFARE DEVELOPMENT.....	7,384	7,384	---
162 NAVY STRATEGIC COMMUNICATIONS.....	47,495	43,495	-4,000
163 RAPID TECHNOLOGY TRANSITION (RTT).....	34,469	34,469	---

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST
164 F/A-18 SQUADRONS.....	71,232	73,632	+2,400
165 E-2 SQUADRONS.....	54,096	54,096	---
166 FLEET TELECOMMUNICATIONS (TACTICAL).....	26,696	26,696	---
167 TOMAHAWK AND TOMAHAWK MISSION PLANNING CENTER (TMPC)..	14,212	18,212	+4,000
168 INTEGRATED SURVEILLANCE SYSTEM.....	20,565	28,765	+8,200
169 AMPHIBIOUS TACTICAL SUPPORT UNITS.....	2,325	2,325	---
170 CONSOLIDATED TRAINING SYSTEMS DEVELOPMENT.....	28,017	27,657	-360
171 CRYPTOLOGIC DIRECT SUPPORT.....	1,441	1,441	---
172 ELECTRONIC WARFARE (EW) READINESS SUPPORT.....	24,276	24,276	---
173 HARM IMPROVEMENT.....	31,427	33,927	+2,500
174 TACTICAL DATA LINKS.....	4,247	4,247	---
175 SURFACE ASW COMBAT SYSTEM INTEGRATION.....	21,720	22,520	+800
176 MK-48 ADCAP.....	15,879	26,279	+10,400
177 AVIATION IMPROVEMENTS.....	122,906	100,266	-22,640
178 NAVY SCIENCE ASSISTANCE PROGRAM.....	3,625	3,625	---
179 OPERATIONAL NUCLEAR POWER SYSTEMS.....	71,576	71,576	---
180 MARINE CORPS COMMUNICATIONS SYSTEMS.....	273,696	281,416	+7,720
181 MARINE CORPS GROUND COMBAT/SUPPORTING ARMS SYSTEMS....	136,080	119,380	-16,700
182 MARINE CORPS COMBAT SERVICES SUPPORT.....	9,646	9,646	---
183 TACTICAL AIM MISSILES.....	6,679	6,679	---
184 ADVANCED MEDIUM RANGE AIR-TO-AIR MISSILE (AMRAAM).....	8,556	8,556	---
185 JOINT HIGH SPEED VESSEL (JHSV).....	11,960	11,960	---
188 TECHNICAL RECONNAISSANCE AND SURVEILLANCE.....	---	2,000	+2,000
190 SATELLITE COMMUNICATIONS (SPACE).....	652,463	653,263	+800
191 INFORMATION SYSTEMS SECURITY PROGRAM.....	27,037	33,737	+6,700
192 JOINT COMMAND AND CONTROL PROGRAM (JC2).....	2,000	2,000	---
193 JOINT COMMAND AND CONTROL PROGRAM (JC2).....	4,148	4,148	---
194 COBRA JUDY.....	101,114	101,114	---
195 NAVY METEOROLOGICAL AND OCEAN SENSORS-SPACE (METOC)...	8,208	8,208	---
196 JOINT MILITARY INTELLIGENCE PROGRAMS.....	4,614	4,614	---
197 TACTICAL UNMANNED AERIAL VEHICLES.....	45,717	51,817	+6,100
198 ENDURANCE UNMANNED AERIAL VEHICLES.....	480,098	433,698	-46,400
199 AIRBORNE RECONNAISSANCE SYSTEMS.....	55,719	66,519	+10,800
200 MANNED RECONNAISSANCE SYSTEMS.....	13,982	19,882	+5,900
201 DISTRIBUTED COMMON GROUND SYSTEMS.....	44,540	44,540	---

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST
202 AERIAL COMMON SENSOR (ACS) .....	74,604	74,604	---
203 MODELING AND SIMULATION SUPPORT.....	8,007	8,007	---
204 DEPOT MAINTENANCE (NON-IF).....	21,130	11,130	-10,000
205 AVIONICS COMPONENT IMPROVEMENT PROGRAM.....	1,877	1,877	---
206 INDUSTRIAL PREPAREDNESS.....	56,681	61,881	+5,200
TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT.....	3,110,432	3,082,506	-27,926
999 CLASSIFIED PROGRAMS.....	1,309,385	1,309,385	---
TOTAL, RESEARCH, DEVELOPMENT, TEST & EVAL, NAVY.....	19,337,238	19,764,276	+427,038

**EXPLANATION OF PROJECT LEVEL ADJUSTMENTS**  
(In thousands of dollars)

R-1	Budget Request	Recommendation
<b>1 UNIVERSITY RESEARCH INITIATIVES</b>	<b>103,707</b>	<b>108,907</b>
Program Growth		-3,000
Computational Modeling and High Performance Computing in		
Advanced Material Processing, Synthesis and Design		1,200
National Security Training		1,600
Human Neural Cell-Based Biosensor		1,000
Low Acoustic and Thermal Signature Battlefield Power Source		2,000
Next Generation Automated Technology for Landmine Detection		1,600
Radiation Hardness and Survivability of Electronic Systems		800
<b>3 DEFENSE RESEARCH SCIENCES</b>	<b>407,271</b>	<b>421,171</b>
Program Growth		-5,000
Biochemical Agent Detection		800
Energetics S&T Workforce Development		4,500
ONAMI Nanoelectronics and Nanometrology Initiative		4,000
Research Support for Nanoscale Research Facility		2,800
Center for Quantum Studies		1,200
Evaluating ELF Signals in Maritime Environments		1,600
Navy Science and Technology Outreach (N-STAR) - Maryland		1,000
Texas Microfactory		3,000
<b>4 POWER PROJECTION APPLIED RESEARCH</b>	<b>79,913</b>	<b>99,113</b>
Aging Military Aircraft Fleet Support		1,600
Electronic Motion Actuation Systems		800
High Energy Conventional Energetics (Phase II)		3,200
High Power Free Electron Laser Development for Naval		
Applications		2,400
Marine Mammal Hearing and Echolocation Research		1,600
Millimeter Wave Imaging		1,600
Strike Weapon Propulsion (SWEAP)		2,400
Unmanned Aerial Vehicle Fuel Cell Power Source with Hybrid		
Reforming		1,600
Combustion Light Gas Gun Projectile		4,000
<b>5 FORCE PROTECTION APPLIED RESEARCH</b>	<b>131,310</b>	<b>187,410</b>
High Strength Welded Structures		800
Integration of Electro-Kinetic Weapons into Next Generation of		
Navy Ships		4,500
Lithium Batteries		1,600
Lithium/Sulfur Chemistry Validation for Sonobuoy Application		1,600
Naval Special Warfare 11m RIB Replacement Craft Design		800
Planar Solid Oxide Fuel Cell System Demonstration at UTC		
SimCenter		3,500
Standoff Explosive Detection System (SEDS)		1,200
Advanced Simulation Tools for Aircraft Structures Made of		
Composite Materials		1,200
Alternative Energy Research		20,000
DEPUTEE - High Powered Microwave Non-Lethal Vehicle/Vessel		
Engine Disabling		1,600
Harbor Shield – Homeland Defense Port Security Initiative		3,500
High Power Density Propulsion and Power for USSVs		1,600
High Speed ACRC & Composites Sea Lion Craft Development		2,000
Lithium-Ion Cell Development with Electro Nano Materials		4,000
Magnetic Refrigeration Technology		2,400
Mk V.1 MAKO for Improved Signature and Weight Performance		2,000

R-1	Budget Request	Recommendation
PMRF Force Protection Lab		2,000
Shipboard Production of Synthetic Aviation Fuel		1,000
Solid Oxide Fuel Cell		800
<b>6 MARINE CORPS LANDING FORCE TECHNOLOGY</b>	<b>36,480</b>	<b>42,980</b>
High Power, Ultra-Lightweight Zinc-Air Battery		2,500
Warfighter Rapid Awareness Processing Technology		4,000
<b>7 MATERIALS, ELECTRONICS AND COMPUTER TECHNOLOGY</b>	<b>0</b>	<b>7,300</b>
Novel Coating Technologies for Military Equipment		4,800
Infrared Materials Laboratories		2,500
<b>8 COMMON PICTURE APPLIED RESEARCH</b>	<b>77,054</b>	<b>85,554</b>
All Weather Sense and Avoid Sensors for UAVs		2,500
Sensor Integration Framework		1,200
Layered Surveillance/Sensing		1,600
SOF Test Environment for Advanced Team Collaboration Missions		2,000
Unmanned Ground Vehicle Mobility and Coordination in Joint Urban/Littoral Environments		1,200
<b>9 WARFIGHTER SUSTAINMENT APPLIED RESEARCH</b>	<b>93,862</b>	<b>116,102</b>
Acoustic Research Detachment Test Support Platform Upgrade		1,500
Intelligent Retrieval of Imagery		2,400
Nanotechnology Engineering and Manufacturing Operations		1,600
Pulse Virtual Clinical Learning Lab		2,400
Advanced Composite Maritime Manufacturing		2,000
Assistive Technologies for Injured Servicemembers		1,600
Biosensors for Defense Applications		2,000
Composite Materials Enhancements Through Polymer Science Research and Development		2,240
Digital Directed Manufacturing Project		1,700
Friction Stir Welding		800
On-Board Vehicle Power Systems Development		2,400
Optimization of New Marine Coatings		1,600
<b>10 RF SYSTEMS APPLIED RESEARCH</b>	<b>54,830</b>	<b>59,870</b>
Energy Efficient Gallium Nitride Semiconductor Technology		1,040
Gallium Nitride RF Power Technology		1,600
Reparative Core Medicine		800
National Initiatives for Applications of Multifunctional Materials		1,600
<b>11 OCEAN WARFIGHTING ENVIRONMENT APPLIED RESEARCH</b>	<b>47,278</b>	<b>51,678</b>
Autonomous Marine Sensors and Networks for Rapid Littoral Assessment		1,600
Extended Underwater Optical Imaging		2,000
Littoral Battlespace Sensing-Autonomous UUV		800
<b>13 UNDERSEA WARFARE APPLIED RESEARCH</b>	<b>58,658</b>	<b>65,458</b>
Autonomous Unmanned Undersea Vehicle (UUV) Delivery and Communication (AUDAC) Implementation		2,800
Advanced High Energy Density Surveillance Power Module		2,400
Galfenol Energy Harvesting		1,600

R-1	Budget Request	Recommendation
<b>14 MINE AND EXPEDITIONARY WARFARE APPLIED RESEARCH</b>	<b>47,869</b>	<b>54,869</b>
Detection and Neutralization of Electronically Initiated Improvised Explosive Devices		2,000
Electromagnetic Signature Assessment System Using Multiple AUVs		1,600
Virtual Onboard Analyst (VIRONA) for Multi Sensor Mine Detection		1,000
Water Security Program (Inland Water Quality and Desalination)		2,400
<b>15 POWER PROJECTION ADVANCED TECHNOLOGY</b>	<b>60,360</b>	<b>82,160</b>
High Speed Anti-radiation Demonstration (HSAD)		800
Quiet Drive Advanced Rotary Actuator		2,000
Real-Time Hyperspectral Targeting Sensor		2,400
Smart Instrument Development for the Magdalena Ridge Observatory (MRO)		7,000
Advanced Ship Self Defense Technology Testing		4,000
Countermine Lidar UAV-based System		1,200
Detection, Tracking, and Identification for ISRTE of Mobile and Asymmetric Targets		1,600
Long Wavelength Array		2,800
<b>16 FORCE PROTECTION ADVANCED TECHNOLOGY</b>	<b>55,099</b>	<b>113,859</b>
Accelerating Fuel Cells Manufacturability and their Application in the Armed Forces		2,400
Advanced Logistics Fuel Reformer for Fuel Cells		2,400
Agile Port and High Speed Ship Technology		6,000
Center for Applied Research in Intelligent Autonomous Systems		2,400
High Power Density Motor Drive		1,000
High Temperature Superconductor Trap Field Magnet Motor		2,000
Implementation of Formable Textile for Composite Shaped Aerospace Composite Structures		1,600
Integrated Advanced Ship Control (IASC)		1,200
Integrated Ship and Motion Control Technology		3,440
Mobile Manufacturing and Repair Cell/Engineering Education Outreach Program		2,400
Navy Multi-Fuel Combustor for Shipboard Fuel Cell Systems		1,600
Remote Continuous Energetic Material Manufacturing for Pyrotechnic IR Decoys		1,600
Self Healing Target System for Laser and Sniper Ranges		1,600
Solid-State DC Protection System		1,200
Stabilized Laser Designation Capability		2,000
Ultra-Wide Coverage Visible Near Infrared Sensor for Force Protection		1,200
Underground Coordination of Managed Mesh-networks (UCOMM)		2,400
Video and Water Mist Technologies for Incipient Fire Detection on Ships		3,200
Wide Area Sensor for Force Protection Targeting		1,600
Advanced Continuous Active Sonar for UUVs		2,500
Durability, Energy Saving and Sustainability of Oceanic Vehicles and Support Infrastructure Through Use of Nanotech Lubricants		800
Electrochemical Field Deployable System for Water Generation		2,800
Future Fuel Non-Tactical Vehicle Initiative		1,600
Improved Stealth and Lower Cost Operations for Ships Using High Strength Flame Resistant LCP Reinforced Netting		1,600
Laser Perimeter Awareness System		1,500
M65 Bismaleimide Carbon Fiber Prepreg		1,600
Single Generator Operations Lithium Ion Battery		4,000
Strategic/Tactical Resource Interoperability Kinetic Environment Program		1,120

R-1	Budget Request	Recommendation
<b>17 COMMON PICTURE ADVANCED TECHNOLOGY</b>	<b>104,578</b>	<b>90,378</b>
Program Growth		-3,000
High Integrity Global Positioning System		-11,200
<b>18 WARFIGHTER SUSTAINMENT ADVANCED TECHNOLOGY</b>	<b>112,520</b>	<b>137,880</b>
Defense Modernization and Sustainment Initiative		5,000
Desktop Virtual Trainer Follow-On		2,400
Domain Specific Knowledge Capture Interface		1,360
Environmentally Sealed, Ruggedized Avionics Displays		4,000
Intelligent Work Management for Class Squadrons (CLASSRONS)		2,000
System for Intelligent Task Assignment and Readiness (SITAR)		800
Validation of Lift Fan Engine Systems		2,000
Chafing Protection System		1,200
Predicting Bio-Agent Threat Profiles Using Automated Behavior Analysis		1,600
Sea Base Mobility and Interfaces		5,000
<b>19 RF SYSTEMS ADVANCED TECHNOLOGY</b>	<b>37,058</b>	<b>56,058</b>
C-Band Radar Replacement Development		4,000
Pacific Airborne Surveillance and Testing		15,000
<b>MARINE CORPS ADVANCED TECHNOLOGY DEMONSTRATION (ATD)</b>	<b>100,787</b>	<b>103,667</b>
Ballistic Helmet Development		1,200
Craft Integrated Electronic Suite (CIES)		2,880
Ground Warfare Acoustical Combat System of Netted Sensors		2,000
Near Infrared Optical (NIRO) Augmentation System		800
Marine Air-Ground Task Force Situational Awareness		1,000
Reduction to Growth		-5,000
<b>21 JOINT NON-LETHAL WEAPONS TECHNOLOGY DEVELOPMENT</b>	<b>11,020</b>	<b>13,020</b>
Eye Safe Laser Warning Systems		2,000
<b>22 WARFIGHTER PROTECTION ADVANCED TECHNOLOGY</b>	<b>12,129</b>	<b>53,929</b>
C.W. Bill Young Marrow Donor Recruitment and Research Program		31,500
Amelioration of Hearing Loss		1,000
High Speed Blood and Fluid Transfusion Equipment		3,100
Integrated Warfighter Biodefense Program		3,000
Repair of Massive Tissue Loss and Amputation through Composite Tissue Allotransplantation		3,200
<b>23 UNDERSEA WARFARE ADVANCED TECHNOLOGY</b>	<b>81,490</b>	<b>83,890</b>
Theater Undersea Warfare Initiative		2,400
<b>24 NAVY WARFIGHTING EXPERIMENTS AND DEMONSTRATIONS</b>	<b>70,216</b>	<b>66,416</b>
Program Growth		
Portable Launch and Recovery System for Unmanned Aerial Vehicle Operation		3,200
Immersive Naval Officer Training Systems		3,000
Reduction to Growth		-10,000
<b>MINE AND EXPEDITIONARY WARFARE ADVANCED TECHNOLOGY</b>	<b>33,426</b>	<b>34,626</b>
Joint Explosive Ordnance Disposal Diver Situational Awareness System		1,200

R-1	Budget Request	Recommendation
<b>26 AIR/OCEAN TACTICAL APPLICATIONS</b>	<b>66,133</b>	<b>67,733</b>
Semi-Submersible UUV		1,600
<b>27 AVIATION SURVIVABILITY</b>	<b>5,917</b>	<b>13,717</b>
Agile Laser Eye Protection		800
In Buoy Processor for Trigger and Alert Sonobuoy System (TASS)		2,000
Air Sentinel		1,000
Modular Advanced Vision System		2,000
UAS Optimization Technologies		2,000
<b>28 DEPLOYABLE JOINT COMMAND AND CONTROL</b>	<b>5,905</b>	<b>7,105</b>
Deployable Command and Control Vehicle		1,200
<b>29 ASW SYSTEMS DEVELOPMENT</b>	<b>28,799</b>	<b>37,199</b>
Program Growth		-3,000
Holographic Optical Filter for Light Detection and Ranging (LIDAR)		2,000
Low Cost Multi-Channel Camera System		2,400
Marine Mammal Awareness, Alert and Response Systems (MMAARS)		2,400
Tactical E-Field Buoy Development		1,600
Sonobouy Wave-Energy Module		3,000
<b>31 ADVANCED COMBAT SYSTEMS TECHNOLOGY</b>	<b>4,367</b>	<b>7,167</b>
Open Architecture/Maintenance Free Operating Period (MFOP)		2,800
<b>32 SURFACE AND SHALLOW WATER MINE COUNTERMEASURES</b>	<b>119,164</b>	<b>123,429</b>
Unmanned Underwater Vehicle Program Delay		-2,935
Unmanned Undersea Vehicles Near Term Interim Capability		4,000
AN/SQQ-32 Mine Hunting Sonar Upgrades		3,200
<b>33 SURFACE SHIP TORPEDO DEFENSE</b>	<b>49,171</b>	<b>51,731</b>
Supportability Training Services Infrastructure		1,600
Mobile Acoustic Decoys for Surface Ship Defense		960
<b>34 CARRIER SYSTEMS DEVELOPMENT</b>	<b>120,511</b>	<b>148,111</b>
Improved Corrosion Protection for Electromagnetic Aircraft Launch System (EMALS) for CVN-21 Class Carriers		2,000
National Sensor Fusion Support for Puget Sound Port Security		1,600
Electromagnetic Aircraft Launch System		24,000
<b>35 SHIPBOARD SYSTEM COMPONENT DEVELOPMENT</b>	<b>4,003</b>	<b>26,903</b>
Advanced Repair Technology for the Expeditionary Navy		800
Data Acquisition Reporting and Trending System (DARTS)		2,400
Extreme Torque Density (XTM) Propulsion Motor		800
Integrated Power System Converter		2,000
Infrared LED Free Space Optics Communications Advancement		400
Landing Craft Composite Lift Fan		1,000
Mobile Valve and Flex Hose Maintenance (MVFM)		1,000
Advanced Fluid Controls for Shipboard Applications Phase III		2,500
Advanced Steam Turbine		1,600
DDG-51 Hybrid Drive System		6,600
Power Dense Integrated Power System for CG(X)		3,000
Smart Valve		800
<b>40 SURFACE ASW</b>	<b>29,574</b>	<b>48,374</b>
Automated Readiness Measurement System (ARMS)		2,800
Small Business Technology Insertion		16,000

R-1	Budget Request	Recommendation
<b>42 ADVANCED SUBMARINE SYSTEM DEVELOPMENT</b>	<b>141,720</b>	<b>151,400</b>
Acoustic Research Detachment Large Scale Vehicles Operations Enhancement		480
Fiber Optic Conformal Acoustic Velocity Sensor (FOCAVES)		2,000
Submarine Fatline Vector Sensor Towed Array		800
Submarine Littoral Defense System		1,600
Low Cost Laser Module Assembly for Acoustic Sensors		1,600
Undersea Launched Missile Study		3,200
<b>43 SUBMARINE TACTICAL WARFARE SYSTEMS</b>	<b>10,212</b>	<b>13,812</b>
Common Architecture Imaging System (CAIS) Program		800
High Awareness Littoral Observing (HALO) Sensor - 360 Degree Imaging for Submarines		1,200
Submarine Panoramic Awareness System Program		1,600
<b>44 SHIP CONCEPT ADVANCED DESIGN</b>	<b>31,111</b>	<b>38,311</b>
Analytics for Shipboard Monitoring Systems		1,600
Low-Signature Modular Weapon Platform		3,200
Smart Machinery Spaces System		2,400
<b>45 SHIP PRELIMINARY DESIGN &amp; FEASIBILITY STUDIES</b>	<b>14,627</b>	<b>24,867</b>
Naval Ship Hydrodynamic Test Facilities		4,000
Bow Lifting Body Ship Research		6,240
<b>47 ADVANCED SURFACE MACHINERY SYSTEMS</b>	<b>0</b>	<b>2,000</b>
Ship Affordability Through Advanced Aluminum		2,000
<b>49 LITTORAL COMBAT SHIP (LCS)</b>	<b>371,008</b>	<b>369,308</b>
Combat System C4I Development		-12,000
Autonomous Acoustic Array Advanced Tubular Solid Oxide Fuel Cell		2,000
LCS Common Mission Package Training Environment		4,500
Alternative Use of Mine Warfare Modules		3,800
<b>50 COMBAT SYSTEM INTEGRATION</b>	<b>54,401</b>	<b>64,401</b>
Navy Requested Transfer from Line 148		10,000
<b>52 MARINE CORPS ASSAULT VEHICLES</b>	<b>316,052</b>	<b>256,052</b>
Program Delay		-60,000
<b>54 MARINE CORPS GROUND COMBAT/SUPPORT SYSTEM</b>	<b>59,049</b>	<b>65,449</b>
Hybrid Capacitor Supercell for Marine Combat Vehicle		1,200
Marine Expeditionary Rifle Squad - Sensor Integrated, Modular Protection, Combat Helmet (MERS-SIMP)		1,600
Anti-Sniper Infrared Targeting System		2,000
Urban Operations Laboratory		1,600
<b>56 COOPERATIVE ENGAGEMENT</b>	<b>38,316</b>	<b>43,116</b>
Cooperative Engagement Capability		4,800
<b>58 ENVIRONMENTAL PROTECTION</b>	<b>19,632</b>	<b>20,832</b>
Puget Sound Anoxia Research for the Department of the Navy		1,200
<b>59 NAVY ENERGY PROGRAM</b>	<b>5,611</b>	<b>10,311</b>
Hydrogen Fuel Cell Development		1,200
Molten Carbonate Fuel Cell Demonstrator		3,500

R-1	Budget Request	Recommendation
<b>60 FACILITIES IMPROVEMENT</b>	<b>4,086</b>	<b>18,886</b>
Kinetic Hydropower System (KHPS) Turbine		2,400
Over-the-Horizon Vessel Tracking		800
Regenerative Fuel Cell Back-up Power		1,200
Swimmer Detection Sonar Network for the Portsmouth Naval Shipyard		3,200
Testing of Critical Components for Ocean Alternate Energy Options for the Department of the Navy		2,000
Wave Energy PowerBuoy Generating System for the Department of the Navy		1,600
Hydrokinetic Power Generator		1,600
Permanent Magnet Linear Generator Power Buoy System		2,000
<b>62 NAVY LOGISTIC PRODUCTIVITY</b>	<b>2,846</b>	<b>17,846</b>
Field Support of Fiber Optic Cable		1,600
Integrated Product Support Data Management System		1,000
NAVAIR Distance Support Environment		800
Advanced Naval Logistics		1,600
Highly Integrated Optical Interconnect for Military Avionics		1,600
RFID TECH Program		800
Thin Film Materials for Advanced Applications, Advanced IED and Anti-Personnel Sensors		3,000
Unique Identification of Tangible Items		3,000
Zero-Standoff HERO-compliant RFID Systems		1,600
<b>70 LAND ATTACK TECHNOLOGY</b>	<b>40,028</b>	<b>18,042</b>
Extended Range Guided Munition		-34,786
Affordable Weapons System		11,200
76mm Swarmbuster Capability		1,600
<b>71 NONLETHAL WEAPONS</b>	<b>46,902</b>	<b>49,302</b>
Boat Trap System for Port Security/Water Craft Interdiction		2,400
<b>72 JOINT PRECISION APPROACH AND LANDING SYSTEMS</b>	<b>99,929</b>	<b>77,429</b>
Precision Approach Program Delay		-22,500
<b>75 DIRECTED ENERGY AND ELECTRIC WEAPON SYSTEMS</b>	<b>0</b>	<b>4,560</b>
Multi-Function Laser System		1,200
Directed Energy Initiative		1,760
Guillotine		1,600
<b>76 TACTICAL AIR DIRECTIONAL INFRARED COUNTERMEASURES</b>	<b>63,244</b>	<b>66,844</b>
Assault Directed Infrared Countermeasures		2,000
Compact Ultra-Fast Laser System Development		1,600
<b>SPACE &amp; ELECTRONIC WARFARE (SEW)</b>		
<b>79 ARCHITECTURE/ENGINE</b>	<b>47,518</b>	<b>48,318</b>
Cross-Domain Network Access System		800
<b>82 STANDARDS DEVELOPMENT</b>	<b>71,920</b>	<b>67,020</b>
U.S. Navy Metrology and Calibration (METCAL)		2,800
Common Avionics Displays		-7,700
<b>86 WARFARE SUPPORT SYSTEM</b>	<b>8,611</b>	<b>12,611</b>
Common Expeditionary Force Protection System Architecture		4,000
<b>87 TACTICAL COMMAND SYSTEM</b>	<b>128,742</b>	<b>102,742</b>
Maritime Domain Awareness Spiral 2		-30,000
ISR Enhancements		4,000

R-1	Budget Request	Recommendation
<b>90 ACOUSTIC SEARCH SENSORS</b>	<b>45,790</b>	<b>39,790</b>
ASW Sensors and Processors Management Growth		-6,000
<b>93 EA-18</b>	<b>128,906</b>	<b>130,106</b>
Next Generation Electronic Warfare Simulator		1,200
<b>94 ELECTRONIC WARFARE DEVELOPMENT</b>	<b>106,932</b>	<b>90,932</b>
Digital Radio Frequency Memory on Board Jammer Program Delay		-21,000
Integrated Naval Electronic Warfare		1,000
Point Mugu Electronic Warfare Laboratory Upgrade		1,600
USMC Electronic Warfare (EW) Training		2,400
<b>95 VHXX EXECUTIVE HELO DEVELOPMENT</b>	<b>1,047,835</b>	<b>835,000</b>
Increment II		-212,835
<b>96 JOINT TACTICAL RADIO SYSTEM - NAVY (JTRS-NAVY)</b>	<b>834,650</b>	<b>848,150</b>
Digital Modular Radio (DMR)		2,000
Army Tactical Radios for Future Combat Systems		11,500
<b>97 SC-21 TOTAL SHIP SYSTEM ENGINEERING</b>	<b>678,936</b>	<b>598,036</b>
Floating Area Network Littoral Sensor Grid		4,800
Bio/Nano-MEMS for Defense Applications		1,500
CG(X) Program Delay		-87,200
<b>98 SURFACE COMBATANT COMBAT SYSTEM ENGINEERING</b>	<b>188,500</b>	<b>200,900</b>
Adaptive Diagnostic Electronic Portable Testset (ADEPT)		800
AEGIS Combat Information Center Modernization		4,000
DDG 51 Permanent Magnet Hybrid Electric Propulsion System		7,600
<b>101 STANDARD MISSILE IMPROVEMENTS</b>	<b>234,653</b>	<b>237,653</b>
Extensible Launching System		3,000
<b>102 AIRBORNE MCM</b>	<b>39,882</b>	<b>41,882</b>
Airborne Mine Countermeasures Open Architecture Technology Insertion		2,000
<b>NAVAL INTEGRATED FIRE CONTROL-COUNTER AIR SYSTEMS</b>		
<b>103 ENG</b>	<b>10,533</b>	<b>13,333</b>
Sustainability of AN/SPS-49 Common Signal Data Processor		2,800
<b>104 ADVANCED ABOVE WATER SENSORS</b>	<b>153,558</b>	<b>139,158</b>
Common Below Decks Affordable Architecture		3,200
National Radio Frequency Research and Development and Technology Transfer Center		4,000
Advanced Sensor Development		12,000
CG(X) Program Delay		-33,600
<b>107 SHIPBOARD AVIATION SYSTEMS</b>	<b>42,843</b>	<b>45,643</b>
Sensorless Control of Linear Motors in EMALS		2,800
<b>108 COMBAT INFORMATION CENTER CONVERSION</b>	<b>14,792</b>	<b>17,792</b>
Scalable Open Architecture Upgradeable Reliable Computing Environment		3,000

R-1	Budget Request	Recommendation
<b>109 NEW DESIGN SSN</b>	<b>167,357</b>	<b>190,357</b>
Highly Corrosive-Resistant Alloy Joining for Nuclear Applications		800
Large-Scale Demonstration Item for Virginia Class Submarine Bow Dome		1,800
Submarine Automated Test and Re-Test (ATRT)		2,000
Small Business Technology Insertion		16,000
ASW Enhancements		2,400
<b>111 SUBMARINE TACTICAL WARFARE SYSTEM</b>	<b>58,592</b>	<b>66,592</b>
Advanced Tactical Control System (ATCS)		1,600
Submarine Maintenance Automation and Communication System (SMACS)		1,600
Water Space Management Navigation Decision Aid		2,400
Submarine Environment for Evaluation and Development		2,400
<b>112 SHIP CONTRACT DESIGN/ LIVE FIRE T&amp;E</b>	<b>72,932</b>	<b>81,132</b>
Automated Fiber Optic Manufacturing Initiative		2,800
Transfer LHA (R) from NDSF		5,400
<b>115 LIGHTWEIGHT TORPEDO DEVELOPMENT</b>	<b>50,732</b>	<b>52,332</b>
Torpedo Composite Homing Array		1,600
<b>119 SHIP SELF DEFENSE (DETECT &amp; CONTROL)</b>	<b>35,999</b>	<b>44,999</b>
Cyber Security		2,400
Autonomous Unmanned Surface Vessel		1,200
Expeditionary Swimmer Defense System		2,400
Persistent Surveillance Wave PowerBuoy System		3,000
<b>120 SHIP SELF DEFENSE (ENGAGE: HARD KILL)</b>	<b>36,238</b>	<b>46,938</b>
Next Generation Phalanx with Laser Demo		10,700
<b>121 SHIP SELF DEFENSE (ENGAGE: SOFT KILL/EW)</b>	<b>57,574</b>	<b>63,974</b>
Accelerated Improvement for Active Surface Electronic Warfare Systems		1,600
Shipboard Electronic Warfare Sustainment Training		3,200
NULKA Decoy and Mk 53 Decoy Launch System		1,600
<b>123 MEDICAL DEVELOPMENT</b>	<b>7,833</b>	<b>39,833</b>
Advanced Molecular Medicine Initiative		2,000
Hampton University Cancer Treatment Initiative		8,000
Military Dental Research		6,000
Mobile Oxygen, Ventilation and External Suction (MOVES)		1,200
On-Demand Custom Body Implants/Prosthesis for Injured Personnel		1,600
Penn State Cancer Institute		2,800
US Navy Cancer Vaccine Program		2,400
US Navy Pandemic Influenza Vaccine Program		1,600
Composite Tissue Transplantation for Combat Wounded Repair		2,000
Disposable Biocidal Medical Masks for NAMRU Evaluation		800
HealthForces		2,800
Topical Hemostat Effectiveness Study		800
<b>125 DISTRIBUTED SURVEILLANCE SYSTEM</b>	<b>0</b>	<b>2,000</b>
Sure Trak Re-Architecture and Sensor Augmentation		2,000
<b>126 JOINT STRIKE FIGHTER (JSF)</b>	<b>1,532,748</b>	<b>1,749,348</b>
Alternate Engine		215,000
JSF F-35B Lift Fan Component Manufacturing		1,600

R-1	Budget Request	Recommendation
<b>128 INFORMATION TECHNOLOGY DEVELOPMENT</b>	<b>72,497</b>	<b>91,897</b>
National Terrorism Preparedness Institute Anti-Terrorism/Counter-Terrorism Technology Development and Training		3,000
Base Level Inventory Tracking System Enhancements		2,800
Condition-based Maintenance Enabling Technologies Program		2,400
Digitization, Integration, and Analyst Access of Investigative Files, NCIS		1,600
Integration of Logistics Information for Knowledge Projection and Readiness Assessment		1,600
Supply Chain Logistics Capability at the ABL NIROP		8,000
<b>134 TACTICAL CRYPTOLOGIC SYSTEMS</b>	<b>16,678</b>	<b>18,278</b>
Paragon System Upgrades		1,600
<b>137 MAJOR T&amp;E INVESTMENT</b>	<b>42,391</b>	<b>52,191</b>
Air Combat Environment Test and Evaluation Facility Upgrade		3,000
Improved Interoperability Research and Development to Support NAVAIR and GWOT		2,000
Network Expansion and Integration of Navy/NASA RDT&E Ranges and Facilities		4,800
<b>141 SMALL BUSINESS INNOVATIVE RESEARCH</b>	<b>0</b>	<b>400</b>
Autonomous Power Management for Distributed Operation		400
<b>142 TECHNICAL INFORMATION SERVICES</b>	<b>713</b>	<b>15,613</b>
Center for Commercialization of Advanced Technology		2,500
Integrated Manufacturing Enterprise		2,400
HTDV		10,000
<b>148 TEST AND EVALUATION SUPPORT</b>	<b>356,254</b>	<b>346,254</b>
Navy Requested Transfer to Line 50		-10,000
<b>152 MARINE CORPS PROGRAM WIDE SUPPORT</b>	<b>24,687</b>	<b>30,287</b>
Logistics Technology Improvements		1,600
Global Supply Chain Management		1,600
USMC Logistics Analysis and Optimization		2,400
<b>159 STRATEGIC SUB &amp; WEAPONS SYSTEM SUPPORT</b>	<b>80,120</b>	<b>78,774</b>
Reliable Replacement Warhead		-23,346
Advanced Linear Accelerator (LINAC) Facility		3,200
Covert Robust Location Aware Wireless Network		1,600
Maritime Security - Surface and Sub-surface Surveillance System and Expeditionary Test-Bed		3,600
Adelos National Security Sensor System		2,000
Enhanced Special Weapons/Nuclear Weapons Security Program		1,600
Advanced Technology for MK5 AF&F		10,000
<b>162 NAVY STRATEGIC COMMUNICATIONS</b>	<b>47,495</b>	<b>43,495</b>
Program Growth		-4,000
<b>164 F/A-18 SQUADRONS</b>	<b>71,232</b>	<b>73,632</b>
Distributed Targeting Processor		2,400

R-1	Budget Request	Recommendation
<b>TOMAHAWK AND TOMAHAWK MISSION PLANNING CENTER</b>		
<b>167 (TMPC)</b>	<b>14,212</b>	<b>18,212</b>
Low-Cost Image-Based Navigation and Precision Targeting		800
Precision Terrain Aided Navigation (PTAN)		1,600
Tomahawk Cost Reduction Initiatives		1,600
<b>168 INTEGRATED SURVEILLANCE SYSTEM</b>	<b>20,565</b>	<b>28,765</b>
Autonomous Anti-Submarine Vertical Beam Array		1,600
Low Cost, Expendable, Fiber Optic Sensor Array		5,000
Distributed Maritime Surveillance System		1,600
<b>170 CONSOLIDATED TRAINING SYSTEMS DEVELOPMENT</b>	<b>28,017</b>	<b>27,657</b>
Curriculum and Trainer Development Growth		-3,000
ASW Training Interoperability Enterprise Demonstration Test Bed		1,600
Total Ship Training System		1,040
<b>173 HARM IMPROVEMENT</b>	<b>31,427</b>	<b>33,927</b>
Aircraft Composite Rocket Launcher Improvement		2,500
<b>175 SURFACE ASW COMBAT SYSTEM INTEGRATION</b>	<b>21,720</b>	<b>22,520</b>
Long Range Synthetic Aperture Sonar for ASW		800
<b>176 MK-48 ADCAP</b>	<b>15,879</b>	<b>26,279</b>
MK 48 Torpedo Post-Launch Communication System		800
Undersea Weapons Enterprise Common Automated Test Equipment		3,200
ASW Enhancements		6,400
<b>177 AVIATION IMPROVEMENTS</b>	<b>122,906</b>	<b>100,266</b>
Multi-Purpose Bomb Rack Program Delay		-35,000
F/A-18 Avionics Ground Support System		2,400
Lightweight Composite Structure Development for Aerospace Vehicles		800
Reduction of Weapon System Downtime Rapid Repair Structural Adhesives		2,400
Rotor Blade Protection Against Sand and Water Erosion		800
Sacrificial Film Laminates for Navy Helicopter Windscreens		960
Vet-Biz Initiative for National Sustainment (VINS-Navy)		1,600
Arc Fault Circuit Breaker with Arc Location System		1,000
Wireless Sensors for Navy Aircraft		2,400
<b>180 MARINE CORPS COMMUNICATIONS SYSTEMS</b>	<b>273,696</b>	<b>281,416</b>
Center for Geospatial Intelligence and Investigation (GII)		1,520
Battlefield Sensor Netting		2,400
M2C2		3,800
<b>MARINE CORPS GROUND COMBAT/SUPPORTING ARMS</b>		
<b>181 SYSTEMS</b>	<b>136,080</b>	<b>119,380</b>
Marine Corps Shotgun Modernization Program		3,000
Marine Personnel Carrier Program Delay		-20,700
MARCOM Computer Research		1,000
<b>188 TECHNICAL RECONNAISSANCE AND SURVEILLANCE</b>	<b>0</b>	<b>2,000</b>
ACINT (MASINT) Tape Digitization Program		2,000
<b>190 SATELLITE COMMUNICATIONS (SPACE)</b>	<b>652,463</b>	<b>653,263</b>
Joint Integrated Systems Technology for Advanced Digital Networking (JIST-NET)		800

R-1	Budget Request	Recommendation
<b>191 INFORMATION SYSTEMS SECURITY PROGRAM</b>	<b>27,037</b>	<b>33,737</b>
TSG Technology Accreditation		2,400
Universal Description, Discovery and Integration		4,300
<b>197 TACTICAL UNMANNED AERIAL VEHICLES</b>	<b>45,717</b>	<b>51,817</b>
Micro-munitions Interface for Tactical Unmanned Systems (MITUS)		1,600
Unmanned Air Systems Tactical Control System		2,500
SKYBUS 80K and 130K LTA-UAS Multirole Technologies		2,000
<b>198 ENDURANCE UNMANNED AERIAL VEHICLES</b>	<b>480,098</b>	<b>433,698</b>
Broad Area Maritime Surveillance Program Delay		-48,000
Advanced Airship Flying Laboratory, AAFL Phase 2		1,600
<b>199 AIRBORNE RECONNAISSANCE SYSTEMS</b>	<b>55,719</b>	<b>66,519</b>
EP-3E Requirements Capability Migration Technology Integration Lab		4,800
Fusion, Exploitation, Algorithm, Targeting High-Altitude Reconnaissance		6,000
<b>200 MANNED RECONNAISSANCE SYSTEMS</b>	<b>13,982</b>	<b>19,882</b>
Unmanned Force Augmentation System		2,400
Collective Aperture Multi-Band Sensor System		3,500
<b>204 DEPOT MAINTENANCE (NON-IF)</b>	<b>21,130</b>	<b>11,130</b>
F-18 Service Life Assessment Program Delay		-10,000
<b>206 INDUSTRIAL PREPAREDNESS</b>	<b>56,681</b>	<b>61,881</b>
E-Beam Free Form Repair Qualification		1,200
Next Generation Scalable Lean Manufacturing Initiative		2,400
Out of Autoclave Composite Processing		1,600

## MINE WARFARE

The Mine Warfare Mission Modules onboard the Littoral Combat Ships (LCS) will provide a significant portion of the Navy's Mine Warfare capability. Delays in the fielding of the LCS translate to a commensurate delay in fielding the mine warfare capability provided by these platforms. Given that the LCS will not be fully operational in significant numbers until well into the next decade, the Nation cannot afford such a delay to the mine warfare capability provided by the associated mission modules. However, the mine warfare capability provided by the mission modules can provide benefit to the fleet even without the LCS platform. Therefore, \$3,800,000 is provided to the LCS mission module development effort to research and study methods to employ these modules independently of the LCS platform. The Secretary of the Navy is directed to provide a report to the congressional defense committees not later than June 30, 2009, detailing the results of this study and the plan for the operational employment of the mine warfare mission modules independent of the LCS.

## ELECTROMAGNETIC AIRCRAFT LAUNCHING SYSTEM (EMALS)

An additional \$24,000,000 is provided to address cost overruns in the Electromagnetic Aircraft Launching System (EMALS) program. Due to continuing concerns about meeting the schedule for integration into PCU Gerald R. Ford (CVN-78), the Secretary of the Navy is directed to submit a report to the congressional defense committees by April 1, 2009, which shall contain a description of efforts to control cost and schedule, an updated schedule for completion of research and development efforts and integration into CVN-78, and an assessment of aircraft launch system options for CVN-78, including cost estimates of those options, if

the EMALS program experiences further delays.

## BONE MARROW REGISTRY

The bill includes \$31,500,000 for the Department of the Navy, to be administered by the C.W. Bill Young Marrow Donor Recruitment and Research Program, also known as and referred to within the Naval Medical Research Center as the Bone Marrow Registry. Funds appropriated for the C.W. Bill Young Marrow Donor Recruitment and Research Program shall remain available only for the purposes for which they were appropriated, and may only be obligated for the C.W. Bill Young Marrow Program. This Department of Defense donor center has recruited more than 475,000 Department of Defense volunteers, and provides more marrow donors per week than any other donor center in the Nation. More than 2,880 servicemembers and other Department volunteers from this donor center have provided marrow to save the lives of patients. The success of this national and international life-saving program for military and civilian patients, which now includes more than 7,000,000 potential volunteer donors is admirable. Further, the agencies involved in contingency planning are encouraged to continue to include the C.W. Bill Young Marrow Donor Recruitment and Research Program in the development and testing of their contingency plans. The Department of Defense form (DD Form 1414) shall show this as a congressional interest item. The Department is further directed to release all the funds appropriated for this purpose to the C.W. Bill Young Marrow Donor Recruitment and Research Program within 60 days of enactment of this Act.

## JOINT COUNTER RADIO-CONTROLLED ELECTRONIC WARFARE (JCREW)

The Navy has been designated as the executive agent for JCREW 3.3 to protect per-

sonnel from improvised explosive devices (IEDs), and is dependent upon transfer of funds from the Joint IED Defeat Organization for critical science and technology projects. Reliance on other sources of funding is inconsistent with the Navy's role as executive agent for JCREW 3.3. Therefore, the Secretary of the Navy is directed to fund these enabling science and technology projects within the Research, Development, Test and Evaluation, Navy account in future budget requests.

## ELECTRIC PROPULSION TECHNOLOGY FOR SURFACE COMBATANTS

Significant steps have been taken in developing more energy efficient alternatives to the mechanical drive propulsion systems currently powering Navy ships. Funding has been provided for several years to mature electric propulsion technologies to support current and future Navy needs, either as an upgrade to DDG-51 or DDG-1000 class ships, or for the next-generation cruiser. Therefore, due to the increased flexibility, projected fuel savings and performance enhancements provided by such technologies, the Secretary of the Navy is directed to continue the exploration of electric propulsion as an integrated part of its surface combatant design and construction plan. Additionally, the Navy is encouraged to continue the development of all-electric technology by including funding in future Shipboard System Component Development (Program Element 0603513N) budget requests.

## RESEARCH, DEVELOPMENT, TEST AND EVALUATION, AIR FORCE

For Research, Development, Test and Evaluation, Air Force, funds are to be available for fiscal year 2009, as follows:

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST	
RESEARCH, DEVELOPMENT, TEST & EVAL, AIR FORCE				
BASIC RESEARCH				
1	DEFENSE RESEARCH SCIENCES.....	309,926	314,726	+4,800
2	UNIVERSITY RESEARCH INITIATIVES.....	125,949	140,789	+14,840
3	HIGH ENERGY LASER RESEARCH INITIATIVES.....	13,425	13,425	---
	TOTAL, BASIC RESEARCH.....	449,300	468,940	+19,640
APPLIED RESEARCH				
7	MEDICAL DEVELOPMENT.....	---	4,900	+4,900
8	MATERIALS.....	117,143	188,503	+71,360
9	AEROSPACE VEHICLE TECHNOLOGIES.....	122,870	126,970	+4,100
10	HUMAN EFFECTIVENESS APPLIED RESEARCH.....	82,091	95,891	+13,800
11	AEROSPACE PROPULSION.....	218,049	251,109	+33,060
12	AEROSPACE SENSORS.....	109,048	130,448	+21,400
13	SPACE TECHNOLOGY.....	117,519	135,799	+18,280
14	CONVENTIONAL MUNITIONS.....	55,963	55,963	---
15	DIRECTED ENERGY TECHNOLOGY.....	62,871	62,871	---
16	COMMAND CONTROL AND COMMUNICATIONS.....	109,492	114,292	+4,800
17	HIGH ENERGY LASER RESEARCH.....	49,449	49,449	---
	TOTAL, APPLIED RESEARCH.....	1,044,495	1,216,195	+171,700
ADVANCED TECHNOLOGY DEVELOPMENT				
18	ADVANCED MATERIALS FOR WEAPON SYSTEMS.....	41,926	65,646	+23,720
19	ADVANCED AEROSPACE SENSORS.....	56,916	65,316	+8,400
20	AEROSPACE TECHNOLOGY DEV/DEMO.....	44,918	46,118	+1,200
21	AEROSPACE PROPULSION AND POWER TECHNOLOGY.....	170,856	180,256	+9,400
22	CREW SYSTEMS AND PERSONNEL PROTECTION TECHNOLOGY.....	26,630	34,110	+7,480
23	ELECTRONIC COMBAT TECHNOLOGY.....	21,056	31,936	+10,880
25	ADVANCED SPACECRAFT TECHNOLOGY.....	80,958	98,580	+17,622
26	MAUI SPACE SURVEILLANCE SYSTEM (MSSS).....	4,838	36,438	+31,600
27	CONVENTIONAL WEAPONS TECHNOLOGY.....	11,813	19,213	+7,400
28	ADVANCED WEAPONS TECHNOLOGY.....	44,507	56,467	+11,960
29	MANUFACTURING TECHNOLOGY PROGRAM.....	39,729	45,329	+5,600
30	C3I ADVANCED DEVELOPMENT.....	30,103	34,003	+3,900
32	HIGH ENERGY LASER ADVANCED TECHNOLOGY PROGRAM.....	4,013	4,013	---
	TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT.....	578,263	717,425	+139,162

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST
-----			
DEMONSTRATION & VALIDATION			
33 INTELLIGENCE ADVANCED DEVELOPMENT.....	4,988	6,588	+1,600
34 PHYSICAL SECURITY EQUIPMENT.....	477	1,677	+1,200
36 GPS III - OPERATIONAL CONTROL SEGMENT.....	2,975	307,335	+304,360
37 GPS OPERATIONAL CONTROL SEGMENT.....	304,360	---	-304,360
38 ADVANCED EHF MILSATCOM (SPACE).....	388,041	388,041	---
39 POLAR MILSATCOM (SPACE).....	237,749	237,749	---
40 SPACE CONTROL TECHNOLOGY.....	76,845	86,645	+9,800
41 COMBAT IDENTIFICATION TECHNOLOGY.....	29,400	29,400	---
42 NATO RESEARCH AND DEVELOPMENT.....	4,334	4,334	---
43 INTERNATIONAL SPACE COOPERATIVE R&D.....	627	627	---
44 TRANSFORMATIONAL SATCOM (TSAT).....	842,974	767,974	-75,000
45 INTEGRATED BROADCAST SERVICE.....	21,105	21,105	---
46 INTERCONTINENTAL BALLISTIC MISSILE.....	65,629	70,429	+4,800
47 WIDEBAND GAPFILLER SYSTEM RDT&E (SPACE).....	12,422	52,422	+40,000
49 POLLUTION PREVENTION (DEM/VAL).....	2,877	11,677	+8,800
50 JOINT PRECISION APPROACH AND LANDING SYSTEMS.....	7,479	7,479	---
52 ALTERNATIVE FUELS.....	28,464	59,864	+31,400
53 AUTOMATED AIR-TO-AIR REFUELING.....	9,889	9,889	---
55 OPERATIONALLY RESPONSIVE SPACE.....	110,032	197,232	+87,200
56 NATIONAL POLAR-ORBITING OPERATIONAL ENVIRONMENTAL SAT.....	289,469	289,469	---
-----			
TOTAL, DEMONSTRATION & VALIDATION.....	2,440,136	2,549,936	+109,800
ENGINEERING & MANUFACTURING DEVELOPMENT			
57 GLOBAL BROADCAST SERVICE (GBS).....	18,790	18,790	---
58 NUCLEAR WEAPONS SUPPORT.....	20,166	20,166	---
59 B-1B.....	128,871	143,031	+14,160
60 SPECIALIZED UNDERGRADUATE FLIGHT TRAINING.....	7,462	13,462	+6,000
61 B-2 ADVANCED TECHNOLOGY BOMBER.....	351,417	365,077	+13,660
63 ELECTRONIC WARFARE DEVELOPMENT.....	54,995	56,495	+1,500
64 PHYSICAL SECURITY EQUIPMENT.....	52	52	---
65 SMALL DIAMETER BOMB (SDB).....	125,067	126,667	+1,600
66 COUNTERSPACE SYSTEMS.....	74,918	76,518	+1,600
67 SPACE SITUATION AWARENESS SYSTEMS.....	210,501	210,501	---
68 AIRBORNE ELECTRONIC ATTACK.....	34,279	34,279	---
69 SPACE BASED INFRARED SYSTEM (SBIRS) HIGH EMD.....	529,771	544,771	+15,000

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST
70 ALTERNATIVE INFRARED SPACE SYSTEM (AIRSS).....	149,064	960	-148,104
71 ARMAMENT/ORDNANCE DEVELOPMENT.....	2,095	2,095	---
72 SUBMUNITIONS.....	1,730	1,730	---
73 AGILE COMBAT SUPPORT.....	5,790	5,790	---
75 LIFE SUPPORT SYSTEMS.....	10,998	16,598	+5,600
76 COMBAT TRAINING RANGES.....	28,047	28,047	---
77 INTEGRATED COMMAND & CONTROL APPLICATIONS (IC2A).....	177	5,777	+5,600
78 INTELLIGENCE EQUIPMENT.....	1,488	2,288	+800
80 JOINT STRIKE FIGHTER (JSF) .....	1,524,016	1,739,016	+215,000
81 EVOLVED EXPENDABLE LAUNCH VEHICLE PROGRAM (SPACE).....	33,719	33,719	---
82 RDT&E FOR AGING AIRCRAFT.....	13,828	17,028	+3,200
83 NEXT GENERATION AERIAL REFUELING AIRCRAFT.....	831,759	23,000	-808,759
84 CSAR-X RDT&E.....	305,062	233,027	-72,035
85 HC/MC-130 RECAP RDT&E.....	11,692	11,692	---
86 LINK-16 SUPPORT AND SUSTAINMENT.....	186,213	193,813	+7,600
87 E-10 SQUADRONS.....	42,215	---	-42,215
88 SINGLE INTEGRATED AIR PICTURE (SIAP).....	66,909	66,909	---
89 FULL COMBAT MISSION TRAINING.....	135,152	135,152	---
90 JOINT CARGO AIRCRAFT (JCA).....	26,777	16,777	-10,000
91 CV-22.....	18,562	18,562	---
92 AIRBORNE SENIOR LEADER C3 (SLC3S).....	1,992	1,992	---
TOTAL, ENGINEERING & MANUFACTURING DEVELOPMENT.....	4,953,574	4,163,781	-789,793

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST
-----			
93 RDT&E MANAGEMENT SUPPORT THREAT SIMULATOR DEVELOPMENT.....	34,568	34,568	---
94 MAJOR T&E INVESTMENT.....	61,818	69,418	+7,600
95 RAND PROJECT AIR FORCE.....	28,676	31,676	+3,000
97 INITIAL OPERATIONAL TEST & EVALUATION.....	29,537	29,537	---
98 TEST AND EVALUATION SUPPORT.....	787,737	787,737	---
99 ROCKET SYSTEMS LAUNCH PROGRAM (SPACE).....	14,895	14,895	---
100 SPACE TEST PROGRAM (STP).....	48,072	48,072	---
101 FACILITIES RESTORATION & MODERNIZATION - TEST & EVAL..	46,234	49,434	+3,200
102 FACILITIES SUSTAINMENT - TEST AND EVALUATION SUPPORT..	28,898	36,298	+7,400
104 INTERNATIONAL ACTIVITIES.....	3,910	3,910	---
	-----	-----	-----
TOTAL, RDT&E MANAGEMENT SUPPORT.....	1,084,345	1,105,545	+21,200
OPERATIONAL SYSTEMS DEVELOPMENT			
105 COMMON VERTICAL LIFT SUPPORT PLATFORM.....	3,868	3,868	---
106 ANTI-TAMPER TECHNOLOGY EXECUTIVE AGENCY.....	20,987	20,987	---
108 B-52 SQUADRONS.....	38,651	47,651	+9,000
110 AIR-LAUNCHED CRUISE MISSILE (ALCM).....	396	396	---
111 STRAT WAR PLANNING SYSTEM - USSTRATCOM.....	17,553	17,553	---
112 NIGHT FIST - USSTRATCOM.....	5,299	5,299	---
114 REGION/SECTOR OPERATION CONTROL CENTER MODERNIZATION..	23,858	23,858	---
115 STRATEGIC AEROSPACE INTELLIGENCE SYSTEM ACTIVITIES....	15	15	---
116 WARFIGHTER RAPID ACQUISITION PROCESS (WRAP) RAPID TRAN	20,807	20,807	---
117 MQ-9 UAV.....	43,557	46,557	+3,000
118 A-10 SQUADRONS.....	---	4,000	+4,000
119 F-16 SQUADRONS.....	123,979	127,179	+3,200
120 F-15E SQUADRONS.....	184,213	199,413	+15,200
121 MANNED DESTRUCTIVE SUPPRESSION.....	5,585	5,585	---
122 F-22 SQUADRONS.....	700,305	607,305	-93,000
124 TACTICAL AIM MISSILES.....	5,748	5,748	---
125 ADVANCED MEDIUM RANGE AIR-TO-AIR MISSILE (AMRAAM)....	54,239	54,239	---
126 JOINT HELMET MOUNTED CUEING SYSTEM (JHMCS).....	3,192	3,192	---
127 AF TENCAP.....	11,578	11,578	---
129 COMPASS CALL.....	4,670	4,670	---
130 AIRCRAFT ENGINE COMPONENT IMPROVEMENT PROGRAM.....	150,956	150,956	---
132 JOINT AIR-TO-SURFACE STANDOFF MISSILE (JASSM).....	13,035	33,035	+20,000

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST
133 AIR AND SPACE OPERATIONS CENTER (AOC).....	118,834	98,834	-20,000
134 CONTROL AND REPORTING CENTER (CRC).....	60,590	60,590	---
135 AIRBORNE WARNING AND CONTROL SYSTEM (AWACS).....	126,300	126,300	---
136 TACTICAL AIRBORNE CONTROL SYSTEMS.....	1,530	1,530	---
137 ADVANCED COMMUNICATIONS SYSTEMS.....	29,782	29,782	---
138 EVALUATION AND ANALYSIS PROGRAM.....	794,036	794,036	---
140 THEATER BATTLE MANAGEMENT (TBM) C4I.....	19,437	19,437	---
141 FIGHTER TACTICAL DATA LINK.....	62,788	57,788	-5,000
142 BOMBER TACTICAL DATA LINK.....	11,702	11,702	---
143 C2ISR TACTICAL DATA LINK.....	1,727	1,727	---
144 COMMAND AND CONTROL (C2) CONSTELLATION.....	32,151	32,151	---
145 JOINT SURVEILLANCE AND TARGET ATTACK RADAR SYSTEM ....	97,641	81,541	-16,100
146 SEEK EAGLE.....	21,645	21,645	---
148 USAF MODELING AND SIMULATION.....	28,981	28,981	---
149 WARGAMING AND SIMULATION CENTERS.....	3,870	3,870	---
150 DISTRIBUTED TRAINING AND EXERCISES.....	7,137	7,137	---
151 MISSION PLANNING SYSTEMS.....	97,560	97,560	---
152 INFORMATION WARFARE SUPPORT.....	12,220	12,220	---
153 SPECIAL EVALUATION SYSTEM.....	1,077,970	1,077,970	---
167 NATIONAL AIR INTELLIGENCE CENTER.....	---	1,360	+1,360
159 E-4B NATIONAL AIRBORNE OPERATIONS CENTER (NAOC).....	4,069	4,069	---
161 MINIMUM ESSENTIAL EMERGENCY COMMUNICATIONS NETWORK ...	70,995	70,995	---
162 INFORMATION SYSTEMS SECURITY PROGRAM.....	187,933	187,933	---
163 GLOBAL COMBAT SUPPORT SYSTEM.....	4,320	4,320	---
164 GLOBAL COMMAND AND CONTROL SYSTEM.....	3,218	7,218	+4,000
165 JOINT COMMAND AND CONTROL PROGRAM (JC2).....	3,234	3,234	---
166 MILSATCOM TERMINALS.....	337,098	337,098	---
167 SPECIAL ACTIVITIES.....	---	5,600	+5,600
168 AIRBORNE SIGINT ENTERPRISE.....	173,631	173,631	---
ADVANCED GEOSPATIAL INTELLIGENCE.....	---	2,000	+2,000
171 GLOBAL AIR TRAFFIC MANAGEMENT (GATM).....	6,275	6,275	---
172 CYBER SECURITY INITIATIVE.....	2,083	2,083	---
173 SATELLITE CONTROL NETWORK (SPACE).....	16,758	16,758	---
174 WEATHER SERVICE.....	47,347	47,347	---
175 AIR TRAFFIC CONTROL, APPROACH, & LANDING SYSTEM (ATC) .	6,867	6,867	---

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST
176 AERIAL TARGETS.....	34,777	34,777	---
179 SECURITY AND INVESTIGATIVE ACTIVITIES.....	786	786	---
181 DEFENSE JOINT COUNTERINTELLIGENCE ACTIVITIES.....	39	39	---
184 NAVSTAR GLOBAL POSITIONING SYSTEM (USER EQUIPMENT)....	127,513	131,513	+4,000
185 NAVSTAR GLOBAL POSITIONING SYSTEM (SPACE AND CONTROL)..	91,277	91,277	---
187 SPACE AND MISSILE TEST AND EVALUATION CENTER.....	1,985	1,985	---
188 SPACE WARFARE CENTER.....	3,003	3,003	---
189 SPACELIFT RANGE SYSTEM (SPACE).....	12,376	12,376	---
190 INTELLIGENCE SUPPORT TO INFORMATION OPERATIONS.....	1,237	3,637	+2,400
191 AIRBORNE RECONNAISSANCE SYSTEMS.....	149,752	104,152	-45,600
192 MANNED RECONNAISSANCE SYSTEMS.....	12,819	17,859	+5,040
193 DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS.....	107,834	107,834	---
194 PREDATOR UAV (JMIP).....	24,773	37,173	+12,400
195 GLOBAL HAWK UAV.....	284,292	311,507	+27,215
196 NETWORK-CENTRIC COLLABORATIVE TARGET (TIARA).....	8,807	8,807	---
197 GPS III SPACE SEGMENT.....	420,342	393,342	-27,000
198 INTELLIGENCE SUPPORT TO INFORMATION WARFARE.....	5,438	5,438	---
200 NUDET DETECTION SYSTEM (SPACE).....	41,292	41,292	---
201 NATIONAL SECURITY SPACE OFFICE.....	10,797	7,797	-3,000
202 SPACE SITUATION AWARENESS OPERATIONS.....	16,166	16,166	---
203 NASS, IO TECHNOLOGY INTEGRATION & TOOL DEV.....	15,726	15,726	---
204 SHARED EARLY WARNING (SEW).....	3,152	3,152	---
205 C-130 AIRLIFT SQUADRON.....	172,560	179,760	+7,200
206 C-5 AIRLIFT SQUADRONS.....	125,063	127,463	+2,400
207 C-17 AIRCRAFT.....	236,047	236,047	---
208 C-130J PROGRAM.....	52,354	27,354	-25,000
209 LARGE AIRCRAFT IR COUNTERMEASURES (LAIRCM).....	32,100	36,500	+4,400
210 KC-135S.....	7,133	7,133	---
214 AIR MOBILITY TACTICAL DATA LINK.....	---	8,000	+8,000
215 SPECIAL TACTICS / COMBAT CONTROL.....	5,728	7,728	+2,000
216 DEPOT MAINTENANCE (NON-IF).....	1,531	1,531	---
217 ACQUISITION AND MANAGEMENT SUPPORT.....	34,428	37,228	+2,800
218 INDUSTRIAL PREPAREDNESS.....	---	4,800	+4,800
220 LOGISTICS INFORMATION TECHNOLOGY (LOGIT).....	189,679	159,679	-30,000

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST
221 SUPPORT SYSTEMS DEVELOPMENT.....	8,145	46,945	+38,800
222 JOINT NATIONAL TRAINING CENTER.....	3,214	3,214	---
223 OTHER PERSONNEL ACTIVITIES.....	116	1,116	+1,000
224 JOINT PERSONNEL RECOVERY AGENCY.....	5,768	5,768	---
225 SERVICE-WIDE SUPPORT (NOT OTHERWISE ACCOUNTED FOR)....	3,016	3,016	---
226 CIVILIAN COMPENSATION PROGRAM.....	8,123	8,123	---
227 PERSONNEL ADMINISTRATION.....	18,625	18,625	---
228 FINANCIAL MANAGEMENT INFORMATION SYSTEMS DEVELOPMENT..	31,782	16,782	-15,000
	-----	-----	-----
TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT.....	7,211,815	7,121,930	-89,885
999 CLASSIFIED PROGRAMS.....	10,304,689	9,740,588	-564,101
	-----	-----	-----
TOTAL, RESEARCH, DEVELOPMENT, TEST & EVAL, AIR FORCE	28,066,617	27,084,340	-982,277

**EXPLANATION OF PROJECT LEVEL ADJUSTMENTS**  
[In thousands of dollars]

R-1	Budget Request	Recommendation
<b>1 DEFENSE RESEARCH SCIENCES</b>	<b>309,926</b>	<b>314,726</b>
Center for Microplasma Science and Technology (CMST)		2,000
Coal Transformation Laboratory		800
Development and Validation of Advanced Design Technologies for Hypersonic Research		2,000
<b>2 UNIVERSITY RESEARCH INITIATIVES</b>	<b>125,949</b>	<b>140,789</b>
Aerodynamic Wind Tunnel Upgrade Initiative		1,600
Cyber Security Laboratory at Louisiana Tech University		3,000
Institute for Science and Engineering Simulation (ISES)		3,360
Lean Management System Research Initiative at Air Mobility Wing MacDill AFB		800
Secure Network Centric Operations		1,600
Unmanned Aerial Systems Mission Planning and Operation Center		400
Battlespace: Reducing Military Decision Cycles		1,280
High Temperature Hydrogen Energy Production Facility		1,200
Partnership in Innovative Preparation for Educators and Students and the Space Education Consortium		800
Rapid Prototyping and Nanotechnology Initiative		800
<b>7 MEDICAL DEVELOPMENT</b>	<b>0</b>	<b>4,900</b>
Biothreat Test Pouch for Film Array System		800
Health Surveillance System		1,600
Regional Telepathology Initiative at Keesler AFB		2,500
<b>8 MATERIALS</b>	<b>117,143</b>	<b>188,503</b>
Accelerated Insertion of Advanced Materials and Certification for Military Aircraft Structure Material Substitution and Repair		3,000
Advance Casting and Coating Technologies for Aircraft Canopies		2,800
Advanced Aerospace Heat Exchangers		1,600
Advanced Carbon Fiber Research and Test Initiative		2,400
Advanced Thermal Control Coatings for Space Applications		1,600
Carbon Non-Materials for Advanced Aerospace Applications		2,400
Ceramic Matrix Composite Turbine Blade Demonstration		4,000
FEL Capabilities for Aerospace Microfabrication		1,120
Fire and Blast Resistant Materials for Force Protection		1,600
Gallium Nitride RF Power Technology		1,600
High Power Broadly Tunable Middle-Infrared Laser Sources		2,400
Intelligent Manufacturing Initiative		2,400
Large Area, APVT Materials Development for High Power Devices		800
Light Weight Organic Photovoltaic Technologies		1,200
Liquid Crystal Laser Eye Protection		1,600
Nanocomposites for Lightning Protection of Composite Airframe Structures		1,200
Next Generation Manufacturing Processes		1,200
Optic Band Control Program		800
Partnership for Emerging Technologies		1,600
Pennsylvania NanoMaterials Commercialization Center		2,000
Plasma-Sphere Array for Flexible Electronics		2,800
Science for Sustainment		1,600
Advanced Military Installations That Integrate Renewable Energy and Advanced Energy Storage Technologies		4,000
Air Force Minority Leaders Program		8,000
Aircraft Fatigue Modeling and Simulation		3,000
Conducting Polymer Stress and Damage Sensors for Composites		1,440

R-1	Budget Request	Recommendation
Consortium for Nanomaterials for Aerospace Commerce and Technology		2,400
Diamond Substrate for Cooling of Micro-Electronics		2,000
LGX High Temperature Acoustic Wave Sensors		1,600
Mobile Wind Turbine Systems to Power Forward Bases		800
Nano-Composite Structures Manufacturing Technology Development		800
ONAMI Safer Nanomaterials and Nanomanufacturing		4,000
Tactical Shelters Next Generation Composite Initiative		1,600
<b>9 AEROSPACE VEHICLE TECHNOLOGIES</b>	<b>122,870</b>	<b>126,970</b>
Center for Solar Electricity and Hydrogen		3,600
Cognitive UAV		500
<b>10 HUMAN EFFECTIVENESS APPLIED RESEARCH</b>	<b>82,091</b>	<b>95,891</b>
Homeland Emergency Learning and Preparedness (HELP) Center		3,000
Imaging Tools for Human Performance Enhancement and Diagnostics		2,000
Smart View Program (SVP)		800
Tools and Technologies for Incident and Consequence Management		800
Component Object Model Attitude Control System Simulation/Trainer		1,600
Joint Theater Air Ground Simulation System		2,400
Ultra High Resolution Deployable Projector for Simulation		3,200
<b>11 AEROSPACE PROPULSION</b>	<b>218,049</b>	<b>251,109</b>
Advanced Lithium Ion Battery Manufacturing		1,600
Advanced Vehicle Propulsion Center		1,200
Aerospace Lab Equipment Upgrade		800
Affordable Lightweight Power Supply Development		1,000
Development and Testing of Advanced Paraffin-Based Hybrid Rockets for Space Applications		2,800
Electronics Liquid Cooling for Advanced Military Ground and Aerospace Vehicle Projects		1,000
Hydrocarbon Boost Technology Demonstrator		1,400
Integrated Power for Aircraft Technologies (INPACT II)		3,500
Integrated Aircraft Energy Management		2,000
Integrated Electrical Starter/Generator (IES/G)		1,600
Integrated Propulsion Analysis Tool		2,000
Lithium Ion Domestic Materials Development		1,600
Multi-Mode Space Propulsion		800
National Test Facility for Aerospace Fuels and Propulsion		1,360
WASH.Oxygen Sensor and Cell-Level Battery Controller		800
Advanced Fuel Cell Based Power System for Small UAV Applications		1,200
Manufacturing of High Energy Superior Lithium Battery Technology		6,000
Vortex Low Cost Rocket Engine		2,400
<b>12 AEROSPACE SENSORS</b>	<b>109,048</b>	<b>130,448</b>
Information Quality Tools for Persistent Surveillance Data Sets		1,600
Net-Centric Sensors Grid		800
Optically Pumped Atomic Laser (OPAL)		2,800
Sensor Fusion		2,400
Watchkeeper		800
Weather Sensors for CoT		1,600
Advanced Data Exploitation and Visualization		800

R-1	Budget Request	Recommendation
Low Voltage, Wideband Electro-Optic Polymer Modulators		3,000
Persistent Sensing Data Processing, Storage and Retrieval		1,600
Space Qualification of the Common Data Link		1,600
Super-Resolution Sensor System		2,000
Wideband Digital Airborne Electronic Sensing Array		2,400
<b>13 SPACE TECHNOLOGY</b>	<b>117,519</b>	<b>135,799</b>
Advanced Modular Avionics for Operationally Responsive Space Use		2,400
Center for Responsive Space Systems		800
Multicontinuum Technology for Space Structures		2,880
Radiation Hardened Non-Volatile Memory Technology		1,600
Defensive Counterspace Testbed		800
Field Programmable Gate Arrays Mission Assurance Center		3,000
Lightweight, High-Efficiency Solar Cells for Spacecraft		800
Massively Parallel Optical Interconnects for MicroSatellite Applications		1,600
Nuclear Test Seismic Research		2,000
Reconfigurable Electronics and Non-Volatile Memory Research		2,000
Shielding Rocket Payloads		400
<b>16 COMMAND CONTROL AND COMMUNICATIONS</b>	<b>109,492</b>	<b>114,292</b>
Compact Laser Terminal for Airborne Network Centric Warfare		2,800
Cyber Attack Mitigation and Exploitation Laboratory (CAMEL) III		2,000
<b>18 ADVANCED MATERIALS FOR WEAPON SYSTEMS</b>	<b>41,926</b>	<b>65,646</b>
Advanced Nanotube Micro-Munitions Weapon Technology Initiative		1,600
EMI Grid Fabrication Technology		2,720
Aircraft Evaluation Readiness Initiative		2,400
Hybrid Bearing		1,600
Materials Integrity Management Research for Air Force Systems		800
Metals Affordability Initiative		4,000
Rapid Automated Processing of Advanced Low Observables		1,600
Sewage-Derived Biofuels Project		2,400
Silicon Carbide Electronics Material Producibility Initiative		4,800
Sonic Infrared Imaging Technology Development		800
Strategic Biofuel Supply Program		1,000
<b>19 ADVANCED AEROSPACE SENSORS</b>	<b>56,916</b>	<b>65,316</b>
Active Unmanned Air Vehicle (UAV) Phenomenology and Automatic Target Recognition Technology Transition (ATR)		2,000
Automated Sensor-Communication Response Technology		1,600
Moving Target Strike		2,000
Reconfigurable Secure Computing		1,200
Precision Image Tracking and Registration		1,600
<b>20 AEROSPACE TECHNOLOGY DEV/DEMO</b>	<b>44,918</b>	<b>46,118</b>
Big Antennas Small Structures Efficient Tactical (BASSET) UAV		1,200
<b>21 AEROSPACE PROPULSION AND POWER TECHNOLOGY</b>	<b>170,856</b>	<b>180,256</b>
Bio-JP8 Fuel Development		800
Texas Research Institute for Environmental Studies		1,600
Small Adaptive Cycle Turbine Engines		1,600
Renewable Hydrocarbon Fuels for Military Applications (Great Lakes Region)		2,000
XTC58F VAATE Small Turbo Fan Program		3,600

R-1	Budget Request	Recommendation
Assured Aerospace Fuels Research		1,600
Silicon Carbide Power Electronics for More Electric Aircraft		3,200
Turbine Engine Core Components - program growth		-5,000
<b>CREW SYSTEMS AND PERSONNEL PROTECTION</b>		
<b>22 TECHNOLOGY</b>	<b>26,630</b>	<b>34,110</b>
Air Purification with Carbon Nanotube Nanostructured Material		5,000
PhasorBIRD Helmet Tracker		2,480
<b>23 ELECTRONIC COMBAT TECHNOLOGY</b>	<b>21,056</b>	<b>31,936</b>
Innovative Polymeric Materials for Three-Dimensional (3-D) Microdevice Construction		1,600
New Electronic Warfare Specialists Through Advanced Research by Students		1,600
COTS Analysis Tools for Navigational Warfare		1,200
Advanced Electromagnetic Location of IEDs Defeat System		1,600
Advance Threat Alert/Advance Technology Demonstration		4,880
<b>25 ADVANCED SPACECRAFT TECHNOLOGY</b>	<b>80,958</b>	<b>98,580</b>
Small Low-Cost Reconnaissance Spacecraft Components		1,600
Space Situational Awareness		1,200
Semiconductor Optical Amplifier for Responsive Space MPOI		2,200
Hybrid Sounding Rocket Propulsion		800
Integrated Spacecraft Engineering Tool (ISET)		1,600
Micromachined Switches for Next Generation Modular Satellites		2,400
Satellite Coherent Optical Receiver (SCORE)		1,750
Operational Responsive Space Architecture for Dual Use Applications		1,272
Thin Film Amorphous Solar Arrays		1,600
Ultra Low Power Electronics		3,200
<b>26 MAUI SPACE SURVEILLANCE SYSTEM (MSSS)</b>	<b>4,838</b>	<b>36,438</b>
Flash Hyper-Dimensional Imaging System for Space Situational Awareness and Ballistic Missile Defense		1,600
MSSS Operations & Research		22,000
PanSTARRS		8,000
<b>27 CONVENTIONAL WEAPONS TECHNOLOGY</b>	<b>11,813</b>	<b>19,213</b>
Energetic Device Quality and Reliability Improvements Using Computer Aided Process Control		2,400
Body Armor Improved Ballistic Protection		2,000
Integrated Targeting Device		3,000
<b>28 ADVANCED WEAPONS TECHNOLOGY</b>	<b>44,507</b>	<b>56,467</b>
Compound Zoom for Airborne Reconnaissance (CZAR)		1,200
Advanced Fiber Lasers Systems and Components		960
Applications of LIDAR to Vehicles with Analysis		7,000
Real-time Optical Surveillance Applications		2,800
<b>29 MANUFACTURING TECHNOLOGY PROGRAM</b>	<b>39,729</b>	<b>45,329</b>
Prepreg Thickness Variability Reduction Program		1,600
Production of Nanocomposites for Aerospace Applications		1,600
Next Generation Casting Supplier Base Initiative		2,400
<b>30 C3I ADVANCED DEVELOPMENT</b>	<b>30,103</b>	<b>34,003</b>
MPOI for Battlespace Information Exchange		3,900

R-1	Budget Request	Recommendation
<b>33 INTELLIGENCE ADVANCED DEVELOPMENT</b>	<b>4,988</b>	<b>6,588</b>
Broad Area Multi-Intelligence Ubiquitous Surveillance Enterprise		1,600
<b>34 PHYSICAL SECURITY EQUIPMENT</b>	<b>477</b>	<b>1,677</b>
Multi-Sensor Person-Borne Suicide Counter Bomber Detection Systems		1,200
<b>36 GPS III - OPERATIONAL CONTROL SEGMENT</b>	<b>2,975</b>	<b>307,335</b>
GPS III OCX		304,360
<b>37 GPS OPERATIONAL CONTROL SEGMENT</b>	<b>304,360</b>	<b>0</b>
GPS III- OCX backwards compatibility		-304,360
<b>40 SPACE CONTROL TECHNOLOGY</b>	<b>76,845</b>	<b>86,645</b>
COTS Technology for Situational Space Awareness		2,800
Multi-mission Deployable Optical System		4,000
Space Situational Awareness - TCN Demonstration and Deployment		3,000
<b>44 TRANSFORMATIONAL SATCOM (TSAT)</b>	<b>842,974</b>	<b>767,974</b>
Program Reduction/TSAT Contract Award Delay		-75,000
<b>46 INTERCONTINENTAL BALLISTIC MISSILE</b>	<b>65,629</b>	<b>70,429</b>
Conventional Strike Mission Integration Demonstration		4,800
<b>47 WIDEBAND GAFILLER SYSTEM RDT&amp;E (SPACE)</b>	<b>12,422</b>	<b>52,422</b>
Program Sustain and Evolution		40,000
<b>49 POLLUTION PREVENTION (DEM/VAL)</b>	<b>2,877</b>	<b>11,677</b>
Microcomposite Coatings for Chrome Replacement		800
Program Increase		8,000
<b>52 ALTERNATIVE FUELS</b>	<b>28,464</b>	<b>59,864</b>
Alternative Energy - Tin City		500
Eielson AFB Coal to Liquid Initiative		5,000
Air Force Requested Transfer (Note: Includes transfer from OM, AF Line 41A)		25,900
<b>55 OPERATIONALLY RESPONSIVE SPACE</b>	<b>110,032</b>	<b>197,232</b>
Micro-Satellite Serial Manufacturing to Include Academic Outreach Educational Program		800
Chip Scale Atomic Clock		2,400
Ballistic Missile Technology		2,400
Florida National Guard Missile Range Safety Technology		1,600
Infrared Sensor Payload Development and Demonstration (Note: Includes transfer from Line 70)		75,000
Low-Earth Orbit Nanosatellite Integrated Defense Autonomous Systems		5,000
<b>59 B-1B</b>	<b>128,871</b>	<b>143,031</b>
FIDL and CITS Program Increase (Note: Air Force requested transfer from AP,AF Line 25)		10,000
B-1 Bomber 16-Carry Adapter Weapons Initiative		4,160
<b>60 SPECIALIZED UNDERGRADUATE FLIGHT TRAINING</b>	<b>7,462</b>	<b>13,462</b>
AT-6B Capabilities Demonstration for the Air National Guard		6,000

R-1	Budget Request	Recommendation
<b>61 B-2 ADVANCED TECHNOLOGY BOMBER</b>	<b>351,417</b>	<b>365,077</b>
Air Force Requested Transfer (Note: Air Force requested transfer to AP,AF Line 24)		-18,500
B-2 Integrated Strike Warfare		12,720
B-2 Moving Target Kill (MTK)/SDB II		8,240
B-2 Advanced Tactical Data Link		11,200
<b>63 ELECTRONIC WARFARE DEVELOPMENT</b>	<b>54,995</b>	<b>56,495</b>
Rapid Replacement of Mission Critical Electronics to Support High Usage Wartime Aircraft Deployments		1,500
<b>65 SMALL DIAMETER BOMB (SDB)</b>	<b>125,067</b>	<b>126,667</b>
M-PACT High Pressure Pure Air Generator System		1,600
<b>66 COUNTERSPACE SYSTEMS</b>	<b>74,918</b>	<b>76,518</b>
Space Control Test Capabilities		1,600
<b>69 SPACE BASED INFRARED SYSTEM (SBIRS) HIGH EMD</b>	<b>529,771</b>	<b>544,771</b>
SBIRS Space HEO Ground Integration		15,000
<b>70 ALTERNATIVE INFRARED SPACE SYSTEM (AIRSS)</b>	<b>149,064</b>	<b>960</b>
Third Generation Infrared System (3GIRS) (Note: Transferred to Line 55)		-149,064
Advanced Staring Infrared Testbed (ASIRT) Technology Demonstration		960
<b>75 LIFE SUPPORT SYSTEMS</b>	<b>10,998</b>	<b>16,598</b>
ACES 5 Ejection Seat		5,600
<b>77 INTEGRATED COMMAND &amp; CONTROL APPLICATIONS (IC2A)</b>	<b>177</b>	<b>5,777</b>
Distributed Mission Interoperability Toolkit (DMIT)		1,600
ASSET eWing and Data Fusion Technology Integration		4,000
<b>78 INTELLIGENCE EQUIPMENT</b>	<b>1,488</b>	<b>2,288</b>
Integrated SAR/PI Evaluator for Critical Target and Activity Recognition (INSPECTAR)		800
<b>80 JOINT STRIKE FIGHTER (JSF)</b>	<b>1,524,016</b>	<b>1,739,016</b>
Alternate Engine		215,000
<b>82 RDT&amp;E FOR AGING AIRCRAFT</b>	<b>13,828</b>	<b>17,028</b>
KC-135R Tanker Blended Winglet Development		3,200
<b>83 NEXT GENERATION AERIAL REFUELING AIRCRAFT</b>	<b>831,759</b>	<b>23,000</b>
Transfer to Tanker Replacement Transfer Fund		-808,759
<b>84 CSAR-X RDT&amp;E</b>	<b>305,062</b>	<b>233,027</b>
Request Ahead of Need/Contract Delay		-40,000
Adjustment due to Fiscal Year 2008 Unobligated Balance		-32,035
<b>86 LINK-16 SUPPORT AND SUSTAINMENT</b>	<b>186,213</b>	<b>193,813</b>
Program Increase		6,400
Flexible Access Secure Transfer (FAST)		1,200
<b>87 E-10 SQUADRONS</b>	<b>42,215</b>	<b>0</b>
Transfer to Global Hawk Line 195		-42,215

R-1	Budget Request	Recommendation
<b>90 JOINT CARGO AIRCRAFT (JCA)</b>	<b>26,777</b>	<b>16,777</b>
Unexecutable request		-10,000
<b>94 MAJOR T&amp;E INVESTMENT</b>	<b>61,818</b>	<b>69,418</b>
FPS-16 Radar Mobilization Upgrade		2,800
Eglin AFB Range Operations Center (ROCC) Initiative		800
Holloman High Speed Test Track		4,000
<b>95 RAND PROJECT AIR FORCE</b>	<b>28,676</b>	<b>31,676</b>
Program Increase		3,000
<b>101 FACILITIES RESTORATION &amp; MODERNIZATION - TEST &amp; EVAL</b>	<b>46,234</b>	<b>49,434</b>
Base Facility Energy Independence		3,200
<b>102 FACILITIES SUSTAINMENT - TEST AND EVALUATION SUPPORT</b>	<b>28,898</b>	<b>36,298</b>
Internal Base Facility Energy Independence - Solar		1,600
Low Profile Arresting Gear		800
Sustainable Energy Vermont National Guard Demonstration Projects		5,000
<b>108 B-52 SQUADRONS</b>	<b>38,651</b>	<b>47,651</b>
Core Component Jammer (CCJ)		9,000
<b>117 MQ-9 UAV</b>	<b>43,557</b>	<b>46,557</b>
MQ-9 Reaper - UAS AirPortal, Hancock Field		3,000
<b>118 A-10 SQUADRONS</b>	<b>0</b>	<b>4,000</b>
Scorpion Low Cost Helmet Mounted Cueing and Information Display System		4,000
<b>119 F-16 SQUADRONS</b>	<b>123,979</b>	<b>127,179</b>
Synthetic Aperture Radar (SAR) Thunder Radar Pod (TRP)		3,200
<b>120 F-15E SQUADRONS</b>	<b>184,213</b>	<b>199,413</b>
F-15 AN/ALR-56C RWR Digital Receiver Upgrade		3,200
F-15 AESA Development and Demonstration		12,000
<b>122 F-22 SQUADRONS</b>	<b>700,305</b>	<b>607,305</b>
Funding for Engines Provided Previously		-38,000
Program Growth		-35,000
Lab Infrastructure Program Growth		-20,000
<b>132 JOINT AIR-TO-SURFACE STANDOFF MISSILE (JASSM)</b>	<b>13,035</b>	<b>33,035</b>
JASSM Extended Range Development (Note: Transferred from MP,AF Line 2)		20,000
<b>133 AIR AND SPACE OPERATIONS CENTER (AOC)</b>	<b>118,834</b>	<b>98,834</b>
ASOC increment 10.2 program delay		-20,000
<b>141 FIGHTER TACTICAL DATA LINK</b>	<b>62,788</b>	<b>57,788</b>
Advanced Tactical Data Link program delay		-5,000
<b>145 JOINT SURVEILLANCE AND TARGET ATTACK RADAR SYSTEM</b>	<b>97,641</b>	<b>81,541</b>
Funded in FY08 Supplemental - DMS		-36,100
Multi Platform Radar Technology Improvement Program (MPRTIP) Integration and Test on JSTARS		20,000

R-1	Budget Request	Recommendation
<b>154 NATIONAL AIR INTELLIGENCE CENTER</b>		<b>1,360</b>
Air Cargo Tracking and Analysis/Secure Skies		1,360
<b>164 GLOBAL COMMAND AND CONTROL SYSTEM</b>	<b>3,218</b>	<b>7,218</b>
Command and Control Service Level Management (C2SLM) Program		4,000
<b>167 SPECIAL ACTIVITIES</b>		<b>5,600</b>
Massively Parallel Optical Interconnects (MPOI) for ISR Satellites		1,600
Radiation Hardened Microelectronics (HX5000) Carbon Nanotube Sensors		2,000
Ultralight Aerospace Nanotube Conductors		2,000
<b>170 ADVANCED GEOSPATIAL INTELLIGENCE</b>		<b>2,000</b>
Advanced Technical Intelligence Center		2,000
<b>184 NAVSTAR GLOBAL POSITIONING SYSTEM (USER EQUIPMENT)</b>	<b>127,513</b>	<b>131,513</b>
Transportable Transponder Landing System		4,000
<b>190 INTELLIGENCE SUPPORT TO INFORMATION OPERATIONS</b>	<b>1,237</b>	<b>3,637</b>
Warfighter Support Using HELIOS		2,400
<b>191 AIRBORNE RECONNAISSANCE SYSTEMS</b>	<b>149,752</b>	<b>104,152</b>
Blackswift - Unjustified Program		-50,000
Multiple UAS Cooperative Concentrated Observation and Engagement Against a Common Ground Objective		4,400
<b>192 MANNED RECONNAISSANCE SYSTEMS</b>	<b>12,819</b>	<b>17,859</b>
Rivet Joint ISR Network Integration		2,000
Combat Sent Wideband Sensor Upgrade Program		3,040
<b>194 PREDATOR UAV (JMIP)</b>	<b>24,773</b>	<b>37,173</b>
Predator Mission Aircrew Training System (PMATS) Upgrade		2,400
Center of Excellence for Defense UAV Education		4,000
Multi-Sensor Detect, See and Avoid		6,000
<b>195 GLOBAL HAWK UAV</b>	<b>284,292</b>	<b>311,507</b>
Program Execution		-15,000
Transferred from E-10 Line 87		42,215
<b>197 GPS III SPACE SEGMENT</b>	<b>420,342</b>	<b>393,342</b>
Contract Award Delay		-27,000
<b>201 NATIONAL SECURITY SPACE OFFICE</b>	<b>10,797</b>	<b>7,797</b>
Program Reduction		-3,000
<b>205 C-130 AIRLIFT SQUADRON</b>	<b>172,560</b>	<b>179,760</b>
Electromagnetic In-Flight Propeller Balancing System		2,000
C-130 Automated Inspection, Repair, Corrosion and Aircraft Tracking Condition-Based Maintenance Plus		3,200
NP 2000 Propeller System - Air National Guard Special Missions C-130		2,000
<b>206 C-5 AIRLIFT SQUADRONS</b>	<b>125,063</b>	<b>127,463</b>
Inductive Thermography Systems Inspection		2,400

R-1	Budget Request	Recommendation
<b>208 C-130J PROGRAM</b>	<b>52,354</b>	<b>27,354</b>
International Block Upgrade Savings		-25,000
<b>209 LARGE AIRCRAFT IR COUNTERMEASURES (LAIRCM)</b>	<b>32,100</b>	<b>36,500</b>
LAIRCM for AFSOC AC/MC-130 Aircraft		4,400
<b>214 AIR MOBILITY TACTICAL DATA LINK</b>		<b>8,000</b>
MAF-Data Link Integration (Note: Air Force requested transfer from APAF, Line 59)		8,000
<b>215 SPECIAL TACTICS / COMBAT CONTROL</b>	<b>5,728</b>	<b>7,728</b>
Next Generation Tactical Environmental Clothing for AFSOC		2,000
<b>217 ACQUISITION AND MANAGEMENT SUPPORT</b>	<b>34,428</b>	<b>37,228</b>
Acquisition Data Repository (ADR)		2,800
<b>218 INDUSTRIAL PREPAREDNESS</b>	<b>0</b>	<b>4,800</b>
Technology Insertion Demonstration and Evaluation (TIDE)		3,200
Laser Peening for Friction Stir Welded Aerospace Structures		1,600
<b>220 LOGISTICS INFORMATION TECHNOLOGY (LOGIT)</b>	<b>189,679</b>	<b>159,679</b>
ECSS Unjustified Growth/Program Delay		-30,000
<b>221 SUPPORT SYSTEMS DEVELOPMENT</b>	<b>8,145</b>	<b>46,945</b>
WR-ALC Strategic Airlift Aircraft Availability Improvement		3,360
Expeditionary 200 kW+ Alternative Power Generator		800
Micro-Grid Energy Storage Utilizing a Deployable Zinc-Bromide Flow Battery		1,600
Alternative Energy Fuel Cell Power		1,600
Accelerator-Driven Non-Destructive Testing		2,000
Eielson Air Force Base Alternative Energy Source Program		2,400
Technical Order Modernization Environment		1,440
Alternative Energy Research		20,000
Assessment of Alternative Energy for Aircraft Ground Equipment		1,600
Freedom Fuels/Coal Fuels Alliance		3,200
Warner Robbins Air Logistics Center Special Operations Forces		800
<b>223 OTHER PERSONNEL ACTIVITIES</b>	<b>116</b>	<b>1,116</b>
Expert Organization Development System (EXODUS)		1,000
<b>FINANCIAL MANAGEMENT INFORMATION SYSTEMS</b>		
<b>228 DEVELOPMENT</b>	<b>31,782</b>	<b>16,782</b>
DEAMS program delay		-15,000
<b>999 CLASSIFIED PROGRAMS</b>	<b>10,304,689</b>	<b>9,740,588</b>
Classified Programs		-579,941
Remote Suspect Identification		3,200
Thermal IR Processing and Exploitation Cell (TPEC)		2,400
Close Proximity Space Situational Awareness		640
Carbon Nanotube-based Radiation Hard Nano-Electronics Devices		7,200
Carbon Nanotube Enhanced Power Sources for Space		2,400

## MAUI SPACE SURVEILLANCE SYSTEM (MSSS)

The bill provides an increase of \$22,000,000 over the budget request for sustainment, investment in new technologies and initiatives, and research and development activities at MSSS. The Air Force is directed to base its overhead charges only on the amount requested. None of the increases provided here shall be subject to Air Force taxes or withholdings. Furthermore, research funds should be allocated by Air Force officials on-site to local programs that offer the greatest potential return and merit.

## SPACE MAJOR FORCE PROGRAM

In the Fiscal Year 2008 Department of Defense Appropriations Act, the Secretary of Defense was directed to create a major force program category for space for the future years defense program of the Department of Defense. Further clarification toward this intent is required. The virtual major force program has been an established measure for several years and it is considered an acceptable foundation for development of the final space major force program inventory. The current virtual major force program includes space-based assets and the associated non-space, command, control, communications, and intelligence assets supporting the space systems.

Space systems are not just the satellites resident in the exo-atmosphere but also include the associated terminal programs. In the past, these terminal programs were desynchronized from the space platforms due to funding shortfalls and schedule delays. In the future, a tighter coupling of these programs is required. Therefore, these terminal programs must be included in the space major force program inventory. The Department of Defense is directed to implement the final space major force program prior to the submission of the fiscal year 2011 budget. Furthermore, six months after enactment of this Act, the Secretary of Defense is directed

to report to the congressional defense committees the status of the population and development of the space major force program.

## MISSILE WARNING

The current Defense Support Program constellation of satellites is aging and needs to be replaced. The Air Force has been pursuing the Space Based Infrared Satellite System—geosynchronous (SBIRS-GEO) component for over a decade and the development is almost complete. A sister system, Space Based Infrared Satellite System—highly elliptical orbit (SBIRS-HEO) has launched, successfully initialized, and is providing extraordinary data, well beyond expectations. However, the SBIRS-HEO component is not fully integrated into the ground system, so the data products are not fully exploited. Therefore, the bill includes \$15,000,000 above the budget request to be used for increased SBIRS-HEO ground integration and data exploitation.

Furthermore, to date the Department of Defense has not planned for additional SBIRS-GEO satellites. In order to avoid a production break and the associated costs, the Department of Defense is directed to begin procurement of the fourth and fifth SBIRS-GEO satellites in the fiscal year 2010 budget request.

## NATIONAL SECURITY SPACE OFFICE

The original intent of the National Security Space Office (NSSO) was to provide the Executive Agent for Space with an analysis team that would make recommendations to the priorities, capabilities and budgets of both the Department of Defense and intelligence community space programs. In recent years, the NSSO has lost the support of the National Reconnaissance Office, which has provided no funding for the NSSO, and the Air Force and other Department of Defense organizations have used the NSSO as personal staff. The Secretary of Defense and the Director of National Intelligence are di-

rected to assess the roles and responsibilities of the NSSO and to report back to the congressional defense oversight committees by May 15, 2009.

## COAL TO LIQUID FUELS

The Congress understands that the Air Force is strongly committed to an energy strategy that looks to certify their entire fleet of aircraft on a synthetic fuel blend by 2011, with the intent to purchase 50 percent of their aviation fuel used in the United States in the form of a synthetic fuel blend by 2016. Part of this strategy involves examining at the feasibility, cost effectiveness, and environmental impacts of building coal-to-liquid fuel (CTL) plants, utilizing enhanced-use leasing authorities. It is envisioned that these plants would be built in strategic locations, where there are abundant coal and water resources to operate these plants. Consistent with the Air Force vision and availability of resources necessary for a CTL plant, a total of \$10,000,000 is provided only to support Air Force efforts in siting and contracting for such a plant on Eielson Air Force Base. This funding is split between Operation and Maintenance, Air Force, and Research, Development, Test and Evaluation, Air Force accounts.

The Secretary of the Air Force is directed to submit a report to the congressional defense committees no later than April 1, 2009, which provides the framework for a joint partnership between the Department of Defense and a private developer, to include an associated milestone schedule, a preliminary design, engineering studies, and the plan to accomplish any required environmental work.

## RESEARCH, DEVELOPMENT, TEST AND EVALUATION, DEFENSE-WIDE

For Research, Development, Test and Evaluation, Defense-Wide, funds are to be available for fiscal year 2009, as follows:

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST
-----				
RESEARCH, DEVELOPMENT, TEST & EVAL, DEFENSE-WIDE				
BASIC RESEARCH				
1	DTRA UNIVERSITY STRATEGIC PARTNERSHIP BASIC RESEARCH..	18,000	22,400	+4,400
2	DEFENSE RESEARCH SCIENCES.....	195,657	203,037	+7,380
3	GOVERNMENT/INDUSTRY COSPONSORSHIP OF UNIVERSITY RESEAR	---	4,400	+4,400
4	DEFENSE EXPERIMENTAL PROGRAM TO STIMULATE COMPETITIVE	2,833	14,833	+12,000
5	NATIONAL DEFENSE EDUCATION PROGRAM.....	68,972	68,972	---
6	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM.....	53,191	72,791	+19,600
TOTAL, BASIC RESEARCH.....		338,653	386,433	+47,780
-----				
APPLIED RESEARCH				
7	INSENSITIVE MUNITIONS--EXPLORATORY DEVELOPMENT.....	15,254	15,254	---
9	HISTORICALLY BLACK COLLEGES & UNIV (HBCU) SCIENCE.....	15,156	41,556	+26,400
10	LINCOLN LABORATORY RESEARCH PROGRAM.....	31,340	31,340	---
11	INFORMATION AND COMMUNICATIONS TECHNOLOGY.....	254,009	252,109	-1,900
12	COGNITIVE COMPUTING SYSTEMS.....	145,262	145,262	---
13	BIOLOGICAL WARFARE DEFENSE.....	66,291	56,291	-10,000
14	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM.....	203,731	234,131	+30,400
15	HUMAN, SOCIAL AND CULTURE BEHAVIOR MODELING (HSCB) APP	7,685	7,685	---
16	TACTICAL TECHNOLOGY.....	371,481	353,881	-17,600
17	MATERIALS AND BIOLOGICAL TECHNOLOGY.....	285,264	283,664	-1,600
18	WMD DEFEAT TECHNOLOGY.....	---	1,200	+1,200
19	ELECTRONICS TECHNOLOGY.....	211,457	199,937	-11,520
21	WEAPONS OF MASS DESTRUCTION DEFEAT TECHNOLOGIES.....	211,078	213,078	+2,000
23	SPECIAL OPERATIONS TECHNOLOGY DEVELOPMENT.....	23,104	38,504	+15,400
24	SOF MEDICAL TECHNOLOGY DEVELOPMENT.....	2,459	2,459	---
25	INSENSITIVE MUNITIONS - ADVANCED DEVELOPMENT.....	15,970	9,970	-6,000
TOTAL, APPLIED RESEARCH.....		1,859,541	1,886,321	+26,780

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST	
26	ADVANCED TECHNOLOGY DEVELOPMENT SO/LIC ADVANCED DEVELOPMENT.....	32,832	33,632	+800
27	COMBATING TERRORISM TECHNOLOGY SUPPORT.....	79,970	123,690	+43,720
28	COUNTERPROLIFERATION INITIATIVES--PROLIF PREV & DEFEAT	211,325	219,645	+8,320
29	BALLISTIC MISSILE DEFENSE TECHNOLOGY.....	118,718	119,718	+1,000
30	JOINT DOD-DOE MUNITIONS TECHNOLOGY DEVELOPMENT.....	23,727	23,727	---
31	ADVANCED AEROSPACE SYSTEMS.....	107,857	87,857	-20,000
32	SPACE PROGRAMS AND TECHNOLOGY.....	287,009	227,009	-60,000
33	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM - ADVANCED DEV	337,927	316,827	-21,100
34	JOINT ELECTRONIC ADVANCED TECHNOLOGY.....	9,320	10,520	+1,200
35	JOINT CAPABILITY TECHNOLOGY DEMONSTRATIONS.....	206,337	208,237	+1,900
36	NETWORKED COMMUNICATIONS CAPABILITIES.....	39,923	29,923	-10,000
37	BIOMETRICS SCIENCE AND TECHNOLOGY.....	10,579	10,579	---
38	HUMAN, SOCIAL AND CULTURE BEHAVIOR MODELING (HSCB) ADV	9,381	9,381	---
39	DEFENSE-WIDE MANUFACTURING SCIENCE AND TECHNOLOGY PROG	11,981	18,381	+6,400
40	JOINT ROBOTICS PROGRAM/AUTONOMOUS SYSTEMS.....	8,449	9,249	+800
41	GENERIC LOGISTICS R&D TECHNOLOGY DEMONSTRATIONS.....	19,375	76,135	+56,760
42	DEPLOYMENT AND DISTRIBUTION ENTERPRISE TECHNOLOGY.....	30,000	30,000	---
43	STRATEGIC ENVIRONMENTAL RESEARCH PROGRAM.....	69,038	69,038	---
44	MICROELECTRONIC TECHNOLOGY DEVELOPMENT AND SUPPORT....	---	32,480	+32,480
45	JOINT WARFIGHTING PROGRAM.....	11,098	12,098	+1,000
46	ADVANCED ELECTRONICS TECHNOLOGIES.....	201,146	200,046	-1,100
47	SYNTHETIC APERTURE RADAR (SAR) COHERENT CHANGE DETECT.	7,984	7,984	---
48	ADVANCED CONCEPT TECHNOLOGY DEMONSTRATIONS.....	---	1,200	+1,200
49	HIGH PERFORMANCE COMPUTING MODERNIZATION PROGRAM.....	208,079	221,559	+13,480
50	COMMAND, CONTROL AND COMMUNICATIONS SYSTEMS.....	338,964	328,964	-10,000
52	CLASSIFIED DARPA PROGRAMS.....	196,697	196,697	---
53	NETWORK-CENTRIC WARFARE TECHNOLOGY.....	156,733	154,433	-2,300
54	SENSOR TECHNOLOGY.....	226,470	218,070	-8,400
55	GUIDANCE TECHNOLOGY.....	110,572	108,272	-2,300
56	DISTRIBUTED LEARNING ADVANCED TECHNOLOGY DEVELOPMENT..	13,538	13,538	---
57	SOFTWARE ENGINEERING INSTITUTE.....	31,244	31,244	---
59	QUICK REACTION SPECIAL PROJECTS.....	113,924	107,385	-6,539
60	JOINT EXPERIMENTATION.....	114,947	109,377	-5,570
61	JOINT WARGAMING SIMULATION MANAGEMENT OFFICE.....	38,147	33,787	-4,360

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST
62 TEST & EVALUATION SCIENCE & TECHNOLOGY.....	94,672	94,672	---
63 TECHNOLOGY LINK.....	2,170	5,770	+3,600
64 SPECIAL OPERATIONS ADVANCED TECHNOLOGY DEVELOPMENT....	28,930	61,250	+32,320
65 SPECIAL OPERATIONS ADVANCED TECHNOLOGY DEVELOPMENT....	10,990	10,990	---
TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT.....	3,520,053	3,573,364	+53,311
DEMONSTRATION & VALIDATION			
66 NUCLEAR AND CONVENTIONAL PHYSICAL SECURITY EQUIPMENT .	38,758	50,158	+11,400
68 RETRACT LARCH.....	22,945	22,945	---
69 JOINT ROBOTICS PROGRAM.....	11,847	11,847	---
70 ADVANCE SENSOR APPLICATIONS PROGRAM.....	---	16,000	+16,000
71 ENVIRONMENTAL SECURITY TECHNICAL CERTIFICATION PROGRAM	31,600	38,904	+7,304
72 BALLISTIC MISSILE DEFENSE TERMINAL DEFENSE SEGMENT....	1,019,073	959,973	-59,100
73 BALLISTIC MISSILE DEFENSE MIDCOURSE DEFENSE SEGMENT...	2,076,662	1,512,662	-564,000
73a TWO STAGE INTERCEPTOR SEGMENT.....	---	363,250	+363,250
73b EUROPEAN MIDCOURSE RADAR.....	---	76,800	+76,800
73c EUROPEAN GLOBAL ENGAGEMENT MANGER/U.S. COMMUNICATIONS.	---	27,100	+27,100
74 BALLISTIC MISSILE DEFENSE BOOST DEFENSE SEGMENT.....	421,229	402,129	-19,100
75 CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM.....	51,291	62,891	+11,600
76 BALLISTIC MISSILE DEFENSE SENSORS.....	1,076,983	770,232	-306,751
77 BALLISTIC MISSILE DEFENSE SYSTEM INTERCEPTOR.....	386,817	386,817	---
78 BALLISTIC MISSILE DEFENSE TEST & TARGETS.....	665,445	914,845	+249,400
79 BALLISTIC MISSILE DEFENSE SYSTEMS CORE.....	432,262	404,162	-28,100
80 SPECIAL PROGRAMS - MDA.....	288,315	176,315	-112,000
81 AEGIS BMD.....	1,157,783	1,117,483	-40,300
82 SPACE SURVEILLANCE & TRACKING SYSTEM.....	242,441	209,641	-32,800
83 MULTIPLE KILL VEHICLES.....	354,455	284,455	-70,000
84 BALLISTIC MISSILE DEFENSE SYSTEM SPACE PROGRAMS.....	29,771	24,771	-5,000
85 BALLISTIC MISSILE DEFENSE C2BMC.....	289,277	289,277	---
86 BALLISTIC MISSILE DEFENSE HERCULES.....	55,955	55,955	---
87 BALLISTIC MISSILE DEFENSE JOINT WARFIGHTER SUPPORT....	69,982	69,982	---
88 BALLISTIC MISSILE DEFENSE JOINT NATIONAL INTERGRATION.	96,404	106,404	+10,000
90 REGARDING TRENCH.....	2,978	2,978	---
91 SEA BASED X-BAND RADAR (SBX).....	---	147,400	+147,400
92 HUMANITARIAN DEMINING.....	14,373	14,373	---
93 COALITION WARFARE.....	14,030	13,319	-711

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST
94 DEPARTMENT OF DEFENSE CORROSION PROGRAM.....	5,102	22,402	+17,300
95 JOINT CAPABILITY TECHNOLOGY DEMONSTRATIONS.....	14,962	13,562	-1,400
96 HUMAN, SOCIAL AND CULTURE BEHAVIOR MODELING (HSCB) RES	5,991	5,991	---
97 JOINT SYSTEMS INTEGRATION COMMAND (JSIC).....	19,643	19,643	---
98 JOINT FIRES INTEGRATION & INTEROPERABILITY TEAM.....	16,906	16,906	---
99 REDUCTION OF TOTAL OWNERSHIP COST.....	24,765	24,765	---
100 JOINT ELECTROMAGNETIC TECHNOLOGY (JET) PROGRAM.....	3,524	5,524	+2,000
101 DEFENSE ACQUISITION CHALLENGE PROGRAM (DACP).....	30,363	28,566	-1,797
102 NUCLEAR AND CONVENTIONAL PHYSICAL SECURITY EQUIPMENT .	4,355	4,355	---
103 PROMPT GLOBAL STRIKE.....	117,572	74,572	-43,000
TOTAL, DEMONSTRATION & VALIDATION.....	9,093,859	8,749,354	-344,505
ENGINEERING & MANUFACTURING DEVELOPMENT			
104 CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM.....	299,373	304,173	+4,800
105 JOINT ROBOTICS PROGRAM.....	5,725	5,725	---
106 ADVANCED IT SERVICES JOINT PROGRAM OFFICE (AITS-JPO)..	13,770	13,770	---
107 JOINT TACTICAL INFORMATION DISTRIBUTION SYSTEM (JTIDS)	20,600	20,600	---
108 WEAPONS OF MASS DESTRUCTION DEFEAT CAPABILITIES.....	15,946	15,946	---
109 INFORMATION TECHNOLOGY DEVELOPMENT.....	11,611	12,411	+800
110 DEFENSE INTEGRATED MILITARY HUMAN RESOURCES SYSTEM....	37,400	37,400	---
111 BUSINESS TRANSFORMATION AGENCY R&D ACTIVITIES.....	148,958	148,958	---
112 HOMELAND PERSONNEL SECURITY INITIATIVE.....	400	400	---
113 TRUSTED FOUNDRY.....	42,360	42,360	---
114 DEFENSE ACQUISITION EXECUTIVE (DAE) PILOT PROGRAM.....	5,883	5,883	---
116 GLOBAL COMBAT SUPPORT SYSTEM.....	18,604	18,604	---
117 JOINT COMMAND AND CONTROL PROGRAM (JC2).....	147,339	57,339	-90,000
TOTAL, ENGINEERING & MANUFACTURING DEVELOPMENT.....	767,969	683,569	-84,400
RDT&E MANAGEMENT SUPPORT			
118 TRAINING TRANSFORMATION (T2).....	38,729	58,329	+19,600
119 DEFENSE READINESS REPORTING SYSTEM (DRRS).....	11,385	11,385	---
120 JOINT SYSTEMS ARCHITECTURE DEVELOPMENT.....	14,310	14,310	---
121 CENTRAL TEST AND EVALUATION INVESTMENT DEVELOPMENT....	133,852	152,852	+19,000
122 THERMAL VICAR.....	9,658	9,658	---
123 JOINT MISSION ENVIRONMENT TEST CAPABILITY (JMETC).....	8,834	8,834	---
124 TECHNICAL STUDIES, SUPPORT AND ANALYSIS.....	34,520	36,520	+2,000

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST
125 USD(A&T)--CRITICAL TECHNOLOGY SUPPORT.....	4,007	4,007	---
126 FOREIGN MATERIAL ACQUISITION AND EXPLOITATION.....	62,816	62,816	---
127 JOINT THEATER AIR AND MISSILE DEFENSE ORGANIZATION....	55,282	55,282	---
128 CLASSIFIED PROGRAM USD(P).....	---	102,000	+102,000
129 FOREIGN COMPARATIVE TESTING.....	34,910	34,910	---
130 NUCLEAR MATTERS - PHYSICAL SECURITY.....	4,475	4,475	---
131 SUPPORT TO NETWORKS AND INFORMATION INTEGRATION.....	14,723	14,723	---
132 GENERAL SUPPORT TO USD (INTELLIGENCE).....	4,379	4,379	---
133 CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM.....	100,082	100,082	---
139 SMALL BUSINESS INNOVATION RESEARCH/CHALLENGE ADMINISTR	2,165	5,765	+3,600
140 DEFENSE TECHNOLOGY ANALYSIS.....	11,040	11,040	---
142 FORCE TRANSFORMATION DIRECTORATE.....	20,701	23,201	+2,500
143 DEFENSE TECHNICAL INFORMATION CENTER (DTIC).....	52,696	52,696	---
144 R&D IN SUPPORT OF DOD ENLISTMENT, TESTING & EVALUATION	25,435	18,435	-7,000
145 DEVELOPMENT TEST AND EVALUATION.....	20,396	23,596	+3,200
146 DARPA AGENCY RELOCATION.....	28,000	28,000	---
147 MANAGEMENT HEADQUARTERS (RESEARCH & DEVELOPMENT).....	52,700	48,700	-4,000
148 BUDGET AND PROGRAM ASSESSMENTS.....	5,878	5,878	---
151 SUPPORT TO INFORMATION OPERATIONS (IO) CAPABILITIES...	30,039	35,159	+5,120
152 INFORMATION TECHNOLOGY RAPID ACQUISITION.....	5,254	5,254	---
153 CYBER SECURITY INITIATIVE.....	50,000	50,000	---
154 INTELLIGENCE SUPPORT TO INFORMATION OPERATIONS (IO)...	17,625	17,625	---
155 INTELLIGENCE SUPPORT TO INFORMATION OPERATIONS(IO)(NSA	---	1,200	+1,200
156 WARFIGHTING AND INTELLIGENCE-RELATED SUPPORT.....	831	831	---
157 PENTAGON RESERVATION.....	19,734	19,734	---
158 MANAGEMENT HEADQUARTERS - MDA.....	86,453	81,453	-5,000
159 IT SOFTWARE DEV INITIATIVES.....	599	599	---
TOTAL, RDT&E MANAGEMENT SUPPORT.....	961,508	1,103,728	+142,220
OPERATIONAL SYSTEMS DEVELOPMENT			
160 DEFENSE INFORMATION SYSTEM FOR SECURITY (DISS).....	11,533	5,533	-6,000
161 PARTNERSHIP FOR PEACE (PFP) INFORMATION MANAGEMENT SYS	2,496	2,496	---
162 CHEMICAL AND BIOLOGICAL DEFENSE (OPERATIONAL SYSTEMS D	10,274	12,674	+2,400
163 JOINT INTEGRATION AND INTEROPERABILITY.....	49,371	49,371	---
164 JOINT STAFF ANALYTICAL SUPPORT.....	8,030	8,030	---
165 CLASSIFIED PROGRAMS.....	1,728	1,728	---

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST
166 C4I INTEROPERABILITY.....	76,226	76,226	---
167 CRYPTOLOGIC ACTIVITIES.....	---	3,200	+3,200
168 JOINT/ALLIED COALITION INFORMATION SHARING.....	19,073	19,073	---
177 NATIONAL MILITARY COMMAND SYSTEM-WIDE SUPPORT.....	615	615	---
178 DEFENSE INFO INFRASTRUCTURE ENGINEERING AND INTEGRATIO	16,054	16,054	---
179 LONG HAUL COMMUNICATIONS (DCS).....	8,508	8,508	---
180 MINIMUM ESSENTIAL EMERGENCY COMMUNICATIONS NETWORK....	9,685	9,685	---
181 PUBLIC KEY INFRASTRUCTURE (PKI).....	15,577	15,577	---
182 KEY MANAGEMENT INFRASTRUCTURE (KMI).....	49,578	49,578	---
183 INFORMATION SYSTEMS SECURITY PROGRAM.....	13,459	13,459	---
184 INFORMATION SYSTEMS SECURITY PROGRAM.....	394,074	403,574	+9,500
186 DISA MISSION SUPPORT OPERATIONS.....	2,181	2,181	---
187 C4I FOR THE WARRIOR.....	3,662	3,662	---
189 GLOBAL COMMAND AND CONTROL SYSTEM.....	36,374	36,374	---
190 JOINT SPECTRUM CENTER.....	19,319	19,319	---
191 NET-CENTRIC ENTERPRISE SERVICES (NCES).....	429	429	---
192 TELEPORT PROGRAM.....	2,060	2,060	---
193 SPECIAL APPLICATIONS FOR CONTINGENCIES.....	16,225	26,325	+10,100
195 DEFENSE GEOSPATIAL-INTELLIGENCE.....	---	1,600	+1,600
196 CYBER SECURITY INITIATIVE.....	1,000	1,000	---
198 CYBER SECURITY INITIATIVE.....	12,800	12,800	---
199 CRITICAL INFRASTRUCTURE PROTECTION (CIP).....	12,700	17,900	+5,200
201 DEFENSE JOINT COUNTERINTELLIGENCE ACTIVITIES.....	2,947	2,947	---
203 POLICY R&D PROGRAMS.....	8,237	8,237	---
206 NET CENTRICITY.....	12,716	12,716	---
210 DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS.....	3,165	765	-2,400
213 DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS.....	3,227	3,227	---
215 MQ-1 PREDATOR A UAV.....	13,679	13,679	---
218 COMBATANT COMMAND INTELLIGENCE OPERATIONS.....	---	12,880	+12,880
225 INDUSTRIAL PREPAREDNESS.....	20,480	55,280	+34,800
226 LOGISTICS SUPPORT ACTIVITIES.....	2,846	2,846	---
227 MANAGEMENT HEADQUARTERS (JCS).....	3,401	3,401	---
228 NATO JOINT STARS.....	27,756	27,756	---
231 SPECIAL OPERATIONS AVIATION SYSTEMS ADVANCED DEV.....	43,977	44,777	+800

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	RECOMMENDED	CHANGE FROM REQUEST
232 SPECIAL OPERATIONS TACTICAL SYSTEMS DEVELOPMENT.....	13,263	26,263	+13,000
233 SPECIAL OPERATIONS INTELLIGENCE SYSTEMS DEVELOPMENT...	39,125	39,974	+849
234 SOF OPERATIONAL ENHANCEMENTS.....	48,137	55,337	+7,200
235 SPECIAL OPERATIONS CV-22 DEVELOPMENT.....	38,229	40,229	+2,000
237 OPS ADVANCED SEAL DELIVERY SYSTEM (ASDS) DEVELOPMENT..	7,090	8,690	+1,600
238 MISSION TRAINING AND PREPARATION SYSTEMS (MTPS).....	4,052	5,652	+1,600
239 UNMANNED VEHICLES (UV).....	1,527	43,927	+42,400
240 MC130J SOF TANKER RECAPITALIZATION.....	4,659	4,659	---
241 SOF WEAPONS SYSTEMS.....	2,759	2,559	-200
242 SOF SOLDIER PROTECTION AND SURVIVAL SYSTEMS.....	3,190	3,190	---
243 SOF VISUAL AUGMENTATION, LASERS & SENSOR SYSTEMS.....	3,495	6,986	+3,491
244 SOF ROTARY WING AVIATION.....	3,822	1,647	-2,175
245 SOF UNDERWATER SYSTEMS.....	3,142	5,542	+2,400
246 SOF SURFACE CRAFT.....	5,206	5,206	---
247 SOF PSYOP.....	15,554	15,554	---
248 SOF GLOBAL VIDEO SURVEILLANCE ACTIVITIES.....	14,686	14,686	---
249 SOF OPERATIONAL ENHANCEMENTS INTELLIGENCE.....	8,729	8,729	---
TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT.....	1,152,127	1,296,372	+144,245
999 CLASSIFIED PROGRAMS.....	3,805,519	3,744,197	-61,322
TOTAL, RESEARCH, DEVELOPMENT, TEST & EVAL, DEF-WIDE.	21,499,229	21,423,338	-75,891

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS  
[In thousands of dollars]

R-1	Budget Request	Recommendation
<b>1 DTRA UNIVERSITY STRATEGIC PARTNERSHIP BASIC RESEARCH</b>	<b>18,000</b>	<b>22,400</b>
Dual Use Technologies for Bio-Defense: Drug Design and Delivery of Novel Therapeutics		1,200
University Strategic Partnership		3,200
<b>2 DEFENSE RESEARCH SCIENCES</b>	<b>195,657</b>	<b>203,037</b>
Infections Disease Research (AMNH) for Defense Research Sciences		2,000
Bio-Butanol Production Research		2,000
Institute for Collaborative Sciences Research		1,200
Ultra Photonics Program		1,280
Reduction to fiscal year 2009 new starts		-4,000
Advanced Materials Research Institute		2,400
Institute for Information Security		2,500
<b>3 GOVERNMENT/INDUSTRY COSPONSORSHIP OF UNIVERSITY RESEARCH</b>	<b>0</b>	<b>4,400</b>
Research of Chemical and Biological Warfare Agents		800
Shock Trauma Research Center		2,000
Integrated Cryo-cooled High Power Density Systems		1,600
<b>4 DEFENSE EXPERIMENTAL PROGRAM TO STIMULATE COMPETITIVE</b>	<b>2,833</b>	<b>14,833</b>
Program Enhancement		12,000
<b>6 CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM</b>	<b>53,191</b>	<b>72,791</b>
Continued Expansion of Prototypes for the Destruction of Airborne Pathogens Project		800
Defense Through Early Containment		1,200
High Speed, High Volume Laboratory Network for Infectious Diseases		5,000
Novel Viral Biowarfare Agent Identification and Treatment (NOVBAIT)		4,000
Zumwalt National Program for Countermeasures to Biological and Chemical Threats		1,200
Mismatch Repair Derived Antibody Medicines to Treat Staphylococcus-derived Bioweapons		1,600
DNA Safeguard		1,200
In Vitro Models for Biodefense Vaccine		1,000
Protection from Oxidative Stress		1,600
Superstructural Particle Evaluation and Characterization with Targeted Reaction Analysis (SPECTRA)		1,200
Vaccine Development Program		800
<b>9 HISTORICALLY BLACK COLLEGES &amp; UNIVERSITIES AND MINORITY SERVING INSTITUTIONS- SCIENCE</b>	<b>15,156</b>	<b>41,556</b>
Morehouse College, John Hopps Program		1,600
Defense Leadership and Technology Initiative		2,400
Program Increase		20,000
Instrumentation Program for Tribal Colleges		2,400

R-1	Budget Request	Recommendation
<b>11 INFORMATION AND COMMUNICATIONS TECHNOLOGY</b>	<b>254,009</b>	<b>252,109</b>
Software Assurance Education and Research Institute		800
National Repository of Digital Forensic Intelligence (NRDFI) and the Center for Telecommunications and Network Security (CTANS)		1,200
Intelligent Remote Sensing for Urban Warfare Operations		2,400
Reduction to fiscal year 2009 new starts		-7,900
Document Analysis and Exploitation		1,600
<b>13 BIOLOGICAL WARFARE DEFENSE</b>	<b>66,291</b>	<b>56,291</b>
Program Execution Delays		-10,000
<b>14 CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM</b>	<b>203,731</b>	<b>234,131</b>
Biosurety Development and Management Program		1,200
Botulinum Neurotoxin Research		1,600
Chemical Warfare Agent Fate Appropriate Response Tool		1,600
Countermeasures to Chemical/Biological Control-Rapid Response		2,400
HyperAcute Vaccine Development		2,400
Miniaturized Chemical Detector for Chemical Warfare Protection (ChemPen)		1,600
Mixed Oxidants for Chem Bio Decontamination		2,800
Multiple Applications for Light Activated, Reactive Materials for the Protection of the Warfighter, First Responder, and Public Health		1,600
Rapid Forensic Evaluation of Microbes in Biodefense		1,000
Chemical/Biological Preparedness Center for Advanced Development of Mobile Rapid Response Prototypes		4,000
Preventing long-term brain and lung damage caused by battlefield trauma project		2,900
TMTI - Reduction to new starts		-7,000
Antibody-Based Therapeutic Against Smallpox		800
Chemical/Biological Infrared Detection System		1,200
Contaminated Human Remains Pouch		1,600
Multivalent Marburg, Ebola Filovirus Vaccine Program		3,500
Novel System for Developing Therapeutics Against Botulism		4,000
Research on a Molecular Approach to Hazardous Materials Decontamination		1,200
Ultra-rapid Next Generation Pathogen identification		2,000
<b>16 TACTICAL TECHNOLOGY</b>	<b>371,481</b>	<b>353,881</b>
Program Execution Delays		-30,000
Explosively Formed Projectile Iron Curtain		800
SeaCatcher UAS Launch and Recovery System		1,600
CEROS		10,000
<b>17 MATERIALS AND BIOLOGICAL TECHNOLOGY</b>	<b>285,264</b>	<b>283,664</b>
Program Execution Delays		-10,000
Strategic Materials and Silicon Carbide Optics		4,400
Synthetic Fuel Innovation		4,000
<b>18 WMD DEFEAT TECHNOLOGY</b>	<b>0</b>	<b>1,200</b>
Center for Nonproliferation Studies, Monterey Institute for International Affairs		1,200

R-1	Budget Request	Recommendation
<b>19 ELECTRONICS TECHNOLOGY</b>	<b>211,457</b>	<b>199,937</b>
3-D Technology for Advanced Sensor Systems		1,440
Indium Based Nitride Technology Development		3,000
Reduction to fiscal year 2009 new starts		-16,200
Secure Media and ID Card Development		240
<b>21 WEAPONS OF MASS DESTRUCTION DEFEAT TECHNOLOGIES</b>	<b>211,078</b>	<b>213,078</b>
Comprehensive National Incident Management System		2,000
<b>23 SPECIAL OPERATIONS TECHNOLOGY DEVELOPMENT</b>	<b>23,104</b>	<b>38,504</b>
Miniature, Remote Wideband Survey, Collection, and Recording System		800
Advanced Craft Technology Demonstrators to Quantify and Mitigate Operator Injury		2,000
Flashlight Soldier-to-Soldier Combat Identification System (FSCIS)		5,600
Technology Infusion Cell (TIC)		1,000
Extended-Lifetime Radioisotope Batteries		1,600
Unified Management Infrastructure System		1,200
Foliage Penetrating Reconnaissance and Surveillance System		3,200
<b>25 INSENSITIVE MUNITIONS - ADVANCED DEVELOPMENT</b>	<b>15,970</b>	<b>9,970</b>
Excessive growth		-6,000
<b>26 SO/LIC ADVANCED DEVELOPMENT</b>	<b>32,832</b>	<b>33,632</b>
Long-range Tagging and Locating System		800
<b>27 COMBATING TERRORISM TECHNOLOGY SUPPORT</b>	<b>79,970</b>	<b>123,690</b>
Biometric Terrorist Watch-List Database Management Development		1,600
Covert Sensing and Tagging System (CSTS)		1,200
Combating Terrorism Technology Support Office/STAR-TEC Partnership Program		2,400
Improved LAS Glass-Ceramic Laminated Armored Window Systems		1,600
EDIT Technology for Counter-Tunnel Operations and Cache Detection		800
Facial Recognition Technology Initiative		2,000
Facility Security Using Tactical Surveys		3,000
Low-Cost Stabilized Turret		1,600
Machine Augmented Composite Armor		800
Military/Law Enforcement Counterterrorism Test Bed		2,400
Port and Hull Security 3D, Real Time Sonar System - Echoscope		1,600
Roll-On, Roll-Off Reconnaissance, Surveillance, and Special Mission Palletized System		4,000
Tactical Biometrics Operating and Surveillance System (TBOSS)		1,600
Ultra Portable Unmanned Surveillance Helicopter		1,000
Validation of an Enhanced Urban Air Blast Tool		2,400
SOF Unattended Sensor Network (Note: only for SBIR SOCOM 03-004)		1,280
Radio Inter-Operability System (RIOS)		800
BOPPER (Bioterrorism Operations Policy for Public Emergency Response)		1,200
Document and Media Search and Discovery (DMSD)		1,440
Ex-RAD Radiation Protection Program		5,000
Full Scale Impact and Blast Loading Laboratory Testing Program		1,600
Remote Sensor Network Services Platform		2,000

R-1	Budget Request	Recommendation
Robotic Mobility Platform System		1,200
Unmanned Aerial Vehicle Avionics Upgrade (UAVAU)		1,200
<b>28 COUNTERPROLIFERATION INITIATIVES--PROLIFERATION PREVENTION &amp; DEFEAT</b>	<b>211,325</b>	<b>219,645</b>
AELED IED Electronic Signature Detection		3,200
Continuation of Advanced Materials (Mercuric Iodide) Research for Nuclear Detection, Counter-Proliferation and Imaging for CBRNE Special Operations		800
National Nuclear Security Agency (NNSA) Metals Declassification for Reuse by DoD in Armaments		2,720
Next Generation Intelligent Portable Radionuclide Detection and Identification Systems		1,600
<b>29 BALLISTIC MISSILE DEFENSE TECHNOLOGY</b>	<b>118,718</b>	<b>119,718</b>
General Reduction		-5,000
Night Vision Sensor		1,000
Multiple Target Tracking Optical Sensor Array Technology		5,000
<b>31 ADVANCED AEROSPACE SYSTEMS</b>	<b>107,857</b>	<b>87,857</b>
Unexecutable growth		-20,000
<b>32 SPACE PROGRAMS AND TECHNOLOGY</b>	<b>287,009</b>	<b>227,009</b>
Blackswift		-60,000
<b>33 CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM - ADVANCED DEVELOPMENT</b>	<b>337,927</b>	<b>316,827</b>
Transformational Medical Tech Initiative- excessive Growth in New Starts		-63,000
Antioxiant Micronutrient Therapeutic Countermeasures for Chemical Agents		800
Bio Agent Early Warning Detector		2,000
Carbon Nanotube Chemical Detector		800
Continuation of Industry Based Research into Biological Agent Identifiers without Wet Reagents		1,600
Eye-Safe Long Range Stand-off System for Detection of Chemical and Biological Weapons		1,500
Mobile Continuous Air Monitor (MCAM)		1,600
Nano Porous Hollow Fiber Regenerative Chemical Filter		1,000
Photo Catalytic Oxidation (PCO) Demonstration for Water Reuse		2,400
Protective Self-Decontaminating Surfaces		1,600
Surface Enhanced Infrared Detection of Threats		1,200
Total Perimeter Surveillance		1,000
Portable Rapid Bacterial Warfare Detection Unit		4,000
Rapid Response Institute		3,200
Liquid Crystal Sensor Technology Research and Development for Force Protection		2,400
Acinetobacter Baumannii Research		2,000
Advanced Development of Mobile Rapid Response Prototypes		1,600
Biodefense Vaccine Development and Engineering of Antiviral Peptides		1,600
Center for Advanced Emergency Response		4,400
Improved Chemical, Biological, and Radiological Filters		1,600
Multi-Purpose Biodefense Immunoarray		800
NIDS Improved Handheld Biological Agent Detector		1,600
Plant Vaccine Development		1,600
ViriChip Rapid Virus Detection Systems		1,600

R-1	Budget Request	Recommendation
<b>34 JOINT ELECTRONIC ADVANCED TECHNOLOGY</b>	<b>9,320</b>	<b>10,520</b>
Advanced Tactical Laser Flashlight Devices		1,200
<b>35 JOINT CAPABILITY TECHNOLOGY DEMONSTRATIONS</b>	<b>206,337</b>	<b>208,237</b>
Distributed Network Switching		2,000
Reduction to execution year new starts		-7,000
Maritime UAS Demonstration for the SOUTHCOM Region		3,000
Simultaneous Field Radiation Technology (SFRT)		2,300
Spartan Advanced Composite Technology		1,600
<b>36 NETWORKED COMMUNICATIONS CAPABILITIES</b>	<b>39,923</b>	<b>29,923</b>
Unsustained growth		-10,000
<b>39 DEFENSE-WIDE MANUFACTURING SCIENCE AND TECHNOLOGY PROGRAM</b>	<b>11,981</b>	<b>18,381</b>
High Performance Manufacturing Technology Initiative		6,400
<b>40 JOINT ROBOTICS PROGRAM/AUTONOMOUS SYSTEMS</b>	<b>8,449</b>	<b>9,249</b>
Joint Ground Robotics Enterprise Modeling, Simulation, Analysis Project		800
<b>41 GENERIC LOGISTICS R&amp;D TECHNOLOGY DEMONSTRATIONS</b>	<b>19,375</b>	<b>76,135</b>
Advanced Mobile Microgrid		2,720
Aging Systems Sustainment and Enabling Technologies		2,000
Connectory Expansion for Rapid Identification of Technology Sources for DoD		400
Florida Defense Manufacturing Supply Chain Initiative		2,000
High-Pressure Mobile Water Delivery System		800
On-Site Alternative Fuel Manufacturing System		1,200
Reliability Testing of Lead-Free Circuits/Components		1,440
New England Defense Manufacturing Supply Chain Initiative		800
Smart, Modular Regenerative Off-Grid Hydrogen Fuel Cell		1,000
Energy Strategy for the Department of Defense		20,000
Alternative Energy from Organic Sources		6,000
Biofuels Program		1,600
Commodity Management System Consolidation Program		1,600
Continuous Acquisition and Life-Cycle (CALs) and Integrated Data Environment and Defense Logistics Enterprise Services Program		3,200
Defense Fuelcell Locomotive		2,000
Emerging Critical Interconnection Tech		2,000
Vehicle Fuel Cell and Hydrogen Logistics Program		8,000
<b>44 MICROELECTRONIC TECHNOLOGY DEVELOPMENT AND SUPPORT</b>	<b>0</b>	<b>32,480</b>
3-D Electronics and Power		2,400
Agile JTRS Integrated Circuits		1,600
Carbon Nanotube Thin Film Devices for Portable Power		1,600
Defense Command Integration Center		880
Electronics and Materials for Flexible Sensors and Transponders (EMFST)		3,200
Feature Size Migration at DMEA AMRS Boundary		2,000
Scalable Topside Array Radar Demonstrator		800
Spintronics Memory Storage Technology		2,400
Superlattice Nanotechnology		2,000
X-Band/W-Band Solid State Power Amplifier		1,600
Semiconductor Photomask Technology Infrastructure Initiative		2,400
C-Scout Container Security System		2,400

R-1	Budget Request	Recommendation
High Performance Tunable Materials		2,400
Smart Bomb Millimeter Wave Radar Guidance System		2,000
Tunable MicroRadio for Military Systems		4,800
<b>45 JOINT WARFIGHTING PROGRAM</b>	<b>11,098</b>	<b>12,098</b>
UAV Situational Awareness System		1,000
<b>46 ADVANCED ELECTRONICS TECHNOLOGIES</b>	<b>201,146</b>	<b>200,046</b>
Hybrid Power Generation System		1,200
Reduction to fiscal year 2009 new starts		-14,900
Center for Autonomous Solar Power (CASP) large-area, flexible PV energy research		4,000
Institute of Advanced Flexible Manufacturing Systems		7,000
Ultra Low Power Electronics for Special Purpose Computers		1,600
<b>48 ADVANCED CONCEPT TECHNOLOGY DEMONSTRATIONS</b>	<b>0</b>	<b>1,200</b>
Advanced Emergency Response Integrated Environment (AERIE)		1,200
<b>49 HIGH PERFORMANCE COMPUTING MODERNIZATION PROGRAM</b>	<b>208,079</b>	<b>221,559</b>
Naval Research Lab Supercomputing Information Prototype		2,800
Arctic Regional Supercomputer		3,200
High Performance Computational Design of Novel Materials		2,480
MHPCC		5,000
<b>50 COMMAND, CONTROL AND COMMUNICATIONS SYSTEMS</b>	<b>338,964</b>	<b>328,964</b>
Growth reduction for program execution		-10,000
<b>53 NETWORK-CENTRIC WARFARE TECHNOLOGY</b>	<b>156,733</b>	<b>154,433</b>
Reduction to fiscal year 2009 new starts		-2,300
<b>54 SENSOR TECHNOLOGY</b>	<b>226,470</b>	<b>218,070</b>
Reduction to fiscal year 2009 new starts		-8,400
<b>55 GUIDANCE TECHNOLOGY</b>	<b>110,572</b>	<b>108,272</b>
Reduction to fiscal year 2009 new starts		-2,300
<b>59 QUICK REACTION SPECIAL PROJECTS</b>	<b>113,924</b>	<b>107,385</b>
Reduction to execution year new starts		-9,339
Augmented Reality to enhance Special Warfare Domain Awareness		1,600
Unmanned Aerial Vehicles		1,200
<b>60 JOINT EXPERIMENTATION</b>	<b>114,947</b>	<b>109,377</b>
Reduction for excessive growth		-6,770
Collaboration Gateway		1,200
<b>61 JOINT WARGAMING SIMULATION MANAGEMENT OFFICE</b>	<b>38,147</b>	<b>33,787</b>
Modeling and Simulation Standards Development		640
Program adjustment		-5,000
<b>63 TECHNOLOGY LINK</b>	<b>2,170</b>	<b>5,770</b>
First Link		2,000
MilTech Expansion Program		1,600

R-1	Budget Request	Recommendation
<b>64 SPECIAL OPERATIONS ADVANCED TECHNOLOGY DEVELOPMENT</b>	<b>28,930</b>	<b>61,250</b>
Hostile Fire Indicating System		800
Field Experimentation Program for Special Operations		1,600
Partnership for Defense Innovation Wi-Fi		
Laboratory Testing and Assessment Center		2,000
Improved Information Transfer for Special Forces		2,400
Advanced Distributed Aperture System		21,120
Micro-power Special Operations Generator		1,600
Autonomous Rendezvous/Formation Flight		2,000
Small Assault Vehicle Expeditionary (SAVE)		800
<b>66 NUCLEAR AND CONVENTIONAL PHYSICAL SECURITY EQUIPMENT</b>	<b>38,758</b>	<b>50,158</b>
Terahertz High-Resolution Portable Explosives Detector		800
Camp Guernsey Joint Training and Experimentation Center		6,000
Intelligent Decision Exploration		3,600
Pacific Data Conversion and Technology Program		1,000
<b>70 ADVANCED SENSOR APPLICATIONS PROGRAM</b>	<b>0</b>	<b>16,000</b>
Program adjustment		16,000
<b>71 ENVIRONMENTAL SECURITY TECHNICAL CERTIFICATION PROGRAM</b>	<b>31,600</b>	<b>38,904</b>
Environmentally Friendly Nanometal Electroplating Processes for Cadmium and Chromium Replacement		5,304
Inland Empire Perchlorate Wellhead Treatment		2,000
<b>72 BALLISTIC MISSILE DEFENSE TERMINAL DEFENSE SEGMENT</b>	<b>1,019,073</b>	<b>959,973</b>
Transfer to Procurement, Defense-Wide Line 95		-65,000
Arrow-Upper Tier		30,000
Arrow-Short Range BMD		28,000
Target funding transfer to Line 78		-52,100
<b>73 BALLISTIC MISSILE DEFENSE MIDCOURSE DEFENSE</b>	<b>2,076,662</b>	<b>1,512,662</b>
Long lead for 2-Stage Interceptors (EIS) (Note: Transfer to Line 73A)		-19,200
Target funding (Note: Transfer to Line 78)		-104,000
GMD upgrades and enhancements		40,000
2-Stage Interceptor Development (Note: Transfer to Line 73A)		-182,900
Missile Field Equipment and Supporting Activities (EIS) (Note: Transfer to Line 73A)		-165,100
Site Planning/ Design/ Activation (EIS) (Note: Transfer to Line 73A)		-65,500
Communications (EIS) (Note: Transfer to Line 73A)		-26,200
European Global Engagement Manager (Note: Transfer to Line 73C)		-26,700
U.S. Communications for European Sites (Note: Transfer to Line 73C)		-14,400

R-1	Budget Request	Recommendation
<b>73A STAGE TWO INTERCEPTOR SEGMENT</b>	<b>0</b>	<b>363,250</b>
2-Stage Interceptor Development (Note: Transfer from Line 73)		182,900
Long lead for 2-Stage Interceptors (EIS) (Note: Transfer from Line 73)		19,200
Missile Field Equipment and Supporting Activities (EIS) (Note: Transfer from Line 73)		82,550
Site Planning/ Design/ Activation (EIS) (Note: Transfer from Line 73)		65,500
Communications (EIS) (Note: Transfer from Line 73)		13,100
<b>73B EUROPEAN MIDCOURSE RADAR</b>	<b>0</b>	<b>76,800</b>
Sensor Equipment (Note: Transfer from Line 76)		44,900
Site Planning/ Design/ Activation (Note: Transfer from Line 76)		15,800
Communications (Note: Transfer from Line 76)		16,100
<b>73C EUROPEAN GLOBAL ENGAGEMENT MANAGER/U.S. COMMUNICATIONS</b>	<b>0</b>	<b>27,100</b>
Global Engagement Manager (Note: Transfer from Line 73)		16,700
U.S. Communications (Note: Transfer from Line 73)		10,400
<b>74 BALLISTIC MISSILE DEFENSE BOOST DEFENSE SEGMENT</b>	<b>421,229</b>	<b>402,129</b>
2nd Airborne Laser Trade Studies		-15,800
Target funding transfer to Line 78		-3,300
<b>75 CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM</b>	<b>51,291</b>	<b>62,891</b>
Biological Threat Antibody Research		1,600
Environmentally Friendly Aircraft Decontamination Systems		1,600
IM Formulation Development of Anthrax Therapeutic		800
Networked Standoff Biological LIDAR		1,200
Reactive Overlay and Removable CBRN Coatings		1,600
Recombinant BChE Formulation Program		1,600
Vacuum Sampling Pathogen Collection and Concentration		3,200
<b>76 BALLISTIC MISSILE DEFENSE SENSORS</b>	<b>1,076,983</b>	<b>770,232</b>
European Site-Southern Radar Site (AN/TPY-2 #6 Radar Manufacturing and Program Support)		-39,119
Airborne Infrared Surveillance (AIRS) System (Note: Transfer to Line 91)		800
External Sensors Lab - program growth		-147,400
Sensor Equipment (EMR) (Note: Transfer to Line 73B)		-10,000
Site Planning/ Design/ Activation (EMR) (Note: Transfer to Line 73B)		-59,900
Communications (EMR) (Note: Transfer to Line 73B)		-15,800
Communications (European Forward Based Radar - AN/TPY-2) - premature request		-22,100
Mobile Sensor Enhancement to BMD Sensors Network		-17,232
		4,000
<b>78 BALLISTIC MISSILE DEFENSE TEST &amp; TARGETS</b>	<b>665,445</b>	<b>914,845</b>
Backup Target		8,000
Inventory LV-2 with MBRV-2		16,000
Kodiak Unique GSE and C4 Pathfinder (Note: Transfer from Line 72)		8,000
(Note: Transfer from Line 73)		52,100
(Note: Transfer from Line 74)		104,000
(Note: Transfer from Line 81)		3,300
(Note: Transfer from Line 82)		39,200
Test and Training Range Upgrades		2,800
		16,000

R-1	Budget Request	Recommendation
<b>79 BALLISTIC MISSILE DEFENSE SYSTEMS CORE</b>	<b>432,262</b>	<b>404,162</b>
General Reduction		-40,000
Advanced Battery Technology		2,300
Next Generation Sensor Producability-flight 2		9,600
<b>80 SPECIAL PROGRAMS - MISSILE DEFENSE AGENCY</b>	<b>288,315</b>	<b>176,315</b>
Program Decrease		-112,000
<b>81 AEGIS BALLISTIC MISSILE DEFENSE</b>	<b>1,157,783</b>	<b>1,117,483</b>
Ballistic Signal Processor/Open Architecture		16,000
SM-3 Block 1A (Note: Transfer to Procurement, D-W, Line 95)		-57,100
Target funding (Note: Transfer to Line 78)		-39,200
Aegis BMD enhancements		40,000
<b>82 SPACE SURVEILLANCE &amp; TRACKING SYSTEM</b>	<b>242,441</b>	<b>209,641</b>
STSS follow-on program		-30,000
Target funding transfer to Line 78		-2,800
<b>83 MULTIPLE KILL VEHICLES</b>	<b>354,455</b>	<b>284,455</b>
Reduction - MKV-R		-55,000
Program growth		-15,000
<b>84 BALLISTIC MISSILE DEFENSE SYSTEM SPACE PROGRAMS</b>	<b>29,771</b>	<b>24,771</b>
Space Testbed		-10,000
Space-based Interceptor Study		5,000
<b>88 BALLISTIC MISSILE DEFENSE JOINT NATIONAL INTEGRATION</b>	<b>96,404</b>	<b>106,404</b>
MDIOC Modeling and Simulation		10,000
<b>91 SEA BASED X-BAND RADAR (SBX)</b>	<b>0</b>	<b>147,400</b>
SBX (Note: Transfer from Line 76)		147,400
<b>93 COALITION WARFARE</b>	<b>14,030</b>	<b>13,319</b>
Reduction to execution year new starts		-711
<b>94 DEPARTMENT OF DEFENSE CORROSION PROGRAM</b>	<b>5,102</b>	<b>22,402</b>
Corrosion Engineering Education Initiative		800
Environmentally Intelligent Moisture and Corrosion Control		2,000
Department of Defense Corrosion Program		12,000
Managing and Extending DoD Asset Lifecycles		2,500
<b>95 JOINT CAPABILITY TECHNOLOGY DEMONSTRATIONS</b>	<b>14,962</b>	<b>13,562</b>
Advanced Active Denial Planar Scanning Antenna System		1,600
Program adjustment for lack of transitions		-3,000
<b>100 JOINT ELECTROMAGNETIC TECHNOLOGY (JET) PROGRAM</b>	<b>3,524</b>	<b>5,524</b>
Secure, Miniaturized, Free Space, Optical Communications		2,000
<b>101 DEFENSE ACQUISITION CHALLENGE PROGRAM (DACP)</b>	<b>30,363</b>	<b>28,566</b>
Reduction to execution year new starts		-1,797
<b>103 PROMPT GLOBAL STRIKE</b>	<b>117,572</b>	<b>74,572</b>
Alternative Re-Entry System		-43,000

R-1	Budget Request	Recommendation
<b>104 CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM</b>	<b>299,373</b>	<b>304,173</b>
Catalytic Oxidation Integrated Demonstration		2,400
Large Scale Single-use Bio Reactor for Rapid Response to Bioterrorism		800
Joint Services Aircrew Mask Don/Doff In-flight Upgrade		1,600
<b>109 INFORMATION TECHNOLOGY DEVELOPMENT</b>	<b>11,611</b>	<b>12,411</b>
In Transit Visibility System		800
<b>117 JOINT COMMAND AND CONTROL PROGRAM (JC2)</b>	<b>147,339</b>	<b>57,339</b>
Net-Enabled Command Capability (NECC)		-90,000
<b>118 TRAINING TRANSFORMATION (T2)</b>	<b>38,729</b>	<b>58,329</b>
Integrated Analysis Environment		1,200
Agile Software Capability Interventions		1,600
Indiana Complex Operations Partnership		2,000
New Mexico State University Institute for Defense and Public Policy		10,000
Playas Training and Research Center Joint Training Experiment		4,800
<b>121 CENTRAL TEST AND EVALUATION INVESTMENT DEVELOPMENT</b>	<b>133,852</b>	<b>152,852</b>
Gulf Range Mobile Instrumentation Capability		800
Joint Gulf Range Complex Upgrade		1,200
Range Element Network Enterprise Technology (RE-NET)		4,000
UAV Systems Operations Validation Program (USOVP)		5,000
Advanced SAM Hardware Simulator Development		5,000
Pacific Region Interoperability Test and Evaluation Capability		3,000
<b>124 TECHNICAL STUDIES, SUPPORT AND ANALYSIS</b>	<b>34,520</b>	<b>36,520</b>
Center for Technology and National Security Policy at the National Defense University		1,200
Defense Support to Large Scale Disaster Preparedness		800
<b>128 CLASSIFIED PROGRAM USD(P)</b>	<b>0</b>	<b>102,000</b>
Classified Program		102,000
<b>139 SMALL BUSINESS INNOVATION RESEARCH/CHALLENGE ADMINISTRATION</b>	<b>2,165</b>	<b>5,765</b>
Directed Energy Systems for UAV Payloads		800
Ferroelectric Component Technology		1,200
Random Obfuscating Compiler Anti-Tamper Software		1,600
<b>142 FORCE TRANSFORMATION DIRECTORATE</b>	<b>20,701</b>	<b>23,201</b>
Buoyancy Assisted Lift Air Vehicle		2,500
<b>144 R&amp;D IN SUPPORT OF DOD ENLISTMENT, TESTING &amp; EVALUATION</b>	<b>25,435</b>	<b>18,435</b>
HR Automation Enhancements - unjustified program		-7,000
<b>145 DEVELOPMENT TEST AND EVALUATION</b>	<b>20,396</b>	<b>23,596</b>
Renewable Fuel Systems for Defense Applications		3,200
<b>147 MANAGEMENT HEADQUARTERS (RESEARCH &amp; DEVELOPMENT)</b>	<b>52,700</b>	<b>48,700</b>
Unexecutable growth		-4,000

R-1	Budget Request	Recommendation
<b>151 SUPPORT TO INFORMATION OPERATIONS (IO) CAPABILITIES</b>	<b>30,039</b>	<b>35,159</b>
Enhanced Simulation for IO Capabilities		5,120
<b>155 INTELLIGENCE SUPPORT TO INFORMATION OPERATIONS (IO)</b>	<b>0</b>	<b>1,200</b>
Advanced Information Discovery and Analysis Capability for NSA		1,200
<b>158 MANAGEMENT HEADQUARTERS - MISSILE DEFENSE AGENCY</b>	<b>86,453</b>	<b>81,453</b>
Management Support		-5,000
<b>160 DEFENSE INFORMATION SYSTEM FOR SECURITY (DISS)</b>	<b>11,533</b>	<b>5,533</b>
Execution delays		-6,000
<b>162 CHEMICAL AND BIOLOGICAL DEFENSE (OPERATIONAL SYSTEMS)</b>	<b>10,274</b>	<b>12,674</b>
Next Generation Respiratory Protection		2,400
<b>167 CRYPTOLOGIC ACTIVITIES</b>	<b>0</b>	<b>3,200</b>
National Biometrics Security Project		3,200
<b>184 INFORMATION SYSTEMS SECURITY PROGRAM</b>	<b>394,074</b>	<b>403,574</b>
High Assurance Cross Domain Solutions for High Performance Computing Center Net-Centric Operations		2,000
Intelligence Analyst Education and Training		3,900
Security for Critical Communication Networks		3,600
<b>193 SPECIAL APPLICATIONS FOR CONTINGENCIES</b>	<b>16,225</b>	<b>26,325</b>
UML UAV/UAS Test Facility		2,400
Advanced Technology Sensors and Payloads		1,600
Expeditionary Persistent Power (USSOCOM)		1,600
Comprehensive Maritime Domain Awareness		4,500
<b>195 DEFENSE - GEOSPATIAL - INTELLIGENCE PROGRAM</b>	<b>0</b>	<b>1,600</b>
Commercial Denied Area Radargrammetry Mapping		800
Improved Commercial Integration (ICI)		800
<b>199 CRITICAL INFRASTRUCTURE PROTECTION (CIP)</b>	<b>12,700</b>	<b>17,900</b>
Electric Grid Reliability/Assurance		1,200
Disaster Response: Communications and Other Infrastructure Restoration		4,000
<b>210 DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS</b>	<b>3,165</b>	<b>765</b>
Excess to need		-2,400
<b>218 COMBATANT COMMAND INTELLIGENCE OPERATIONS</b>	<b>0</b>	<b>12,880</b>
Advanced Missile Simulation Technology for Intelligence Analysts		1,280
All-Source Content Management (ASCMAN) for Actionable Intelligence		1,600
Armed Forces Health and Food Supply Research		5,000
National Consortium for MASINT Research		3,000
Pat Roberts Intel Scholars Program (PRISP)		2,000
<b>225 INDUSTRIAL PREPAREDNESS</b>	<b>20,480</b>	<b>55,280</b>
Copper-Based Casting Technology Applications		2,800
Improved Collapsible Urethane-Fuel Storage Tanks (ICU-FST)		1,600
Ultrahigh-Strength Steel for Landing Gear		2,000
Wiring Integrity Technology		1,600
Northwest Defense Manufacturing Initiative		1,600

R-1	Budget Request	Recommendation
Vet-Biz Initiative for National Sustainment (VINS)		2,000
Cellulosic-Derived Biofuels Research Project		4,000
Industrial Base Innovation Fund		19,200
<b>231 SPECIAL OPERATIONS AVIATION SYSTEMS ADVANCED DEVELOPMENT</b>	<b>43,977</b>	<b>44,777</b>
Helicopter Cable Warning and Obstacle Avoidance		800
<b>232 SPECIAL OPERATIONS TACTICAL SYSTEMS DEVELOPMENT</b>	<b>13,263</b>	<b>26,263</b>
Covert Communications for SOF Operations		1,600
Integrated Bridge System		1,200
Common UGV Command and Control for PSYOP Programs		800
SEAL Delivery Vehicle (SDV) Integrated Combat System (ICS)		3,200
Advanced, Long Endurance Unattended Ground Sensor Technologies		3,600
Integration of Force XXI Battle Command, Brigade & Below (FBCB2) with Tactical Handheld Digital Devices (THDD)		1,200
Weapons Shot Counter		1,400
<b>233 SPECIAL OPERATIONS INTELLIGENCE SYSTEMS DEVELOPMENT</b>	<b>39,125</b>	<b>39,974</b>
Global Sensors Network, execution		-9,051
Generation II Special Operation Forces Internally Transported Vehicle (SOF-ITV)		1,600
Advanced Tactical Threat Warning Radio (ATTWR)		1,200
Biometric Signatures Research		2,000
Multi-Spectral Laboratory (UML) and Analytical Services Center (ASCENT) Program		1,600
Picoceptor and Processor for Man-portable Threat Warning		3,500
<b>234 SOF OPERATIONAL ENHANCEMENTS</b>	<b>48,137</b>	<b>55,337</b>
Freeze-dried Plasma		800
USSOCOM Medical Research		4,000
Signal Intelligence and Electronic Warfare Developments for Integration of SOF Systems		1,600
Communications-Capable Reconnaissance Imager		800
<b>235 SPECIAL OPERATIONS CV-22 DEVELOPMENT</b>	<b>38,229</b>	<b>40,229</b>
CV-22 Helmet Mounted Display		2,000
<b>237 OPS ADVANCED SEAL DELIVERY SYSTEM (ASDS) DEVELOPMENT</b>	<b>7,090</b>	<b>8,690</b>
Lithium Ion Battery Safety Detection and Control of Impending Catastrophic Failures		1,600
<b>238 MISSION TRAINING AND PREPARATION SYSTEMS (MTPS)</b>	<b>4,052</b>	<b>5,652</b>
SOF Mission Training and Preparation Systems Interoperability		1,600
<b>239 UNMANNED VEHICLES (UV)</b>	<b>1,527</b>	<b>43,927</b>
Photovoltaic Power Supply for Autonomous Sensors		2,400
Global Observer Development		40,000
<b>241 SOF WEAPONS SYSTEMS</b>	<b>2,759</b>	<b>2,559</b>
SOF Combat Assault Rifle Acceleration		-200

R-1	Budget Request	Recommendation
<b>243 SOF VISUAL AUGMENTATION, LASERS &amp; SENSOR SYSTEMS</b>	<b>3,495</b>	<b>6,986</b>
SOCOM requested transfer from P-82 for Precision Laser Targeting Device		5,000
SOF Laser Rangefinder and Designator		-1,509
<b>244 SOF ROTARY WING AVIATION</b>	<b>3,822</b>	<b>1,647</b>
Infrared Exhaust Suppressor Termination		-2,175
<b>245 SOF UNDERWATER SYSTEMS</b>	<b>3,142</b>	<b>5,542</b>
Technology for Shallow Water Special Operations Forces Mobility		2,400
<b>999 CLASSIFIED PROGRAMS</b>	<b>3,805,519</b>	<b>3,744,197</b>
Classified Programs		-84,762
Laboratory for High Performance Computational Systems		1,600
Advanced Scientific Missile Intelligence Preparation of the Battlespace (IPB)		2,000
Collection Management Tool Development		1,440
Northwest Maritime Information and Littoral Operations Program		2,800
Defense Manpower Data Center		800
Integrated Signature Production and Exploitation		800
Countering Missile-Related Technology Proliferation		2,000
Center for Innovative Geospatial Technology		10,000
High Assurance Cross Domain Technology Development		2,000

## ENERGY STRATEGY FOR THE DEPARTMENT OF DEFENSE

Achieving improved energy efficiency, which includes reduced consumption, expanded sources of supply as well as a reduction in our dependence on foreign oil are possibly the greatest national security challenges facing our nation.

In 2006, according to the Defense Science Board, the Department of Defense consumed 110,000,000 barrels of premium fuel and 3,800,000,000 kilowatt hours of electricity at a cost of \$13,600,000,000. Of this amount, \$10,000,000,000 was spent on fuel for combat and combat-related systems, and another \$3,600,000,000 to power the Department of Defense's infrastructure. The major challenges to fuel efficiency are operational, tactical and fixed based.

The most recent Defense Science Board Task Force is but the latest in a long line of reports addressing the necessity for a reduction in the fuel burden. The 2001 Defense Science Board Task Force report entitled, "More Capable Warfighting through Reduced Fuel Burden," stated that 70 percent of the tonnage the Army ships into battle is associated with fuel logistics and that multiple technologies were available at all levels of maturity that could reduce demand. Furthermore, it advocated "including fuel efficiency as a key performance parameter in all operational requirements documents and capstone requirements documents." It was not until 2007 that the Department issued a memorandum making it policy to include the fully burdened cost of delivered energy in trade off analyses conducted for all tactical systems and identified only three pilot programs.

While the Department is the leading consumer of fuel in the U.S., the Air Force is the leading consumer of fuel within the Department. The Air Force has been in the forefront on alternative fuels and is on the path to qualify all Air Force aircraft on a coal-based jet fuel by 2012. The challenge in using coal-based jet fuels is directly dependent upon carbon capture and sequestration to mitigate CO<sub>2</sub> emissions.

The Department is provided \$20,000,000 to initiate research into carbon capture and sequestration technology for the future production of coal-based jet fuel. The Department is encouraged to budget for the continued research of this initiative in the fiscal year 2010 request. The Secretary of Defense is directed to provide the congressional defense committees with specific plans for utilizing these funds to include specific details and goals not later than 90 days after enactment of this Act.

Similarly, in the fixed base, there is a near total reliance on the commercial power grid. Efforts to raise the issue and support alternative and/or renewable energy sources for the Department of Defense have been sporadic at best.

The Department of Defense's scattered efforts to address the energy issue throughout its organization is coupled with minimal centralized policy and oversight. The Defense Science Board Task Force went on to say, "decisions that create energy demand are dispersed organizationally across the Department and throughout the services. There is no unifying vision, strategy, or metrics or governance structure with enterprise-wide energy in its portfolio."

The Department of Defense can no longer rely on such haphazard approaches to energy. Our future national security and military readiness demands swift action guided by a clear mandate.

The Secretary of Defense is encouraged to appoint a senior official to be responsible for energy efficiency. Further, the Department

is directed to address comprehensively and submit a report, not later than June 15, 2009, regarding energy efficiency and how it will be given greater importance and weight in all aspects of the Department's resource allocation process.

## TRANSFORMATIONAL MEDICAL TECHNOLOGIES INITIATIVE (TMTI)

The fiscal year 2009 budget request includes \$240,900,000 for the Transformational Medical Technologies Initiative (TMTI) in program elements 0601384BP, 0602384BP and 0603384BP of the Chemical and Biological Defense Program, an increase of \$105,000,000 over the amount appropriated in fiscal year 2008. Of the amount requested for fiscal year 2009, more than half, or \$123,900,000, is requested for new start projects, an increase of \$78,300,000 over the amount provided for new projects in fiscal year 2008. This growth for new starts is excessive at this juncture in the program and the request for new start projects in fiscal year 2009 is reduced by \$70,000,000. The Special Assistant, Chemical and Biological Defense is directed to provide the annual TMTI report (as detailed in Senate Report 109—292) with the submission of the fiscal year 2010 budget request.

## DEFENSE ADVANCED RESEARCH PROJECTS AGENCY (DARPA)

The fiscal year 2009 budget request for DARPA is \$3,285,569,000, an increase of \$326,493,000, more than 10 percent, over the fiscal year 2008 appropriated program of \$2,959,076,000. In recent years, DARPA has repeatedly underexecuted its funded program level, executing a fiscal year 2005 program that was nine percent below the appropriated program and a fiscal year 2006 program that was twelve percent below the appropriated program. Based on program execution to date, DARPA will likely continue that trend for the fiscal year 2007 and 2008 programs. While DARPA's continued underexecution can partially be explained by its fiscally responsible management approach of withholding funds from projects that fail to demonstrate progress, doubts exist about DARPA's ability to responsibly manage such a large increase. Therefore, the bill provides \$3,142,229,000, a reduction of \$143,340,000 from the request. The Director of DARPA is directed to provide to the congressional defense committees not later than 60 days after enactment of this Act a report that details by program element and project the application of undistributed reductions made in this Act.

The conference reports accompanying the fiscal year 2007 and 2008 Department of Defense Appropriations Acts cited the lack of individual project level detail provided in DARPA's budget justification materials. While the high-risk nature of many DARPA projects makes it hard to pinpoint detailed schedules, there is concern about the lack of detail provided for individual projects regarding their scope, notional schedule and overall funding requirements. Moreover, project funding is often adjusted from one year to the next without justification. DARPA is directed to provide greater programmatic detail for its projects in its justification materials beginning with the fiscal year 2010 budget request. Further, DARPA is encouraged to continue to pursue transition plans for all of its Advanced Technology Development programs. The Director of DARPA is directed to submit with the fiscal year 2010 budget submission the report on transitions that was initiated in fiscal year 2009.

## NEW STARTS IN THE YEAR OF EXECUTION

The fiscal year 2009 budget request includes no less than \$176,770,000 in the Research, Development, Test and Evaluation,

Defense-Wide account for new start programs that will be selected and initiated in fiscal year 2009, an increase of \$61,766,000 from the amount above the fiscal year 2007 level. While there is awareness of the need for certain programmatic flexibility to address urgent unfunded requirements, this level of funding is unjustified, particularly in light of the fact that several projects continue to be resourced from these funds over a sustained period of time without transitioning to funded programs of record. Additionally, congressional notification of programs initiated with these funds has been lagging and inconsistent. Therefore, the bill reduces the request for these programs by ten percent.

## JOINT REPORT ON COAL-TO-LIQUID FUELS

The Secretary of Defense, in coordination with the Department of Energy's Office of Fossil Energy is directed to submit a report to the congressional defense committees no later than March 31, 2009, on alternatives to reduce the life cycle emissions of coal-to-liquid fuels and potential uses of coal-to-liquid fuels to meet the Department of Defense's mobility energy requirements. The report shall examine, at a minimum, the following: the potential clean energy alternatives for powering the coal-to-liquids conversion processes, including nuclear, solar, and wind energies; the alternatives for reducing carbon emissions during the coal-to-liquids conversion processes; and the military utility of coal-to-liquid fuels for military operations and for use by expeditionary forces compared with the military utility and life cycle emissions of mobile, in-theater synthetic fuel processes.

## INFRARED FOCAL PLANE ARRAYS

Infrared Focal Plane Arrays (IFPA) are the key to infrared sensor systems widely used by the military. New and improved military capabilities will require the development of new and more complex arrays. Recent reports reveal that the United States, which has traditionally held the lead in IFPA technology, is falling behind. This poses the very real threat that the United States government could lose control of this technology. The Department of Defense is directed to review developments in this critical area and report on the status of the United States' competitive position, and if warranted, provide a plan of action to remedy the situation. This report should be submitted no later than 90 days after enactment of this Act.

## CLIMATE CHANGE AND NATIONAL SECURITY

Climate change is a key environmental issue that has national security implications. The Department of Defense should assess the impact of climate change on our coasts, water resources, and other geographic and environmental components of the United States national security. The Department of Defense should also establish a baseline set of indicators for assessing climate change and a set of tools for measuring its future impact on those aspects of climate change that could affect our national security.

## MISSILE DEFENSE AGENCY (MDA) REPORTING REQUIREMENTS AND JUSTIFICATION MATERIALS

The budget information provided by the MDA does not allow sufficient oversight of the Ballistic Missile Defense programs. The programs change significantly from the time the budget is submitted to the time funding is appropriated, making it extremely difficult to understand what is actually in the budget on an annual basis. The justification materials should no longer be presented in the block structure format, but rather by fiscal year for each activity within the program element. The documents must provide

more detailed schedules, quantities, and break-outs of funding for each activity.

Past Congresses have established a framework of laws that require program and cost reporting to Congress to help exercise this oversight. The MDA is directed to report according to the existing acquisition laws to improve accountability and transparency of the programs.

#### NEAR-TERM MISSILE DEFENSE PROGRAMS

In order to execute a balanced program, the Missile Defense Agency (MDA) must continue to field the near-term missile defense programs, primarily Ground-Based Missile Defense (GMD), AEGIS Ballistic Missile Defense (BMD), and Theater High Area Altitude Defense (THAAD) programs. Funding for fielding these programs, however, is sacrificed each year to pay for the development of futuristic missile defense programs. Therefore, the bill reduces funding for several of the far-term programs, such as the Multiple Kill Vehicle, the Airborne Laser, and Space Test Bed and provides an additional \$120,000,000 for enhancements to the GMD, AEGIS and THAAD programs. The MDA is directed to provide a report to the congressional defense committees by December 1, 2008, on how those additional funds will be allocated to the programs.

The Joint Capability Mix (JCM) study, conducted by the Joint Staff, concluded that U.S. combatant commanders need about twice as many Standard Missile-3 and THAAD interceptors as currently planned to meet minimum operational requirements for defending against short and medium-range ballistic missiles. The MDA's highest priority should be to achieve the minimum levels of interceptor inventories identified in the JCM study and the Department of Defense should budget accordingly in its fiscal year 2010 budget submission.

#### EUROPEAN CAPABILITY—THIRD SITE

Three separate program elements are recommended for the European Missile Defense sites in order to provide adequate visibility of these initiatives and to ensure that funding for the Ground-Based Missile Defense, Sensors, and Command and Control program elements are not adversely impacted by the European sites.

The bill provides \$467,150,000 for European missile defense and development and testing of the two-stage interceptor. The first program element provides \$363,250,000 for the development and testing of the two-stage interceptors and the interceptor site planned for Poland. The bill provides \$182,900,000 for development and testing of the two-stage interceptors; \$19,200,000 for long-lead components for two-stage interceptors; and \$65,500,000 for site planning, design and activation. Due to the delay in ratification of a missile defense agreement with Poland, funding for missile field equipment is reduced by \$82,550,000 and communications by \$13,100,000, half of the request.

The second program element provides \$76,800,000 for the European Midcourse Radar (EMR) to be located in the Czech Republic. The bill provides \$15,800,000 for site planning,

design and activation, but reduces funding for sensor equipment by \$15,000,000 and communications by \$6,000,000 due to at least a three month delay in ratification of an agreement with the Czech government in fiscal year 2009.

The third program element provides \$27,100,000 for the European Global Engagement Manager and U.S. Communications for the European sites. Due to the delay in ratifying agreements with the European host sites, the request is reduced by \$14,000,000. The bill provides no funding for the European Forward Based Radar (AN-TPY-2) since a location has not been determined for the site.

These estimates do not include costs for barracks, family housing or any other costs normally associated with infrastructure of a cantonment area of a military facility. Also, the estimate does not include personnel costs for manning the facilities.

#### SPACE TRACKING AND SURVEILLANCE SYSTEM (STSS)

It is premature for the Missile Defense Agency to move forward with a follow-on STSS constellation until after a successful launch and thorough analysis of the STSS demonstrator data. No funding is provided to begin work on an STSS follow-on constellation, an STSS gap filler, space sensor research and development, or any other space demonstration program.

#### FLIGHT TEST DELAYS AND CANCELLATIONS

As one of the largest research, development, test and evaluation programs in the Department of Defense, the Missile Defense Agency (MDA) has established a pattern of cost, schedule and performance problems. Tests were delayed or cancelled in fiscal years 2006, 2007 and 2008 and it is not unreasonable to assume that some of the tests planned for fiscal year 2009 will likely slip into subsequent fiscal years. The MDA annually conducts operational testing of the Ballistic Missile Defense System through a series of planned tests which are outlined in the Integrated Master Test Plan (IMTP). The numbers reflected in the IMTP only address successful flights of a missile. Rates of delay, cancellations or changes that occur annually in the testing programs and which affect the programming and budgeting of future years are not addressed.

In fiscal years 2006 through 2008, the MDA conducted approximately 85 percent of the planned tests in the same fiscal year as originally scheduled. The MDA's fiscal year 2009 test schedule reflects 13 flight tests with 77 percent of these tests scheduled for the third and fourth quarters of 2009. The fiscal year 2009 test schedule contains two major flight tests to support Ground-Based Midcourse Defense (FTG-05 and FTG-06). Combined, these tests cost approximately \$300,000,000. Department of Defense officials have expressed concern that FTG-06 will not have a target vehicle to support the test within fiscal year 2009. Therefore, the Missile Defense Agency is directed to report to the congressional defense committees by January 15, 2009, on the state of the testing pro-

gram and what funding shortfalls exist, if any.

#### TARGETS

The Missile Defense Agency (MDA) has renewed its focus and commitment to the target program and must continue this momentum in order to achieve optimal production and deliveries. In order to ensure that the program office has the proper oversight of all funding for the targets program, the bill transfers the entire request for targets from the individual program elements to the Test and Target program element.

The bill provides an additional \$32,000,000 above the budget request for the flexible family of targets to initiate an inventory build up of critical long lead hardware items. However, there are additional funding shortfalls for targets that need to be addressed in fiscal year 2009. The MDA should submit an above threshold reprogramming to the congressional defense committees to ensure that this important component of missile defense testing is adequately funded. In addition, MDA should adequately address shortfalls in its out-year budget requests for targets to continue inventory buildup to ensure proper support of the rigorous testing program planned beginning in fiscal year 2010.

Terminal High Altitude Area Defense (THAAD)

The bill transfers \$65,000,000 from Program Element 0603881C to Procurement, Defense-Wide, Line 95, as identified by the Missile Defense Agency (MDA) to recover schedule and mitigate production line gaps for Fire Unit #3 and #4. The MDA is directed to identify additional funds to ensure production line continuity.

#### STANDARD MISSILE-3 (SM-3) INTERCEPTORS

The bill transfers \$57,100,000 from Program Element 0603892C to Procurement, Defense-Wide, Line 95, for advance procurement of SM-3 Block 1A interceptors.

#### AEGIS BALLISTIC MISSILE DEFENSE

Management of the kill vehicle for the Standard Missile-Block II is being done by the Kill Vehicle program office instead of the AEGIS program. The AEGIS program has had a long history of success working with the Navy to manage the entire development and fielding of the Standard Missile, and any change in management could result in a delay to the program. Therefore, the AEGIS program is directed to manage all current and future Standard Missile development and upgrades for ballistic missile defense, including the kill vehicles.

#### SPACE-BASED INTERCEPTOR STUDY

The bill provides \$5,000,000 to support the study outlined in section 236 of S. 3001, the National Defense Authorization Act for Fiscal Year 2009.

#### OPERATIONAL TEST AND EVALUATION, DEFENSE

For Operational Test and Evaluation, Defense, funds are to be available for fiscal year 2009, as follows: