FY 95 CONGRESSIONAL MAXI-$-TRACK RDT&E (3600)
(Dollars In Thousands)

SEQ	PE	TITLE	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF	NOTES
002	0601102F	DEFENSE RESEARCH SCIENCES	$235,805	235,805	230,805	225,805	247,805	201,000	247,805	
004	0602102F	MATERIALS	$70,049	70,049	70,049	70,049	70,049	70,049	70,049	
005	0602201F	AEROSPACE FLIGHT DYNAMICS	$64,046	65,046	59,046	59,046	60,000	60,946	60,946	
006	0602202F	HUMAN SYSTEMS TECHNOLOGY	$52,518	52,518	47,518	47,518	49,000	48,302	48,302	
007	0602203F	AEROSPACE PROPULSION	$77,506	77,506	72,506	72,506	80,506	73,406	74,406	
008	0602204F	AEROSPACE AVIONICS	$74,673	74,673	69,673	67,000	67,000	66,977	67,957	
009	0602205F	PERSONNEL, TRAINING AND SIMULATION	$29,848	29,848	29,848	29,848	29,848	33,748	33,748	
010	0602206F	CIVIL ENG & ENVIRONMENTAL QUALITY	$7,045	7,045	7,045	7,045	6,500	7,045	6,500	
011	0602269F	HYPERSONIC FLIGHT TECHNOLOGY	$45,000	45,000	45,000	45,000	45,000	10,000	45,000	
013	0602601F	ADVANCED WEAPONS	$125,202	140,202	142,202	145,202	140,202	148,202	159,502	
014	0602602F	CONVENTIONAL MUNITIONS	$44,685	44,685	44,685	44,685	44,685	44,685	44,685	
015	0602702F	COMMAND/CONTROL/COMMUNICATION	$95,444	85,444	95,444	95,444	85,444	95,444	95,444	
016	0603106F	LOGISTICS SYSTEMS TECHNOLOGY	$18,200	18,200	18,200	18,200	15,000	18,200	15,000	
017	0603112F	ADVANCED MATERIALS FOR WEAPONS SYST	$19,900	19,900	19,900	19,900	21,400	19,900	20,400	
018	0603202F	AEROSPACE PROPULSION SUBSYS INTEG	$29,941	21,941	29,941	29,941	21,941	29,941	29,941	
019	0603203F	ADV AVIONICS FOR AEROSPACE VEHICLES	$34,500	37,500	34,500	37,500	37,500	23,398	28,500	

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SEQ	PE	TITLE	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF	NOTES
020	0603205F	AEROSPACE VEHICLE TECHNOLOGY	$14,339	14,339	14,339	13,500	13,500	6,718	6,718	
021	0603211F	AEROSPACE STRUCTURES	$12,300	12,300	12,300	12,300	12,300	300	12,300	
022	0603216F	AEROSPACE PROPULSION AND POWER TECH	$40,662	36,662	40,662	32,421	30,662	32,421	37,345	
023	0603227F	PERSONNEL, TRAINING & SIM TECH	$9,241	9,241	9,241	9,241	9,000	9,241	9,000	
024	0603231F	CREW SYS AND PERSONNEL PROTECT TECH	$16,600	18,900	21,600	22,700	17,700	16,600	17,700	
025	0603238F	GLOBAL SURV/AIR DEF/PRECISION STRIKE TECHNOLOGY DEMONSTRATION	$14,500	14,500	14,500	14,500	14,500	2,000	2,000	
026	0603245F	ADV FIGHTER TECHNOLOGY INTEGRATION	$18,100	18,100	18,100	18,100	18,100	4,000	9,100	
027	0603250F	LINCOLN LABORATORY	$15,000	15,000	15,000	15,000	15,000	0	15,000	
028	0603253F	ADVANCED AVIONICS INTEGRATION	$24,500	24,500	24,500	24,500	25,500	8,684	17,205	
030	0603270F	ELECTRONIC WARFARE TECHNOLOGY	$27,700	27,700	27,700	24,000	24,000	18,299	18,299	
031	0603302F	SPACE AND MISSILE ROCKET PROPULSION	$11,800	14,300	11,800	14,300	14,300	8,630	16,800	
032	0603311F	BALLISTIC MISSILE TECHNOLOGY	$10,000	10,000	10,000	5,000	5,000	5,000	5,000	
034	0603401F	ADVANCED SPACECRAFT TECHNOLOGY	$24,200	124,200	24,200	54,200	0	19,400	19,400	
035	0603410F	SPACE SYS ENV INTERACTIONS TECH	$4,200	4,200	4,200	4,200	0	4,200	4,200	
036	0603428F	SPACE SUBSYSTEMS TECHNOLOGY	$0	0	0	0	8,000	0	8,000	
037	0603601F	CONVENTIONAL WEAPONS TECHNOLOGY	$35,100	35,100	35,100	35,100	35,100	17,464	31,250	

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(Dollars In Thousands)

SEQ	PE	TITLE	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF	NOTES
038	0603605F	ADVANCED RADIATION TECHNOLOGY	$59,500	59,500	59,500	69,500	79,500	86,500	96,500	
039	0603707F	WEATHER SYSTEMS - ADV DEV	$5,100	5,100	5,100	5,100	5,100	5,100	5,100	
040	0603723F	CIVIL/ENVIRONMENTAL ENGINEERING TEC	$9,798	9,798	9,798	9,798	9,798	9,798	9,798	
041	0603726F	C3I SUBSYSTEM INTEGRATION	$11,050	11,050	11,050	11,050	11,050	11,050	11,050	
042	0603728F	ADVANCED COMPUTING TECHNOLOGY	$9,125	9,125	9,125	9,125	9,125	9,125	9,125	
043	0603789F	C3 ADVANCED DEVELOPMENT	$9,925	16,925	9,925	10,925	10,925	9,925	10,925	
047	0603260F	INTELLIGENCE ADVANCED DEVELOPMENT	$5,134	5,134	5,134	5,134	5,134	5,134	5,134	
048	0603307F	AIR BASE OPER ADVANCED DEV	$2,312	2,312	2,312	2,312	2,312	2,312	2,312	
049	0603308F	STRATEGIC MISSILE MODERNIZATION	$36,018	36,018	36,018	36,018	36,018	0	0	
050	0603319F	AIRBORNE LASER TECHNOLOGY	$20,000	20,000	20,000	20,000	20,000	0	20,000	
051	0603402F	SPACE TEST PROGRAM	$62,084	62,084	62,084	62,084	0	67,998	67,998	
052	0603430F	ADVANCED MILSATCOM	$22,095	35,000	22,095	22,095	0	22,095	22,095	
053	0603434F	DEFENSE METEOROLOGICAL SATELLITE PGM	$7,601	7,601	3,601	7,601	0	7,601	7,601	
054	0603438F	SATELLITE SYSTEMS SURVIVABILITY	$8,531	8,531	8,531	8,531	0	2,131	2,131	
055	0603440F	BRILLIANT EYES			120,000	0				
056	0603441F	ADVANCED SPACE BASED TW/AA (DEM VAL)	$150,000	150,000	119,000	169,000	0	0	0	

FY 95 CONGRESSIONAL MAXI-$-TRACK RDT&E (3600)
(Dollars In Thousands)

SEQ	PE	TITLE	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF	NOTES
057	0603617F	COMMAND/CONTROL/COMM APPLICATIONS	$5,402	5,402	5,402	5,402	5,402	5,402	5,402	
059	0603742F	COMBAT IDENTIFICATION TECHNOLOGY	$13,453	13,453	13,453	13,453	13,453	13,453	13,453	
060	0603800F	JOINT ADVANCED STRIKE TECHNOLOGY PROGRAM	$101,354	101,354	101,354	101,354	101,354	101,354	86,354	
060A		ICBM - DEM/VAL						43,206	43,206	
062	0604201F	AIRCRAFT AVIONICS EQUIPMENT DEV	$4,824	4,824	4,824	4,824	4,824	4,824	4,824	
065	0604218F	ENGINE MODEL DERIVATIVE PRGM (EMDP)	$761	761	761	761	761	761	761	
066	0604222F	NUCLEAR WEAPONS SUPPORT	$5,637	3,637	5,637	5,637	3,637	5,637	5,637	
067	0604226F	B-1B	$74,119	74,119	74,119	74,119	74,119	74,119	74,119	
068	0604227F	TRAINING SYSTEMS DEVELOPMENT	$14,261	14,261	14,261	14,261	14,261	14,261	14,261	
069	0604231F	C-17 PROGRAM	$221,454	105,154	221,454	221,454	105,154	210,154	190,154	
070	0604233F	SPECIALIZED UNDERGRAD PILOT TRAINING (SUPT)	$41,633	41,633	41,633	37,433	20,000	37,433	37,433	
071	0604237F	VAR STAB IN-FLIGHT SIM TEST A/C	$2,027	2,027	2,027	2,027	2,027	2,027	2,027	
072	0604239F	F-22 EMD	$2,461,149	2,461,149	2,461,149	2,461,149	2,443,349	2,399,849	2,351,000	
073	0604240F	B-2 ADV TECH BOMBER	$408,543	408,543	408,543	408,543	408,543	408,543	388,543	
075	0604243F	MANPOWER, PERS & TRAINING DEV	$4,636	4,636	4,636	4,636	4,636	4,636	4,636	
076	0604249F	NIGHT/PRECISION ATTACK	$21,672	21,672	21,672	21,672	4,672	21,672	21,672	

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(Dollars In Thousands)

SEQ	PE	TITLE	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF	NOTES
077	0604268F	AIRCRAFT ENGINE COMP IMP PROGRAM	$97,399	97,399	97,399	97,399	95,399	97,399	95,399	
077A		COMPOSITE PROPELLER DEVELOPMENT			8,000	4,000				
077B		LAUNCH VEHICLE TECHNOLOGY			10,000	0				
078	0604270F	EW DEVELOPMENT	$88,774	88,774	88,774	88,774	88,774	118,275	119,275	
080	0604321F	JOINT TACTICAL FUSION PROGRAM	$8,666	4,666	8,666	8,666	8,666	8,666	8,666	
082	0604408F	NATIONAL LAUNCH SYSTEM	$10,176	3,976	10,176	0	0	0	0	
082A		LAUNCH VEHICLE TECHNOLOGY				10,000				
083	0604479F	MILSTAR LDR/MDR SAT COMM	$607,248	607,248	607,248	607,248	0	607,248	607,248	
084	0604601F	CHEMICAL/BIOLOGICAL DEFENSE EQUIP	$7,587	7,587	7,587	7,587	7,587	7,587	7,587	
085	0604602F	ARMAMENT/ORDNANCE DEVELOPMENT	$10,853	10,853	10,853	10,853	18,853	10,853	18,853	
085A		CALCM				8,000				
085B		B-1/JDAM INTEGRATION				16,900				
086	0604604F	SUBMUNITIONS	$26,680	12,680	26,680	26,680	12,680	28,680	28,680	
087	0604609F	R&M MATURATION/TECHNOLOGY INSERTION	$8,804	8,804	8,804	8,804	8,804	8,804	8,804	
088	0604617F	AIR BASE OPERABILITY	$9,580	9,580	9,580	9,580	5,606	9,580	5,606	
089	0604618F	JOINT DIRECT ATTACK MUNITION	$84,995	84,995	84,995	84,995	84,995	84,995	67,583	

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SEQ	PE	TITLE	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF	NOTES
090	0604703F	AEROMEDICAL/CHEMICAL DEFENSE SYS	$8,178	8,178	8,178	8,178	8,178	8,178	8,178	
091	604704F	COMMON SUPPORT EQUIPMENT DEV	$1,605	1,605	1,605	1,605	1,605	1,605	1,605	
092	0604706F	LIFE SUPPORT SYSTEMS	$5,058	5,058	5,058	5,058	5,058	5,058	5,058	
094	0604708F	CIVIL, FIRE, ENVIR, SHELTER ENGIN	$3,214	3,214	3,214	3,214	3,214	3,214	3,214	
095	0604711F	SYSTEMS SURVIVABILITY (NUC EFFECTS)	$2,786	0	2,786	0	0	2,786	0	
096	0604727F	JOINT STANDOFF WEAPONS SYSTEMS	$48,966	48,966	48,966	48,966	48,966	80,966	55,966	
097	0604733F	SURFACE DEFENSE SUPPRESSION	$951	951	951	951	951	951	951	
098	0604735F	RANGE IMPROVEMENT	$18,301	18,301	18,301	18,301	18,301	5,101	14,101	
099	604740F	COMPUTER RESOURCES TECH TRANS (CRTT)	$6,621	6,621	6,621	6,621	21,121	15,121	21,121	
101	0604750F	INTELLIGENCE EQUIPMENT	$2,633	2,633	2,633	2,633	2,633	2,633	2,633	
102	0604754F	JT TAC INFORM DISTRIBUTION SYS (JTIDS)	$11,634	11,634	11,634	11,634	11,634	11,634	11,634	
105	0604770F	JOINT SURV/TGT ATT RADAR SYS (JSTARS)	$190,408	160,408	190,408	190,408	190,408	191,908	175,408	
106	0604779F	JT INTEROP OF TAC COMM & CTRL SYS	$2,063	2,063	2,063	2,063	2,063	2,063	2,063	
107	0303606F	UHF SATELLITE COMMUNICATIONS	$20,879	20,879	20,879	20,879	0	20,879	20,879	
107A		C-130J					5,000		5,000	
107B		ICBM - EMD						148,048	138,048	

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(Dollars In Thousands)

SEQ	PE	TITLE	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF	NOTES
108	0604256F	THREAT SIMULATOR DEVELOPMENT	$40,075	49,075	40,075	45,075	45,075	45,664	41,075	
109	060458F	TARGET SYSTEMS DEVELOPMENT	$7,576	7,576	7,576	7,576	7,576	7,576	7,576	
110	0604759F	MAJOR T&E INVESTMENT	$53,544	53,544	48,544	51,044	53,544	52,530	52,530	
111	0605101F	RAND PROJECT AIR FORCE	$28,039	28,039	28,039	23,039	27,000	27,000	27,000	
112	0605306F	RANCH HAND II EPIDEMIOLOGY STUDY	$3,160	3,160	3,160	3,160	3,160	3,160	3,160	
114	0605708F	NAV/RADAR/SLED TRACK TEST SUPPORT	$26,023	26,023	30,023	30,023	30,023	29,123	30,023	
115	0605712F	INITIAL OPERATIONAL TEST & EVAL	$33,504	33,504	28,504	31,004	33,504	33,504	33,504	
116	0605807F	TEST AND EVALUATION SUPPORT	$373,376	373,376	373,376	373,376	373,376	370,300	370,300	
117	0605808F	DEVELOPMENT PLANNING	$9,959	9,959	9,959	7,500	7,500	0	7,500	
118	0605856F	ENVIRONMENTAL COMPLIANCE	$42,876	42,876	42,876	42,876	42,876	42,876	42,876	
119	0605863F	RDT&E AIRCRAFT SUPPORT	$34,476	34,476	34,476	34,476	34,476	34,476	34,476	
120	0605876F	MINOR CONSTRUCTION (RPM) - RDT&E	$3,281	3,281	3,281	3,281	3,281	3,281	3,281	
121	0605878F	MAINTENANCE & REPAIR (RPM) - RDT&E	$51,904	51,904	41,904	46,904	51,904	51,904	51,904	
122	0605896F	BASE OPERATIONS - RDT&E	$106,914	106,914	96,914	101,914	106,914	106,914	106,914	
128	0101213F	MINUTEMAN SQUADRONS	$151,675	151,675	151,675	151,675	151,675	0	0	
132	0102325F	JOINT SURVEILLANCE SYSTEM	$2,770	2,770	2,770	2,770	2,770	2,770	2,770	

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SEQ	PE	TITLE	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF	NOTES
133	0102411F	SURVEILLANCE RADAR STATIONS/SITES	$4,191	4,191	4,191	4,191	4,191	4,191	4,191	
134	0102412F	DEW RADAR STATIONS	$2,068	2,068	2,068	2,068	2,068	-1,932	2,068	
135	0207129F	F-111 SQUADRONS	$11,019	1,504	11,019	2,819	11,019	1,504	4,671	
138	0207133F	F-16 SQUADRONS	$93,157	93,157	93,157	93,157	56,057	138,657	138,657	
139	0207134F	F-15E SQUADRONS	$116,562	116,562	116,562	116,562	116,562	108,562	108,652	
140	0207136F	MANNED DESTRUCTIVE SUPPRESSION	$38,422	38,422	38,422	38,422	38,422	37,422	37,422	
143	0207160F	TRI-SERVICE STANDOFF ATTACK MISSILE	$81,063	81,063	81,063	218,600	0	218,600	135,600	
144	0207161F	TACTICAL AIM MISSILES	$26,944	26,944	26,944	0	0	0	0	
145	0207163F	ADV MED RANGE A/A MSL (AMRAAM)	$70,715	70,715	70,715	70,715	70,715	59,015	70,715	
147	0207247F	AF TENCAP	$21,183	21,183	21,183	21,183	13,402	21,183	21,183	
148	0207248F	SPECIAL EVALUATION PROGRAM	$118,260	118,260	118,260	118,260	118,260	118,260	118,260	
150	0207412F	TACTICAL AIR CONTROL SYS	$7,383	7,383	7,383	7,383	7,383	7,383	7,383	
151	0207417F	AIRBORNE WARNING & CNTL SYS (AWACS)	$85,643	85,643	85,643	85,643	85,643	85,643	85,643	
152	0207419F	TACTICAL AIRBORNE COMMAND AND CONTROL	$2,779	2,779	2,779	2,779	2,779	2,779	2,779	
153	0207422F	DEPLOYABLE C3 SYSTEMS	$2,610	2,610	2,610	2,610	2,610	2,610	2,610	
154	0207423F	ADVANCED COMMUNICATIONS SYS	$459	459	459	459	459	459	459	

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SEQ	PE	TITLE	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF	NOTES
155	0207424F	EVALUATION AND ANALYSIS PROGRAM	$73,957	73,957	73,957	73,957	73,957	73,957	73,957	
157	0207433F	ADVANCED PROGRAM TECHNOLOGY	$165,351	165,351	165,351	165,351	165,351	165,351	165,351	
158	0207438F	THEATER BATTLE MANAGEMENT (TBM) C4I	$33,957	33,957	33,957	33,957	33,957	25,957	29,957	
159	0207579F	ADVANCED SYSTEMS IMPROVEMENTS	$119,866	119,866	119,866	119,866	119,866	119,866	119,866	
160	0207590F	SEEK EAGLE	$15,982	15,982	15,982	15,982	15,982	15,982	15,982	
161	0207591F	ADVANCED PROGRAM EVALUATION	$105,077	105,077	105,077	105,077	105,077	109,507	114,416	
162	0207601F	USAF WARGAMING AND SIMULATION	$19,110	19,110	19,110	19,110	14,110	19,110	14,110	
163	0208006F	MISSION PLANNING SYSTEMS	$14,483	14,483	14,483	14,483	9,483	14,483	14,483	
167	0208060F	THEATER MISSILE DEFENSES	$79,302	79,302	79,302	27,302	27,302	17,002	27,302	
175	0303110F	DEF SAT COMM SYS	$30,876	30,876	21,476	21,476	0	30,876	14,876	
177	0303131F	MIN ESS EMERG COMM NETWORK (MEECN)	$40,795	35,795	40,795	35,795	35,795	34,195	34,195	
178	0303140F	INFORMATION SYSTEMS SECURITY PROGRAM	$10,293	11,793	10,293	11,793	11,793	10,293	11,793	
179	0303144F	ELECTROMAGNETIC COMBAT ANALYSIS CTR	$9,287	9,287	9,287	9,287	9,287	9,287	9,287	
181	0303601F	MILSTAR SAT COMM SYS (AF TERMINALS)	$18,249	18,249	18,249	18,249	18,249	18,249	18,249	
182	0303605F	SATELLITE COMM TERMINALS	$1,905	1,905	1,905	1,905	1,905	1,905	1,905	
184	0305110F	SATELLITE CONTROL NETWORK	$101,146	101,146	101,146	101,146	15,000	101,146	83,000	

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SEQ	PE	TITLE	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF	NOTES
185	0305111F	WEATHER SERVICE	$20,990	20,990	20,990	20,990	20,990	20,990	20,990	
186	0305114F	AIR TRAFFIC CONTROL, APPROACH, AND LAND SYSTEM (ATCALS)	$7,566	7,566	0	7,566	7,566	0	7,566	
187	0305119F	MEDIUM LAUNCH VEHICLES	$21,042	121,042	21,042	21,042	0	21,042	21,042	
187A		SPACE LAUNCH VEHICLES				50,000				
189	0305137F	NATIONAL AIR SPACE SYS (NAS) PLAN	$30,980	30,980	30,980	30,980	20,980	30,980	30,980	
190	0305138F	UPPER STAGE SPACE VEHICLES	$3,663	3,663	3,663	3,663	0	3,663	3,663	
192	0305144F	TITAN SPACE LAUNCH VEHICLES	$161,096	161,096	161,096	161,096	0	153,396	153,396	
193	0305145F	ARMS CONTROL IMPLEMENTATION	$6,456	6,456	6,456	6,456	6,456	3,456	3,456	
194	0305158F	CONSTANT SOURCE	$3,259	3,259	3,259	3,259	3,259	3,259	3,259	
195	0305160F	DEF METEOROLOGICAL SAT PROG (DMSP)	$21,135	21,135	21,135	21,135	0	21,135	21,135	
196	0305164F	NAVSTAR GPS (USER EQUIPMENT)	$9,781	9,781	9,781	9,781	9,781	9,781	9,781	
197	0305165F	NAVSTAR GPS (SPACE/CONTROL SEG)	$51,125	51,125	51,125	51,125	0	36,425	36,425	
199	0305181F	WESTERN SPACE LAUNCH FACILITY (WSLF)	$0	0	0	0	0	0	0	
200	0305182F	EASTERN SPACE LAUNCH FACILITY (ESLF)	$42,710	42,710	42,710	42,710	42,710	42,710	42,710	
201	0305887F	ELECTRONIC COMBAT INTEL SUPPORT	$1,892	1,892	1,892	1,892	1,892	1,892	1,892	
204	0305906F	NCMC - TW/AA SYSTEMS	$100,520	100,520	100,520	100,520	133,020	100,520	133,020	

FY 95 CONGRESSIONAL MAXI-$-TRACK RDT&E (3600)
(Dollars In Thousands)

SEQ	PE	TITLE	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF	NOTES
206	0305910F	SPACETRACK	$34,396	34,396	34,396	34,396	37,396	53,196	54,896	
207	0305911F	DEFENSE SUPPORT PROGRAM	$76,351	56,351	76,351	76,351	0	67,359	67,359	
209	0305913F	NUDET DETECTION SYSTEM	$10,140	10,140	10,140	10,140	0	10,140	10,140	
210	0401218F	KC-135s	$5,160	5,160	5,160	5,160	5,160	17,160	23,260	
214	0702207F	DEPOT MAINTENANCE (NON-IF)	$2,099	2,099	2,099	2,099	2,099	2,099	2,099	
215	0708011F	INDUSTRIAL PREPAREDNESS/MANUFACTURING TECHNOLOGY	$0	0	50,000	50,000	95,000	48,260	84,317	
216	0708012F	LOGISTICS SUPPORT ACTIVITIES	$5,804	5,804	5,804	5,804	5,804	5,804	5,804	
217	0708026F	PROD/REL/AVAIL/MAIN PROG OFC (PRAMP)	$6,785	7,785	6,785	6,785	6,785	6,785	6,785	
218	0708054F	POLLUTION PREVENTION	$16,216	16,216	16,216	16,216	16,216	16,216	16,216	
219	0804734F	CRYPTOLOGIC/SIGINT-RELATED SKILL TRAINING	$1,526	1,526	1,526	1,526	1,526	1,526	1,526	
221	0901218F	CIVILIAN COMPENSATION PROGRAM	$5,655	5,655	5,655	5,655	5,655	5,655	5,655	
222	1001004F	INTERNATIONAL ACTIVITIES	$3,436	3,436	3,436	3,436	3,436	1,910	1,910	
222A		GENERAL REDUCTION, UNIVERSITY RESEARCH					-92,000		-18,456	
222B		CIVILIAN PERSONNEL PAY RAISE AND LOCALITY PAY					7,700		4,300	
223		CIVILIAN UNDERSTRENGTH			-21,000	0	-15,400		-9,100	

FY 95 CONGRESSIONAL MAXI-$-TRACK RDT&E (3600)
(Dollars In Thousands)

SEQ	PE	TITLE	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF	NOTES
224		FEDERAL WORKFORCE RESTRUCTURING ACT			900	900		900	900	
225		ALARM DEM/VAL PROTOTYPE						222,500	0	
226		SPECIAL ACTIVITIES						-115,900	0	
227		FOREST GREEN						-500	0	
228		EVOLVED ELV FAMILY							30,000	
229		REUSEABLE LAUNCH VEHICLE TECHNOLOGY							30,000	
230		SPACE-BASED INFRA-RED ARCHITECTURE							221,000	

TITLE: DEFENSE RESEARCH SCIENCES APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$235,805	235,805	230,805	225,805	247,805	201,000	247,805

SASC:

Seismic monitoring research

After an extensive interagency review, a Presidential Directive was issued in 1993 formulating a coordinated plan for all U.S. investments in enhancing the seismic monitoring methods for monitoring a Comprehensive Test Ban Treaty. Prior to the President's directive, there had been various appropriations to academic groups to develop and operate seismic networks that were important during the initial stages of the reopening of the former Soviet Union. These networks have now been altogether eclipsed by the government regional arrays and the International Data Center; moreover, universities have access to essentially all the data collected by the government arrays. Further investment in private arrays should be coordinated with the President's plan; accordingly, the committee recommends a provision that would prohibit obligation of any funds for seismic monitoring projects that have not been included in the yearly updates of the plan.

SASC, p. 126 (Defense-wide RDT&E)

University research initiatives

The committee is pleased that the defense authorization and appropriations acts for fiscal year 1994 were nearly free of earmarks for specific universities and colleges in the university research initiative program.

According to a study released by the Congressional Research Service dated April 13, 1994, there were only two earmarks totalling $12.0 million in this program in fiscal year 1994. This is a significant improvement over fiscal year 1993 in which there were 29 earmarks totaling $176.5 million.

Although the committee is pleased that other committees have begun to cooperate to require that funds authorized for basic research at the university level are awarded on the basis of merit-based competition, the committee is aware that there is still no consensus on the best way to ensure that smaller colleges and universities have an adequate opportunity to compete for funding.

In 1993, this committee created the university research initiative support program. This program was authorized $20.0 million for a separate competition for institutions that had received less than $2.0 million in federal grants in the last two years. Institutions would be eligible for this program regardless of their location. No funds were specifically appropriated for this program.

The National Defense Authorization Act for Fiscal Year 1994 also authorized $20.0 million for the defense experimental program to stimulate competitive research program (DEPSCOR). This program authorizes a separate competition for colleges and universities in states that have been designated by the Director of the National Science Foundation. Seventeen states are currently eligible for this program. The Department of Defense program is intended to complement the National Science Foundation program for building research capacity in states that have not traditionally received significant numbers of federal research grants.

The committee is concerned that the DEPSCOR program places the emphasis on states rather than institutions. DEPSCOR does not make awards to institutions that have good proposals but are not located in a DEPSCOR state, even though the institution has had little or no previous federal funding. The committee is also concerned that DEPSCOR awards are not limited by either state or institution. As a result, individual institutions and states can still receive DEPSCOR funds even if they have received large amounts of federal funds from other sources in recent years.

The committee recommends a balance between the university research initiative and DEPSCOR programs. The committee recommends that $10.0 million of the funds authorized in PE 61103D for university research be authorized for the university research support program, and that $10.0 million of the funds in PE 61103D be authorized for DEPSCOR. The committee further recommends a provision that would limit DEPSCOR awards to states that have received less than 50 percent of the national average investment of federal funds for institutions of higher education during the past two fiscal years.

SASC, p. 141 (Defense-wide RDT&E)

HAC:

BASIC RESEARCH
DEFENSE RESEARCH SCIENCES

The Air Force requested $235,805,000 for defense research sciences. The Committee recommends $247,805,000, an increase of $12,000,000 only for seismic research. The proliferation of nuclear weapons continues to be one of the most serious threats to the U.S. national security, emphasizing the need for an effective capability to seismically monitor potential nuclear tests. The Committee recommends $12,000,000 only for the Joint Seismic Program and Global Seismic Network, administered by the Incorporated Research Institutions for Seismology. The Committee supports the $4,000,000 included in the request for university based seismic research funded within this defense research sciences program. Since any delay in this program could harm the nation's ability to monitor a comprehensive nuclear test ban treaty, the Committee directs the Secretary of the Air Force to ensure expeditious obligation of these funds.

Within the amount requested by the Air Force for defense research sciences, a total of $650,000 has been included for support to the Sacramento Peak Observatory in New Mexico. The Committee directs that the full amount be provided to Sacramento Peak and designates this project to be an item of specific Committee interest.

HAC, p. 234

UNIVERSITY RESEARCH

The Defense Department estimates that the fiscal year 1995 Department of Defense budget contains about $1.8 billion for university research and associated contracts with universities, to include Navy laboratories. The Committee recommends a reduction of $900,000,000, about half of the budget request, due to fiscal constraints. The reduction is recommended as a general reduction to the following appropriation accounts:

[In thousands of dollars]

RDT&E, Army	-68,000
RDT&E, Navy	-310,000
RDT&E, Air Force	-92,000
RDT&E, Defense wide	-430,000

HAC, p. 199

SAC:

Defense research sciences.-The Committee directs that, of the funds recommended for this program element, $650,000 shall be made available by the Air Force only as the service's annual contribution to support the National Solar Observatory [NSO]. Additional recommendations regarding this program element are contained in the "Principal committee observations" section of this report.

SAC, p. 277

APPN CONF:
Amendment No. 97: Restores language proposed by the House and stricken by the Senate which provides funds for seismic research; restores language proposed by the House and stricken by the Senate which provides funds for the National Center for Manufacturing Sciences; and inserts language proposed by the Senate on the Air Force Maui Space Surveillance Site.

Appn Conf, p. 128

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TITLE: AEROSPACE FLIGHT DYNAMICS APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$64,046	65,046	59,046	59,046	60,000	60,946	60,946

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HASC:
Microencapsulated phase change materials

In fiscal year 1992, Congress began a program to determine the usefulness of microencapsulated phase change materials (MicroPCM) in aircraft avionics cooling systems. That program is progressing well and preliminary results the expected at the end of fiscal year 1995. In order to ensure that the two MicroPCM initiatives are funded through fiscal year 1995, and to avoid unnecessary contract or program gaps, the committee recommends an additional authorization of $1 million in PE 602201F.

HASC, p. 115

AUTH CONF:
Microencapsulated phase change materials

The budget request contained no funding for microencapsulted phase change materials (micro PCM).

The Senate bill contained no funding for micro PCM.

The House amendment would authorize an additional $1.0 million to continue micro PCM research in the Air Force.

The House recedes. The the conferees, however believe that micro PCM innovative technology worth pursuing and would allow the Air Force to reprogram funds within its allotted funding to support micro PCM research in fiscal year 1995.

Auth Conf, p. 599

HAC:

PROGRAM GROWTH/BUDGET EXECUTION ADJUSTMENTS

The budget request included amounts for some programs which exceed by unjustifiably large margins the amounts provided for fiscal year 1993 or 1994. Other programs had significant prior year unobligated balances, and budget adjustments are necessary due to poor budget execution. The Committee therefore recommends the following reductions:

[In thousands of dollars]

	Request	HASC	HAC	Change
Aerospace Flight Dynamics Exploratory Development	$64,046	$65,046	$60,000	-$4,046
Human Systems Technology Exploratory Development	52,518	52,518	49,000	-3,518
Aerospace Avionics Exploratory Development	74,673	74,673	67,000	-7,673
Civil Engineering and Environmental Quality Exploratory Development	7,045	7,045	6,500	-545
Logistics Systems Technology Advanced Development	18,200	18,200	15,000	-3,200
Aerospace Propulsion Subsystems Integration	29,941	21,941	21,941	-8,000
Aerospace Vehicle Technology Advanced Development	14,339	14,339	13,500	-839
Personnel Training and Simulation Advanced Development	9,241	9,241	9,000	-241
Electronic Warfare Technology Advanced Development	27,700	27,700	24,000	-3,700
Rand Project Air Force	28,039	28,039	27,000	-1,039
Development Planning	9,959	9,959	7,500	-2,459
Wargaming/Simulation	19,110	19,110	14,110	-5,000
Mission Planning Systems	14,483	14,483	9,483	-5,000

HAC, p. 233

SAC:

Aerospace flight dynamics.-The Committee approves $60,946,000 for this program element, decreasing the budget request by $3,100,000 and adding $946,000 compared to the House amount. The Committee provides $1,500,000 only to permit the Air Force and the Advanced Research Projects Agency [ARPA] to work jointly on concepts which establish methods to drop sensors and cargo from aircraft with improved accuracy. The Committee also deletes $4,600,000 to study aerodynamic design and airframe propulsion integration for future aircraft. Such efforts are premature until the JAST Program proceeds.

SAC, p. 277

APPN CONF:

AEROSPACE FLIGHT DYNAMICS

The conferees agree to provide $60,946,000 for Aerospace Flight Dynamics as recommended by the Senate. An increase of $1,500,000 has been provided for a joint Air Force/Advanced Research Projects Agency project to develop approaches for improving the Air Force's ability to accurately drop sensors and cargo from aircraft. The conferees direct that the $1,500,000 increase shall be transferred to the appropriate program office at Eglin Air Force Base within 30 days of enactment of this Act.

Appn Conf, p. 123

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TITLE: HUMAN SYSTEMS TECHNOLOGY APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$52,518	52,518	47,518	47,518	49,000	48,302	48,302

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HAC:

PROGRAM GROWTH/BUDGET EXECUTION ADJUSTMENTS

The budget request included amounts for some programs which exceed by unjustifiably large margins the amounts provided for fiscal year 1993 or 1994. Other programs had significant prior year unobligated balances, and budget adjustments are necessary due to poor budget execution. The Committee therefore recommends the following reductions:

[In thousands of dollars]

	Request	HASC	HAC	Change
Aerospace Flight Dynamics Exploratory Development	$64,046	$65,046	$60,000	-$4,046
Human Systems Technology Exploratory Development	52,518	52,518	49,000	-3,518
Aerospace Avionics Exploratory Development	74,673	74,673	67,000	-7,673
Civil Engineering and Environmental Quality Exploratory Development	7,045	7,045	6,500	-545
Logistics Systems Technology Advanced Development	18,200	18,200	15,000	-3,200
Aerospace Propulsion Subsystems Integration	29,941	21,941	21,941	-8,000
Aerospace Vehicle Technology Advanced Development	14,339	14,339	13,500	-839
Personnel Training and Simulation Advanced Development	9,241	9,241	9,000	-241
Electronic Warfare Technology Advanced Development	27,700	27,700	24,000	-3,700
Rand Project Air Force	28,039	28,039	27,000	-1,039
Development Planning	9,959	9,959	7,500	-2,459
Wargaming/Simulation	19,110	19,110	14,110	-5,000
Mission Planning Systems	14,483	14,483	9,483	-5,000

HAC, p. 233

SAC:

Human systems technology.-The Committee approves $48,302,000, reducing the budget request by $4,216,000 and the House allowance by $698,000. The reduction is made to hold the program to the fiscal year 1994 level, deleting funds for efforts such as hypervelocity crew escape exposure studies and poorly coordinated helmet mounted display [HMD] activities.

SAC, p. 277

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TITLE: AEROSPACE PROPULSION APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$77,506	77,506	72,506	72,506	80,506	73,406	74,406

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HAC:

AEROSPACE PROPULSION

The Air Force requested $77,506,000 for aerospace propulsion. The Committee recommends $80,506,000, an increase of $3,000,000 only to continue the ongoing research project on coal-based thermally stable jet fuels.

HAC, p. 235

SAC:

Aerospace propulsion.-The Committee approves $73,406,000, adjusting the budget request downward by $4,100,000 and providing $7,100,000 less than the House. The Committee deletes $4,100,000 for scramjet and combined cycle propulsion efforts which the Air Force indicated notionally supported an SR-71 follow-on or a theater missile defense program. These efforts should be transferred to the Hypersonic Flight Technology Program element for consideration.

SAC, p. 277

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TITLE: AEROSPACE AVIONICS APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$74,673	74,673	69,673	67,000	67,000	66,977	67,957

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HAC:

PROGRAM GROWTH/BUDGET EXECUTION ADJUSTMENTS

The budget request included amounts for some programs which exceed by unjustifiably large margins the amounts provided for fiscal year 1993 or 1994. Other programs had significant prior year unobligated balances, and budget adjustments are necessary due to poor budget execution. The Committee therefore recommends the following reductions:

[In thousands of dollars]

	Request	HASC	HAC	Change
Aerospace Flight Dynamics Exploratory Development	$64,046	$65,046	$60,000	-$4,046
Human Systems Technology Exploratory Development	52,518	52,518	49,000	-3,518
Aerospace Avionics Exploratory Development	74,673	74,673	67,000	-7,673
Civil Engineering and Environmental Quality Exploratory Development	7,045	7,045	6,500	-545
Logistics Systems Technology Advanced Development	18,200	18,200	15,000	-3,200
Aerospace Propulsion Subsystems Integration	29,941	21,941	21,941	-8,000
Aerospace Vehicle Technology Advanced Development	14,339	14,339	13,500	-839
Personnel Training and Simulation Advanced Development	9,241	9,241	9,000	-241
Electronic Warfare Technology Advanced Development	27,700	27,700	24,000	-3,700
Rand Project Air Force	28,039	28,039	27,000	-1,039
Development Planning	9,959	9,959	7,500	-2,459
Wargaming/Simulation	19,110	19,110	14,110	-5,000
Mission Planning Systems	14,483	14,483	9,483	-5,000

HAC, p. 233

EXPLORATORY DEVELOPMENT
EXEMPTIONS FROM GENERAL REDUCTIONS

A table earlier in this report explains budget execution or growth reductions made to certain programs. The Committee directs that none of the reduction to the aerospace avionics exploratory development program be applied to project 2000: active electronics countermeasures or to project 7662: avionics data transmission and reception, and that none of the reduction to the electronic warfare advanced development program be applied to project 691X: onboard countermeasures or to project 2432: defense systems fusion.

HAC, p. 234

SAC:
Aerospace avionics.-The Committee approves $66,977,000 to continue Air Force efforts to develop avionics concepts for future aircraft. The recommendation provides a decrease of $7,696,000 to the budget request and a decrease of $23,000 to the House allowance. The Committee's action reflects the following reductions: (a) $1,287,000 for development efforts on laser-based jamming to counter infrared-guided missiles; (b) $650,000 to develop a less than 1 kilowatt laser source; (c) $3,642,000 allocated to developing advanced processor and software technology for embedded, real time data processing; (d) $980,000 to develop an advanced solid state miniature inertial sensor; (e) $592,000 budgeted for low cost radar and architecture technology; and (f) $545,000 allocated to a laser radar effort. These efforts duplicate ongoing development programs in service or Advanced Research Projects Agency [ARPA] accounts, lack firm transition plans, have experienced delays in transitioning within the Air Force, or are not supported by future program requirements.

SAC, p. 277-8

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TITLE: PERSONNEL, TRAINING AND SIMULATION APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$29,848	29,848	29,848	29,848	29,848	33,748	33,748

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HAC:

PROGRAM GROWTH/BUDGET EXECUTION ADJUSTMENTS

The budget request included amounts for some programs which exceed by unjustifiably large margins the amounts provided for fiscal year 1993 or 1994. Other programs had significant prior year unobligated balances, and budget adjustments are necessary due to poor budget execution. The Committee therefore recommends the following reductions:

[In thousands of dollars]

	Request	HASC	HAC	Change
Aerospace Flight Dynamics Exploratory Development	$64,046	$65,046	$60,000	-$4,046
Human Systems Technology Exploratory Development	52,518	52,518	49,000	-3,518
Aerospace Avionics Exploratory Development	74,673	74,673	67,000	-7,673
Civil Engineering and Environmental Quality Exploratory Development	7,045	7,045	6,500	-545
Logistics Systems Technology Advanced Development	18,200	18,200	15,000	-3,200
Aerospace Propulsion Subsystems Integration	29,941	21,941	21,941	-8,000
Aerospace Vehicle Technology Advanced Development	14,339	14,339	13,500	-839
Personnel Training and Simulation Advanced Development	9,241	9,241	9,000	-241
Electronic Warfare Technology Advanced Development	27,700	27,700	24,000	-3,700
Rand Project Air Force	28,039	28,039	27,000	-1,039
Development Planning	9,959	9,959	7,500	-2,459
Wargaming/Simulation	19,110	19,110	14,110	-5,000
Mission Planning Systems	14,483	14,483	9,483	-5,000

HAC, p. 233

SAC:

Personnel, training, and simulation.-The Committee approves $33,748,000, an increase to the budget request and the House allowance of $3,900,000. The additional funds are provided as a result of the transfer of a new Advanced Research Projects Agency [ARPA] simulation-based training initiative. The Committee directs the Air Force and ARPA to work together on this initiative to ensure that the program addresses user needs and maximizes the use of innovative Air Force and ARPA technologies.

SAC, p. 278

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TITLE: CIVIL ENG & ENVIRONMENTAL QUALITY APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$7,045	7,045	7,045	7,045	6,500	7,045	6,500

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HAC:

PROGRAM GROWTH/BUDGET EXECUTION ADJUSTMENTS

The budget request included amounts for some programs which exceed by unjustifiably large margins the amounts provided for fiscal year 1993 or 1994. Other programs had significant prior year unobligated balances, and budget adjustments are necessary due to poor budget execution. The Committee therefore recommends the following reductions:

[In thousands of dollars]

	Request	HASC	HAC	Change
Aerospace Flight Dynamics Exploratory Development	$64,046	$65,046	$60,000	-$4,046
Human Systems Technology Exploratory Development	52,518	52,518	49,000	-3,518
Aerospace Avionics Exploratory Development	74,673	74,673	67,000	-7,673
Civil Engineering and Environmental Quality Exploratory Development	7,045	7,045	6,500	-545
Logistics Systems Technology Advanced Development	18,200	18,200	15,000	-3,200
Aerospace Propulsion Subsystems Integration	29,941	21,941	21,941	-8,000
Aerospace Vehicle Technology Advanced Development	14,339	14,339	13,500	-839
Personnel Training and Simulation Advanced Development	9,241	9,241	9,000	-241
Electronic Warfare Technology Advanced Development	27,700	27,700	24,000	-3,700
Rand Project Air Force	28,039	28,039	27,000	-1,039
Development Planning	9,959	9,959	7,500	-2,459
Wargaming/Simulation	19,110	19,110	14,110	-5,000
Mission Planning Systems	14,483	14,483	9,483	-5,000

HAC, p. 233

TITLE: HYPERSONIC FLIGHT TECHNOLOGY APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$45,000	45,000	45,000	45,000	45,000	10,000	45,000

SAC:

Hypersonic flight technology.-This newly created program element represents the remaining efforts of the now deferred National Aerospace Plane [NASP] Program. While the Committee believes it is necessary for the Air Force to invest in basic hypersonic technologies, the currently proposed program is unaffordable. The Committee cannot endorse the expenditure of $500,000,000 for four flight tests which will leave many questions about hypersonic flight still unanswered. The Committee understands that the Air Force has reached a similar conclusion and is likely to delete the funds to continue this program from future defense budgets.

At one time, the creation of a consortia of aerospace contractors and Government officials within the NASP program office [NPO] represented a significant accomplishment and positive step toward NASP development. Now, the NPO represents an unaffordable overhead cost preventing the Air Force from defining an affordable hypersonic technology program. The Committee believes that the Air Force must define a program which charts a path to expanding our understanding and ability to operate missiles, and possibly flight vehicles, at hypersonic speeds.

Based on these conclusions, the Committee provides $10,000,000, a decrease to the budget request of $35,000,000 and an equal amount below the House allocation. The Committee directs that these funds may not be obligated until the Congress receives a plan from the Assistant Secretary of the Air Force (acquisition) outlining the Air Force's objectives for these funds, certifying that future budgets will sustain the defined program, and providing a detailed breakdown of the cost of the fiscal year 1995 activities.

SAC, p. 278

APPN CONF:

HYPERSONIC FLIGHT TECHNOLOGY

The conferees agree to provide $45,000,000 for the new Air Force hypersonic flight technology program. The conferees direct that $35,000,000 of these funds may not be obligated until the Secretary of the Air Force certifies that the proposed Hypersonic Systems Technology (HySTP) program is fully funded in the Future Years Defense Program (FYDP) for fiscal years 1996-2001. Furthermore, the conferees agree with the Senate direction to provide a plan outlining the Air Force's objectives for FY 1995 and future years hypersonic funds, certifying that future budgets will sustain the defined program, and providing a detailed breakdown of the annual and total cost of the FY 1995 activities.

Appn Conf, p. 123

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TITLE: ADVANCED WEAPONS APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$125,202	140,202	142,202	145,202	140,202	148,202	159,502

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HASC:

Rocket propulsion technology

The budget request included $31.5 million in PE 602601F, project 1011, for rocket propulsion technology to continue development of advanced propellants, high energy density materials, and orbit transfer and maneuvering technology demonstrations. The committee recommends an addition $5 million to initiate an integrated high performance rocket propulsion technology program that is similar to the Air Force program for turbine engines. This initiative would involve the Department of Defense, NASA and commercial interests in a joint, cost shared, coordinated research and development effort.

The committee also recommends an additional $2.5 million for PE 603302F to allow a more robust technology demonstration effort. The $50.8 million authorized for these programs shall only be used for direct support costs of these technology efforts.

HASC, p. 117

Thermionic power systems

The budget request included $26.897 million in PE 602601F, project 8809, for satellite technology. The committee supports thermionic power conversion technology that shows potential for achieving significantly greater conversion efficiencies than current methods. The committee encourages the Air Force to continue development of thermionic bimodal technology for both electrical power and propulsion for spacecraft. The committee recommends an additional $10 million for this effort.

HASC, p. 119

SASC:

Thermionic conversion technology

The National Defense Authorization Act for Fiscal Year 1994 authorized $10.0 million to continue research and development of thermionic conversion technology. Thermionics is an innovative, dual-use technology that can convert heat from almost any source, including combustion, solar, and nuclear, directly into usable electrical energy with no moving parts. The applications of this technology range from space power and propulsion to terrestrial energy conservation and cogeneration initiatives.

The committee believes that the U.S. thermionics program offers the potential for revolutionary improvement in power generation, with substantial defense and commercial application. In particular, the committee is encouraged by progress in developing thermionic "bimodal" technology that will substantially enhance the cost and operational effectiveness of existing satellite power and propulsion systems.

The committee recommends an increase of $10.0 million in PE 0602601F to continue research and development of thermionic conversion technology in fiscal year 1995.

SASC, p. 86

High frequency active auroral research program

The committee is aware of the promising results of the high frequency active auroral research program (HAARP). This transmitter in Alaska, besides providing a world class research facility for ionospheric physics, could allow earth-penetrating tomography over most of the northern hemisphere. Such a capability would permit the detection and precise location of tunnels, shelters, and other underground shelters. The absence of such a capability has been noted as a serious weakness in the Department of Defense plans for precision attacks on hardened targets and for counterproliferation. In fact, the May 1994 report from the Deputy Secretary of Defense on nonproliferation and counterproliferation activities and programs recommends increased funding of $75.0 million annually for detection of underground structures.

The committee recommends $5.0 million in PE 62601F to continue the HAARP project, but notes with concern that the capital cost of a full-scale HAARP facility could be as much as $90.0 million. Unless the Department of Defense is committed to include such a project in future budget requests, the recommended authorization for fiscal year 1995 will have little effect. Therefore the committee directs that none of these funds may be obligated or expended until the Secretary of Defense notifies the Committees on Armed Services of the Senate and the House of Representatives that the Department will, as part of the nonproliferation and counterproliferation program recommended in the May 1994 report, include the cost for a full-scale HAARP facility in its fiscal year 1996 budget request.

SASC, p. 86

AUTH CONF:

Thermionic power systems

The budget request contained $26.897 million in PE 62601F (project 8809, satellite technology). No funds were requested in this project to continue research on thermionic space power technology.

The Senate bill and the House amendment would both add $10.0 million to continue development of this technology.

The conferees agree that the thermionics program offers the potential for revolutionary improvements in power generation technology with substantial defense and commercial implications, and urge the Air Force to continue development of this technology.

Rocket propulsion technology

The budget request included $31.5 million in PE 62601F for project 1011 and $11.8 million in PE 63302F for rocket propulsion technology.

The Senate bill would provide no additional funds for this research.

The House amendment would authorize an additional $5.0 million in PE 62601F for project 1011 and an additional $2.5 million in PE 63302F for rocket propulsion technology.

The Senate recedes. The conferees support the additional funding for rocket propulsion programs as described in the House report (H. Rept. 103-499).

Auth Conf, p. 596

High frequency active auroral research program

The budget request contained no funding for the High frequency active auroral research program.

The Senate bill would authorize $5.0 million for this purpose in PE 62601F, provided that the Secretary of Defense notifies the congressional defense committees that funding to complete the project will be included in future budget requests.

The House amendment would provide no funding for the program.

The House recedes.

The conferees agree that the project has promise for detection of underground structures such as tunnels and shelters, and note that the absence of such a capability has been identified in a May 1994 report the Deputy Secretary of Defense as a serious weakness in the DOD plans for precision attacks on hardened targets and counterproliferation. This report recommends increased funding of $75.0 million annually for the detection of underground structures. The conferees further note that such a project would provide a world-class ionospheric research facility that could also detect mineral and oil deposits, aquifers, and geological structures.

The conferees share the Senate's concern that the Department of Defense will not include funds to finish this facility in future budget requests. The Air Force has spent $20.0 million, but the complete facility would require another $150.0 million. The conferees see no reason why funds would not be requested to finish this project if the Department of Defense is truly serious about locating underground structures. Therefore, the conferees direct that none of these funds be obligated until the Secretary of Defense notifies the congressional defense committees that the Department will, as part of the nonproliferation and counterproliferation program recommended in the May 1994 report, include funding for this project in future budget requests.

Auth Conf, p. 596-7

HAC:

ADVANCED WEAPONS

The Air Force requested $125,202,000 for advanced weapons. The Committee recommends $140,202,000. The increase of $15,000,000 is allocated as follows: $10,000,000 only for Thermionic Power Systems and $5,000,000 only to initiate an integrated high performance rocket propulsion technology program at the Air Force's Phillips Laboratory at Edwards Air Force Base. The Committee directs that the Secretary of the Air Force ensure that there is no diversion of funds from either of these two programs.

HAC, p. 235

SAC:

Advanced weapons.-The Committee provides $148,202,000, an increase of $23,000,000 to the request and an amount $8,000,000 above the House allowance.

Of the additional funds, the Committee directs that $13,000,000 shall be made available only to continue the establishment and operation of a massively parallel supercomputer to support the image information processing needs of the Air Force Maui Space Surveillance Site [MSSS] and other DOD high-performance computing needs. The Committee has included bill language to implement this recommendation.

The Committee also directs that the remaining additional funds, $10,000,000, are available only to continue thermionic research and development efforts.

The Committee further directs that, of the total funds provided in this program element-not including the previously discussed increases-the Air Force shall make available $5,000,000 only to continue the high altitude active auroral research program [HAARP].

SAC, p. 278-9

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TITLE: COMMAND/CONTROL/COMMUNICATION APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$95,444	85,444	95,444	95,444	85,444	95,444	95,444

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HASC:
Electronics

The committee recognizes that both the Department's and the Advanced Research Projects Agency's (ARPA) programs in electronics technology are the "seed corn" for high technology electronic research that will fuel military and commercial product development. Without it, the vision of American companies developing electronic products for the information super highways will not be achieved.

The committee also believes that the success of the SEMATECH consortium, which has enabled the United States to recapture the lead in integrated circuit development and sales, must be sustained. The committee further believes that advanced lithography should be a top priority of SEMATECH to ensure that the lead is maintained.

The committee is alarmed by the Department's request to reduce the advanced lithography program from over $71 million in 1992 to $10 million in 1995. This has caused industry to decry the budget request as one which is tantamount to an abandonment of the industry and as an acceptance of total reliance for this critical technology on foreign suppliers. This will eventually jeopardize U.S. dominance of electronics system innovation.

The committee notes that the Department has increased its budget request for electronics and that it is sufficient to fund the overall electronics investment. However, the committee believes that because the Department does not have an investment strategy for advanced lithography it has resulted in an investment portfolio imbalance. Therefore, the committee recommends the following action for a strengthened and continued program:

(1) Increase ARPA in request in PE 603739E for research in lithography from $10 million to $55 million;

(2) Redirect $20 million of the $90 million requested for SEMATECH to advanced lithography development;

(3) Provide $25 million to ARPA for the procurement of lithography tools (alignment tools, steppers, etc.) to be placed at government sponsored research institutions (Federal and national laboratories, FFRDCs, universities) currently supported advanced lithography development. This will accelerate and intensify research and stimulate U.S. tool manufacturing; and

(4) Direct the Secretary of Defense to implement section 263 of the National Defense Authorization Act for Fiscal Year 1994 (Public Law 103-160) to complete the staffing of the Semiconductor Technology Council and facilitate its operation to immediately address a strategy for lithography development and industrialization.

The committee understands that, when possible, these funds will be matched by private industrial research funding. Funding for the above research and development should be in accordance with the current lithography plan contained in the National Technology Roadmaps for Semiconductors.

The committee recommends the following reductions in programs to offset this initiative. The committee notes that several of the programs listed below have limited long-term application if a strong U.S. capability in leading edge integrated circuit development and manufacturing does not occur.

PE 602308A-decrease $10 million.

PE 602572N-decrease $10 million.

PE 602702F-decrease $10 million.

PE 602301E (ST-19)-decrease $20 million.

PE 602217C (1601)-decrease $20 million.

Finally, section 216 of the bill would prohibit the obligation of any high performance computing (PE 602301E), SEMATECH (PE 603745E) or Warbreaker (PE 603226E, Project EE-40) funding until the Semiconductor Technology Council, established in the National Defense Authorization Act for Fiscal Year 1994 (Public Law 103-160) is functioning.

HASC, p. 76-77

SASC:

Passive identification friend or foe

The committee has learned of an ongoing program for passive aircraft identification that shows promise. If successful, the initiative could be instrumental in avoiding friendly fire losses.

The committee recommends that the Air Force apply $1.0 million from within PE 62702F for development of real-time, automatic, passive identification of both hostile and friendly aircraft. The committee understands that program was to be reviewed in early June 1994 to validate results. The committee's recommendation is made under the presumption that the program will receive a favorable review of its test results.

SASC, p. 86-87

HAC:

COMMITTEE RECOMMENDATIONS
AUTHORIZATION CHANGES

The Committee recommends the following changes in accordance with authorization action:

[In thousands of dollars]

	Request	HASC	HAC	Change
Command, Control and Communications	$95,444	$85,444	$85,444	-$10,000
Exploratory Development				
Nuclear Weapons Support	5,637	3,637	3,637	-2,000
C-17	221,454	105,154	105,154	-116,300
Systems Survivability (Nuclear Effects)	2,786	0	0	-2,786
Submunitions	26,680	12,680	12,680	-14,000
MEECN	40,795	35,795	35,795	-5,000
Information Systems Security Program	10,293	11,793	11,793	+1,500

HAC, p. 233

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TITLE: LOGISTICS SYSTEMS TECHNOLOGY APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$18,200	18,200	18,200	18,200	15,000	18,200	15,000

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HAC:

PROGRAM GROWTH/BUDGET EXECUTION ADJUSTMENTS

The budget request included amounts for some programs which exceed by unjustifiably large margins the amounts provided for fiscal year 1993 or 1994. Other programs had significant prior year unobligated balances, and budget adjustments are necessary due to poor budget execution. The Committee therefore recommends the following reductions:

[In thousands of dollars]

	Request	HASC	HAC	Change
Aerospace Flight Dynamics Exploratory Development	$64,046	$65,046	$60,000	-$4,046
Human Systems Technology Exploratory Development	52,518	52,518	49,000	-3,518
Aerospace Avionics Exploratory Development	74,673	74,673	67,000	-7,673
Civil Engineering and Environmental Quality Exploratory Development	7,045	7,045	6,500	-545
Logistics Systems Technology Advanced Development	18,200	18,200	15,000	-3,200
Aerospace Propulsion Subsystems Integration	29,941	21,941	21,941	-8,000
Aerospace Vehicle Technology Advanced Development	14,339	14,339	13,500	-839
Personnel Training and Simulation Advanced Development	9,241	9,241	9,000	-241
Electronic Warfare Technology Advanced Development	27,700	27,700	24,000	-3,700
Rand Project Air Force	28,039	28,039	27,000	-1,039
Development Planning	9,959	9,959	7,500	-2,459
Wargaming/Simulation	19,110	19,110	14,110	-5,000
Mission Planning Systems	14,483	14,483	9,483	-5,000

HAC, p. 233

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TITLE: ADVANCED MATERIALS FOR WEAPONS SYST APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$19,900	19,900	19,900	19,900	21,400	19,900	20,400

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HAC:

ADVANCED DEVELOPMENT
ADVANCED MATERIALS FOR WEAPON SYSTEMS

The Air Force requested $19,900,000 for advanced materials for weapon systems. The Committee recommends $21,400,000, an increase of $1,500,000 only for the National Center for Industrial Competitiveness.

HAC, p. 235

TITLE: AEROSPACE PROPULSION SUBSYS INTEG APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$29,941	21,941	29,941	29,941	21,941	29,941	29,941

HASC:
Tactical aircraft modernization programs

The budget request included $100.037 million and $101.354 million, for the Navy and Air Force Joint Advance Strike Technology (JAST) programs, respectively. The objective of the JAST program is to develop an affordable next generation strike fighter aircraft that would optimize commonality among the military services through design modularity and common components. The fiscal year 1995 request would fund the following technology areas: air vehicle; manufacturing and producibility; propulsion; avionics; weapons integration; supportability; strategy to technology analysis; and strike weapons system concept studies.

The budget request also includes $8.721 million for the Navy and $20.014 million for the Advanced Research Projects Agency (ARPA) for Phase II of a four phase program for the Advanced Short Takeoff and Vertical Landing (ASTOVL)/Conventional Takeoff and Landing (CTOL) demonstrator aircraft. The program's objective is to investigate the technical feasibility of designing an affordable aircraft, using modular design and common engine, airframe, and avionics. Fiscal year 1995 funds would be used for wind tunnel and propulsion system tests of competing concepts. No funds are identified in the budget for Phases III and IV.

The committee commends the Department's efforts to achieve a common, affordable multi-service solution to satisfy future aircraft requirements. The committee, however, has the following concerns:

(1) No agreed upon multi-service requirement exists, yet the Department has requested over $230 million for the next fiscal year for a variety of disparate tasks that include conceptual, studies and analysis, modeling and simulation ($111.612 million), wind tunnel and propulsion system tests. The Department's goal is to enter engineering and manufacturing development at the turn of the century;

(2) JAST has similar objectives to ASTOVL/CTOL, yet each exists as separate programs;

(3) The Navy and Air Force JAST scope of work replicates a significant amount of technology development within individual service program elements. It appears that the Navy and Air Force JAST budgets, and their other related technology budgets, were developed independently. For example, the Navy and Air Force JAST request for a ground demonstrator engine is $32.769 million. At the same time the Navy and Air Force budget request included at least $85 million, level of effort funding, for exploratory and advanced development in turbine engine programs. This does not include the funding for ASTOVL, the majority of which is for developmental engine funding. Similar overlap and duplication exist in the scope of work described for JAST and other military service technology efforts for structures, materials and processes, subsystems and power, avionics, weapons integration, and supportability.

The committee supports the potential of the JAST office to provide the multi-service focus required to manage the acquisition of the next generation tactical aircraft. Therefore, the committee believes that ASTOVL/CTOL must be an integral part of the JAST effort, with funding provided by JAST for ASTOVL/CTOL through Phase II, and execution remaining with ARPA. The committee also believes there must be closer coordination and integration of military service technology efforts with the JAST office. This will provide the necessary focus for JAST development.

Accordingly, the committee recommends the following adjustments to the requested levels to achieve central management of JAST and ASTOVL/CTOL and to minimize redundancy and unnecessary duplication between JAST and other JAST-related technology efforts:

FY 1995 CONGRESSIONAL TRACK

[In millions of dollars]

	Request	Change	Recommendations
ARPAASTOVL/CTOL 603226E/EE24	$20.104	($20.014)	0
Navy:			
ASTOVL/CTOL 603217N/R2152	8.721	(8.721)	0
Propulsion 603217N/W2014	8.354	(5,000)	$3.354
JAST 603800N	100.037	n/c	100.037
Air Force:			
Propulsion 603202F	25.636	(8.000)	17.636
603216F/P681B	28.991	(10.000)	18.991
JAST 603800f	101.354	n/c	101.354

Finally, the committee expects the fiscal year 1996 request to be accompanied by a complete joint requirements and cost and operational effectiveness analysis. The document should address, at a minimum, the two cockpit versus one cockpit issue, and the two engine versus single engine issue.

HASC, p. 79-81

HAC:

PROGRAM GROWTH/BUDGET EXECUTION ADJUSTMENTS

The budget request included amounts for some programs which exceed by unjustifiably large margins the amounts provided for fiscal year 1993 or 1994. Other programs had significant prior year unobligated balances, and budget adjustments are necessary due to poor budget execution. The Committee therefore recommends the following reductions:

[In thousands of dollars]

	Request	HASC	HAC	Change

Aerospace Flight Dynamics Exploratory Development	$64,046	$65,046	$60,000	-$4,046
Human Systems Technology Exploratory Development	52,518	52,518	49,000	-3,518
Aerospace Avionics Exploratory Development	74,673	74,673	67,000	-7,673
Civil Engineering and Environmental Quality Exploratory Development	7,045	7,045	6,500	-545
Logistics Systems Technology Advanced Development	18,200	18,200	15,000	-3,200
Aerospace Propulsion Subsystems Integration	29,941	21,941	21,941	-8,000
Aerospace Vehicle Technology Advanced Development	14,339	14,339	13,500	-839
Personnel Training and Simulation Advanced Development	9,241	9,241	9,000	-241
Electronic Warfare Technology Advanced Development	27,700	27,700	24,000	-3,700
Rand Project Air Force	28,039	28,039	27,000	-1,039
Development Planning	9,959	9,959	7,500	-2,459
Wargaming/Simulation	19,110	19,110	14,110	-5,000
Mission Planning Systems	14,483	14,483	9,483	-5,000

HAC, p. 233

AEROSPACE PROPULSION SUBSYSTEMS INTEGRATION

The Air Force requested $29,941,000 for aerospace propulsion subsystems integration. The Committee recommends $21,941,000, a decrease of $8,000,000 as recommended by the House Armed Services Committee in its fiscal year 1995 report to transfer ASTOVL funds to the JAST program.

HAC, p. 235

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TITLE: ADV AVIONICS FOR AEROSPACE VEHICLES APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$34,500	37,500	34,500	37,500	37,500	23,398	28,500

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HAC:

ADVANCED AVIONICS FOR WEAPON SYSTEMS

The Air Force requested $34,500,000 for advanced avionics for weapon systems. The Committee recommends $37,500,000, an increase of $3,000,000 only for development of the Advanced Anti-Radiation Guided Missile in conjunction with the Navy.

HAC, p. 235

SAC:

Advanced avionics for aerospace vehicles.-The Committee recommends $23,398,000, a reduction of $11,102,000 to the budget request and an amount which is $14,102,000 below the House allowance, for this program element. The recommendation denies funds in the target attack and recognition technology project so as to constrain these efforts to the fiscal year 1994 level. These funds support activities in the automatic target recognition, advanced target detection, and target attack areas which duplicate efforts sponsored by the Advanced Research Projects Agency or which represent premature enhancements to still emerging precision targeting and weapons capabilities.

SAC, p. 279

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TITLE: AEROSPACE VEHICLE TECHNOLOGY APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$14,339	14,339	14,339	13,500	13,500	6,718	6,718

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HAC:

PROGRAM GROWTH/BUDGET EXECUTION ADJUSTMENTS

The budget request included amounts for some programs which exceed by unjustifiably large margins the amounts provided for fiscal year 1993 or 1994. Other programs had significant prior year unobligated balances, and budget adjustments are necessary due to poor budget execution. The Committee therefore recommends the following reductions:

[In thousands of dollars]

	Request	HASC	HAC	Change
Aerospace Flight Dynamics Exploratory Development	$64,046	$65,046	$60,000	-$4,046
Human Systems Technology Exploratory Development	52,518	52,518	49,000	-3,518
Aerospace Avionics Exploratory Development	74,673	74,673	67,000	-7,673
Civil Engineering and Environmental Quality Exploratory Development	7,045	7,045	6,500	-545
Logistics Systems Technology Advanced Development	18,200	18,200	15,000	-3,200
Aerospace Propulsion Subsystems Integration	29,941	21,941	21,941	-8,000
Aerospace Vehicle Technology Advanced Development	14,339	14,339	13,500	-839
Personnel Training and Simulation Advanced Development	9,241	9,241	9,000	-241
Electronic Warfare Technology Advanced Development	27,700	27,700	24,000	-3,700
Rand Project Air Force	28,039	28,039	27,000	-1,039
Development Planning	9,959	9,959	7,500	-2,459
Wargaming/Simulation	19,110	19,110	14,110	-5,000
Mission Planning Systems	14,483	14,483	9,483	-5,000

HAC, p. 233

SAC:

Aerospace vehicle technology.-The Committee recommends $6,718,000, a reduction of $7,621,000 to the budget request for this program element. Funds are denied for the improved methods for aircraft cargo handling project ($300,000) and for several joint advanced strike technology [JAST]-related activities. These latter decreases are explained earlier in the report.

The cargo handling project was rejected last year by the Congress and is unjustified before the configuration of the airlift fleet is determined after the probation period for the C-17 transport program. Until then, firm requirements for cargo handling volume and throughput are a matter of speculation.

The House allowance reduced this program element by $839,000.

SAC, p. 279

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TITLE: AEROSPACE STRUCTURES APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$12,300	12,300	12,300	12,300	12,300	300	12,300

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SAC:

Aerospace structures.-The Committee provides $300,000, a reduction of $12,000,000 to the budget request and the same amount below the House allowance, for this program element. The only funds provided are for the special operations and future transport structures subproject, which seeks to explore lighter, stronger armor/airframe structures. All other funds in the advanced composites structures and advanced metallic structures projects are eliminated because they should be considered for funding in the JAST Program.

SAC, p. 279

TITLE: AEROSPACE PROPULSION AND POWER TECH APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$40,662	36,662	40,662	32,421	30,662	32,421	37,345

HASC:
Tactical aircraft modernization programs

The budget request included $100.037 million and $101.354 million, for the Navy and Air Force Joint Advance Strike Technology (JAST) programs, respectively. The objective of the JAST program is to develop an affordable next generation strike fighter aircraft that would optimize commonality among the military services through design modularity and common components. The fiscal year 1995 request would fund the following technology areas: air vehicle; manufacturing and producibility; propulsion; avionics; weapons integration; supportability; strategy to technology analysis; and strike weapons system concept studies.

The budget request also includes $8.721 million for the Navy and $20.014 million for the Advanced Research Projects Agency (ARPA) for Phase II of a four phase program for the Advanced Short Takeoff and Vertical Landing (ASTOVL)/Conventional Takeoff and Landing (CTOL) demonstrator aircraft. The program's objective is to investigate the technical feasibility of designing an affordable aircraft, using modular design and common engine, airframe, and avionics. Fiscal year 1995 funds would be used for wind tunnel and propulsion system tests of competing concepts. No funds are identified in the budget for Phases III and IV.

The committee commends the Department's efforts to achieve a common, affordable multi-service solution to satisfy future aircraft requirements. The committee, however, has the following concerns:

(1) No agreed upon multi-service requirement exists, yet the Department has requested over $230 million for the next fiscal year for a variety of disparate tasks that include conceptual, studies and analysis, modeling and simulation ($111.612 million), wind tunnel and propulsion system tests. The Department's goal is to enter engineering and manufacturing development at the turn of the century;

(2) JAST has similar objectives to ASTOVL/CTOL, yet each exists as separate programs;

(3) The Navy and Air Force JAST scope of work replicates a significant amount of technology development within individual service program elements. It appears that the Navy and Air Force JAST budgets, and their other related technology budgets, were developed independently. For example, the Navy and Air Force JAST request for a ground demonstrator engine is $32.769 million. At the same time the Navy and Air Force budget request included at least $85 million, level of effort funding, for exploratory and advanced development in turbine engine programs. This does not include the funding for ASTOVL, the majority of which is for developmental engine funding. Similar overlap and duplication exist in the scope of work described for JAST and other military service technology efforts for structures, materials and processes, subsystems and power, avionics, weapons integration, and supportability.

The committee supports the potential of the JAST office to provide the multi-service focus required to manage the acquisition of the next generation tactical aircraft. Therefore, the committee believes that ASTOVL/CTOL must be an integral part of the JAST effort, with funding provided by JAST for ASTOVL/CTOL through Phase II, and execution remaining with ARPA. The committee also believes there must be closer coordination and integration of military service technology efforts with the JAST office. This will provide the necessary focus for JAST development.

Accordingly, the committee recommends the following adjustments to the requested levels to achieve central management of JAST and ASTOVL/CTOL and to minimize redundancy and unnecessary duplication between JAST and other JAST-related technology efforts:

[In millions of dollars]

	Request	Change	Recommendations
ARPAASTOVL/CTOL 603226E/EE24	$20.104	($20.014)	0
Navy:			
ASTOVL/CTOL 603217N/R2152	8.721	(8.721)	0
Propulsion 603217N/W2014	8.354	(5,000)	$3.354
JAST 603800N	100.037	n/c	100.037
Air Force:			
Propulsion 603202F	25.636	(8.000)	17.636
603216F/P681B	28.991	(10.000)	18.991
JAST 603800f	101.354	n/c	101.354

Finally, the committee expects the fiscal year 1996 request to be accompanied by a complete joint requirements and cost and operational effectiveness analysis. The document should address, at a minimum, the two cockpit versus one cockpit issue, and the two engine versus single engine issue.

HASC, p. 79-81

Ducted rockets

The budget request included $4.194 million in PE 603216F for continued development of variable flow ducted rocket motors for current and future missile systems. The committee recommends an additional $6.0 million to facilitate technology transition to increase overall end-game kinematics for current and future missile systems.

HASC, p. 115

SAC:

Aerospace propulsion and power technology.-This program element funds development of advanced propulsion and engine technologies for aircraft and missiles. The Committee approves $32,421,000, a reduction of $8,241,000 to the budget request. An amount of $3,327,000 is deleted for the JAST-related aerospace power technology/more electric aircraft sub-project. Another $4,914,000 is denied for the variable flow ducted rocket [VFDR] engine. Emerging results of the cost-and-operational effectiveness analysis for the advanced medium range air-to-air missile [AMRAAM] product improvement program have prompted the Air Force and Navy to conclude that the VFDR engine is not a cost-effective and affordable option for the upgrade.

The House allowance included $30,662,000 for this program element.

SAC, p. 279

APPN CONF:

AEROSPACE PROPULSION AND POWER TECHNOLOGY

The conferees agree to provide $37,345,000 for Aerospace Propulsion and Power Technology. Within that amount, the conferees agree to allocate $4,914,000 for the variable flow ducted rocket (VFDR) propulsion project. However, the conferees direct that none of the funds may be obligated until 30 days after the results of the ongoing cost-and-operational effectiveness analysis (COEA) for the advanced medium-range air-to-air missile (AMRAAM) pre-planned product improvement (P3I) program Phase 3 have been reported to the Committees on Appropriations.

The conferees further direct that the funds also may not be obligated until the Secretary of the Air Force certifies that continuation of the VFDR project is required for successful achievement of the objectives of the AMRAAM P3I Phase 3. Any certification, if submitted, should include the results of the COEA. The conferees also direct that the COEA consider updated information about threats validated by the intelligence community.

Appn Conf, p. 123-124

TITLE: CREW SYS AND PERSONNEL PROTECT TECH APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$16,600	18,900	21,600	22,700	17,700	16,600	17,700

AUTH CONF:
Telemedics

The budget request contained no funding for telemedicine.

The Senate bill would authorize $20.0 million for telemedicine in the following amounts: $10.0 million in the Army in PE 63002A; $5.0 million in the Air Force in PE 63231F; and $5.0 million in the Navy in PE 63706N.

The House amendment would provide $5.0 million in PE 62301E for telemedicine.

The House recedes. The conferees agree that the Director of Defense Research and Engineering should report to the Committees on Armed Services of the House of Representatives and the Senate in accordance with the direction on telemedicine reporting contained in the House report (H. Rept. 103-499). The conferees agree that any funds needed to accomplish the ARPA coordination called for in the House report shall come from PE 62301E.

Auth Conf, p. 608 (Defense-wide RDT&E)

HAC:

CREW SYSTEMS AND PERSONNEL PROTECTION TECHNOLOGY

The Air Force requested $16,600,000 for crew systems and personnel protection technology. The Committee recommends $17,700,000, an increase of $1,100,000 only for Project 2830, Advanced Life Support, to continue the integration of aircrew life support systems in order to increase situation awareness while reducing fatigue and pilot workload.

HAC, p. 235

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TITLE: GLOBAL SURV/AIR DEF/PRECISION STRIKE TECHNOLOGY DEMONSTRATION APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$14,500	14,500	14,500	14,500	14,500	2,000	2,000

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SAC:

Global surveillance.-The Committee provides $2,000,000, a reduction of $12,500,000 from the budget request and an equal amount below the House allowance, for this program element. All requested funds ($14,500,000) are denied to begin the Air Mobility Command Global Communications Grid Program. This costly initiative (at least $150,000,000) has not been subject to an independent cost estimate, feasibility study, technical risk assessment, and rigorous military requirements analysis.

The Committee provides $2,000,000 only for these purposes, which does not constitute an endorsement of this new start proposal. The Committee directs that the acquisition studies be accomplished by an independent entity with no connection to the sponsoring Air Force organizations, and that the military requirements be closely examined by the Organization of the Joint Chiefs of Staff.

The results of these studies must be submitted to the Committees on Appropriations no later than April 1, 1995. The Committee directs that, should any funds be sought in the fiscal year 1996 budget request for this initiative, the Assistant Secretary of the Air Force (acquisition) and the Deputy Chief of Staff for Plans and Operations must certify by the same date that the proposed effort does not duplicate any other acquisition or operational programs throughout the Defense Department to improve Air Force command, control, communications, and mission planning of mobility forces. This certification must include consideration of activities sponsored by the Advanced Research Projects Agency in its warbreaker/synthetic theater of war programs.

SAC, p. 280

APPN CONF:

SPACE PROGRAMS

The conferees agree: (a) to fully fund the STEP-3 satellite attack warning and assessment flight experiment in the Space Test Program; (b) to delete $16,000,000 from the Defense Satellite Communications System due to termination by DOD of the beam forming network modifications; (c) that the prior approval of the Committees on Appropriations must be obtained before obligating any funds for enhancements or modernization of the Air Force Satellite Control Network, that $60,000,000 be withheld from obligation pending receipt of that approval, and that none of the reduction to the AFSCN shall be assessed against any activities or upgrades associated with SCN installations in the state of Hawaii; (d) not to close one Titan IV launch pad on the east coast in fiscal year 1995 as proposed by the House; (e) that $100,000,000 provided for the space-based infra-red Heritage Sensor satellite program not be obligated until the Space Acquisition Executive presents a detailed plan addressing requirements, cost, schedule, and technical risks, and consults with and notifies the Committees on Appropriations; (f) that the $30,000,000 provided for reusable space launch vehicle technology should be included in program element 0603401F; and (g) that the funds provided for the Have Gaze project may only be used for continuing the basic technology efforts and may not be used for initiating or conducting any flight test program.

Appn Conf, p. 127-128

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TITLE: ADV FIGHTER TECHNOLOGY INTEGRATION APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$18,100	18,100	18,100	18,100	18,100	4,000	9,100

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SAC:

Advanced fighter technology integration.-The Committee endorses $4,000,000, a decrease of $14,100,000 to the budget request and the same amount below the House allowance, for this program element. Funds are deleted for two JAST-related projects and for the common mobility aircraft cockpit ($5,000,000). This activity was rejected last year by the Congress and remains unjustified pending future decisions about the composition of the airlift mobility fleet.

In addition, the opportunity and military requirement for a common mobility aircraft cockpit is unclear since a new crew station/avionics study and demonstration for the KC-135 cockpit is being funded in the KC-135 squadrons program element. Also, the affordability in future budgets of reconfiguring the cockpits of hundreds of transport aircraft must be questioned.

SAC, p. 280

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TITLE: LINCOLN LABORATORY APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$15,000	15,000	15,000	15,000	15,000	0	15,000

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SAC:

Lincoln Laboratory.-This program element supports in-house research and salaries at the Lincoln Laboratory federally funded research and development center. As such, it represents only a fraction of the more than $300,000,000 the laboratory receives annually from the Air Force.

The Air Force has demonstrated that this separate program element for Lincoln Laboratory is a low priority by reducing its budget allocation to zero in the future spending plan. Therefore, the Committee recommends no funds for this separate program element, a decrease of $15,000,000 to the budget request and an equal amount below the House allowance.

SAC, p. 280

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TITLE: ADVANCED AVIONICS INTEGRATION APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$24,500	24,500	24,500	24,500	25,500	8,684	17,205

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HAC:

ADVANCED AVIONICS INTEGRATION

The Air Force requested $24,500,000 for advanced avionics integration. The Committee recommends $25,500,000, an increase of $1,000,000 only for passive analysis of background acoustics for non-cooperative target identification.

HAC, p. 235

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TITLE: ELECTRONIC WARFARE TECHNOLOGY APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$27,700	27,700	27,700	24,000	24,000	18,299	18,299

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HAC:

REPROGRAMMING LIMITATIONS

The Committee in the past has agreed in conference to a number of reprogramming limitations affecting RDT&E programs. The Director of ARPA testified to the Committee that nearly 70 percent of the ARPA budget is restricted by either project level restrictions or special interest designations. The Air Force has not moved funds between projects within its electronic warfare program without prior Congressional approval for many years, even though the issues which originally prompted the Congressional restriction on electronic warfare programs have subsided. The Committee does not believe that reprogramming restrictions beyond those described in DOD Instruction 7250.10 should be continued in perpetuity, but should be reviewed annually to assess their relevance. The Committee therefore directs that no further reprogramming limitations beyond those described in DOD Instruction 7250.10 shall apply to fiscal year 1995 and subsequent RDT&E funds unless stated in one of the Committee reports and agreed to in conference. This would not affect Congressional interest items designated in Congressional reports.

HAC, p. 199

PROGRAM GROWTH/BUDGET EXECUTION ADJUSTMENTS

The budget request included amounts for some programs which exceed by unjustifiably large margins the amounts provided for fiscal year 1993 or 1994. Other programs had significant prior year unobligated balances, and budget adjustments are necessary due to poor budget execution. The Committee therefore recommends the following reductions:

[In thousands of dollars]

	Request	HASC	HAC	Change

Aerospace Flight Dynamics Exploratory Development	$64,046	$65,046	$60,000	-$4,046
Human Systems Technology Exploratory Development	52,518	52,518	49,000	-3,518
Aerospace Avionics Exploratory Development	74,673	74,673	67,000	-7,673
Civil Engineering and Environmental Quality Exploratory Development	7,045	7,045	6,500	-545
Logistics Systems Technology Advanced Development	18,200	18,200	15,000	-3,200
Aerospace Propulsion Subsystems Integration	29,941	21,941	21,941	-8,000
Aerospace Vehicle Technology Advanced Development	14,339	14,339	13,500	-839
Personnel Training and Simulation Advanced Development	9,241	9,241	9,000	-241
Electronic Warfare Technology Advanced Development	27,700	27,700	24,000	-3,700
Rand Project Air Force	28,039	28,039	27,000	-1,039
Development Planning	9,959	9,959	7,500	-2,459
Wargaming/Simulation	19,110	19,110	14,110	-5,000
Mission Planning Systems	14,483	14,483	9,483	-5,000

HAC, p. 233

EXPLORATORY DEVELOPMENT
EXEMPTIONS FROM GENERAL REDUCTIONS

A table earlier in this report explains budget execution or growth reductions made to certain programs. The Committee directs that none of the reduction to the aerospace avionics exploratory development program be applied to project 2000: active electronics countermeasures or to project 7662: avionics data transmission and reception, and that none of the reduction to the electronic warfare advanced development program be applied to project 691X: onboard countermeasures or to project 2432: defense systems fusion.

HAC, p. 234

SAC:
Electronic warfare [EW] technology.-The Committee provides $18,299,000, a reduction of $9,401,000 to the budget request, for this program element. The recommendation deletes funds in the offboard countermeasures project to develop a laser-based countermeasures system to defeat infrared (heat-seeking) missiles.

This project is premature because of ongoing Army and Air Force efforts to develop an advanced tactical infrared countermeasures [ATIRCM] system and a directed infrared countermeasures [DIRCM] system for helicopters and large aircraft. These programs can serve as risk reduction and a foundation for applying such technologies to tactical combat aircraft.

In addition, the project in this program element is not sufficiently coordinated with the overall DOD infrared countermeasures plan, which establishes a much later, lower priority for fighter aircraft-oriented activities.

The House allowance reduced this program element by $3,700,000.

SAC, p. 280-281

TITLE: SPACE AND MISSILE ROCKET PROPULSION APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$11,800	14,300	11,800	14,300	14,300	8,630	16,800

AUTH CONF:
Rocket propulsion technology

The budget request included $31.5 million in PE 62601F for project 1011 and $11.8 million in PE 63302F for rocket propulsion technology.

The Senate bill would provide no additional funds for this research.

The House amendment would authorize an additional $5.0 million in PE 62601F for project 1011 and an additional $2.5 million in PE 63302F for rocket propulsion technology.

The Senate recedes. The conferees support the additional funding for rocket propulsion programs as described in the House report (H. Rept. 103-499).

Auth Conf, p. 596

HAC:

SPACE AND MISSILE ROCKET PROPULSION

The Air Force requested $11,800,000 for space and missile rocket propulsion programs. The Committee recommends $14,300,000, an increase of $2,500,000 to allow a more robust technology demonstration effort at the Air Force's Phillips Laboratory at Edwards Air Force Base. The Secretary of the Air Force is directed to ensure that no portion of this increase in funding be diverted to other programs.

HAC, p. 236

SAC:
Space and missile rocket propulsion.-The Committee recommends $8,630,000, a decrease of $3,170,000 and an amount which is $5,670,000 below the House allocation, for this program element. An amount of $5,670,000 is denied specifically for the new start effort to develop advanced cryogenic propulsion technologies for reusable space launch vehicles. The Defense Department has no military requirement for reusable space boosters.

The Committee adds $2,500,000 to support the development of environmentally acceptable propellants and related components for space boosters.

SAC, p. 281

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TITLE: BALLISTIC MISSILE TECHNOLOGY APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$10,000	10,000	10,000	5,000	5,000	5,000	5,000

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HAC:

BALLISTIC MISSILE TECHNOLOGY

The Air Force requested $10,000,000 for ballistic missile technology. The Committee recommends $5,000,000, a decrease of $5,000,000 to defer work on re-entry vehicle phenomenology due to fiscal constraints.

HAC, p. 236

SAC:

Ballistic missile technology.-The Committee allocates $5,000,000, an equal amount below the budget request for this program element. The reduction is made to the reentry vehicle [RV] technology project, which apparently has been focussed toward developing capabilities for a conventional-warhead intercontinental ballistic missile.

The House allowance also deleted $5,000,000 from this program element but recommended an adjustment in other RV advanced technology activities.

SAC, p. 281

TITLE: ADVANCED SPACECRAFT TECHNOLOGY APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$24,200	124,200	24,200	54,200	0	19,400	19,400

HASC:

Space launch modernization

The committee notes the Department's continued delay in formulating a space launch modernization plan. The Department appears resigned to accepting increasingly expansive access to space to meet its launch requirements, while the U.S. commercial space launch industry continues to struggle to retain a declining share of the global launch market.

The committee believes that, with the right leadership and management approach, many of the factors contributing to high costs, unresponsiveness in meeting launch requirements, and less than desired system reliability and operability could be ameliorated. The committee believes that the Ballistic Missile Defense Organization's success with both the DC-X technology demonstrator and the Clementine satellite provides evidence of the kind of leadership and management that can again make the United States a leader in space launch vehicle development.

Several factors contribute to the current situation:

(1) No one in charge. At present, no single organization or individual has the responsibility and authority to reconcile the requirements and costs of satellite and space launch. Consequently, payload developers are frequently allowed to establish satellite requirements without sufficient regard to payload size and cost. In addition, responsibility for launch system development and operation is shared among many departments and agencies.

(2) Launch costs. Launch system users often are not required to pay all direct and indirect costs to launch their payloads. Consequently, users do not have the incentive to reduce payload size and complexity. As a result, launch costs are driven by low use-rate, extremely high cost systems such as Titan IV.

(3) The acquisition system. As with most Department programs, proposed launch system programs take a decade or more to develop, having had large program offices, and often fail to achieve inflated claims of program goals.

As the Department marks time, the traditional expendable launch vehicle manufacturers and the space industry entrepreneurs have presented a variety of options for new, upgraded, and "leap-frog" approaches to reducing the costs and improving the reliability and responsiveness of military, civilian, and commercial access to space.

In summary, the space launch acquisition system has numerous shortcomings, but there appears to be readily available options to make significant, affordable improvements in space launch capability. Accordingly, section 211 of the bill would direct the Secretary of Defense to take several actions. First, the Secretary would be required to centralize oversight of DOD launch requirements and other users to preclude inflated requirements from escalating current and future launch costs.

Second, the Secretary would be required to begin and complete a program to replace or consolidate the current fleet of medium and heavy expendable launch vehicles with new or upgraded expendable and reusable launch vehicles. The committee believes the Secretary should begin a program that will evaluate and select for development industry proposals to either upgrade the Atlas or Delta expendable launch vehicles, or to use other innovative approaches such as the use of upgraded solid rocket motors to provide medium and heavy lift capability.

The committee recommends an additional $100 million in PE 305119F for this purpose. The committee believes that the Department should also pursue an aggressive technology demonstration program to demonstrate the high return "leap-frog" potential of reusable launch vehicle technologies. The committee

recommends an additional $100 million in PE 603401F for this purpose and recommends the Secretary take advantage of the innovative management team and approach demonstrated in the DC-X program.

Third, the Secretary would be required to encourage and evaluate innovative acquisition, technical, and financing solutions for providing affordable, operable, reliable, and responsive access to space.

The committee notes that it has not received the Space Launch Modernization Plan required by section 213 of the National Defense Authorization Act of 1994 (Public Law 103-160) or the Administration's space launch vehicle policy directive. The committee understands that the draft Space Launch Modernization Plan fails to meet legislative requirements as it does not provide a "plan," milestones, or a "roadmap," for space launch modernization, but is simply a series of options for space launch modernization.

Finally, the committee understands that the Administration is likely to recommend that another executive agency be assigned responsibility for reusable launch vehicles. The committee recognizes the prerogative for such action. The committee, however, intends to authorize funding for a reusable launch vehicle program only if it is executed by the Department of Defense. The committee notes that jointly managed, cost-shared space launch programs have not been models of success.

HASC, p. 117-119

AUTH CONF:

Space launch programs (sec. 211)

The Senate bill contained a provision (sec. 213) that would transfer prior-year funds appropriated for single-stage-to-orbit (SSTO) rocket technology from the Department of Defense to the National Aeronautics and Space Administration (NASA), since the Secretary of Defense submitted a report recommending that NASA be assigned lead responsibility for developing reusable rocket technology. The Senate bill would authorize no funds for reusable rocket technology for fiscal year 1995 and would authorize a total of $20.2 million for expendable rocket technology development.

The House amendment contained a provision (sec. 211) that would (1) establish DOD space launch policy; (2) require the Secretary of Defense to replace current launch systems, conduct flight tests by 1998 of reusable launch vehicles, and conduct flight tests of expendable launch vehicles; and (3) authorize $200.0 million, equally divided, for reusable and expendable rocket technology demonstrations.

The Senate recedes with an amendment.

The conferees agree to (1) authorize no funds for the national launch system program; (2) authorize $10.0 million in PE 62601F to continue concept development of simple, inexpensive expendable rocket systems that do not require complex turbo machinery; (3) transfer prior-year SSTO funds from the Advanced Research Projects Agency to the Air Force PE 63401F and note that these funds would not be for further development of the "Delta Clipper" vehicle built by BMDO; (4) authorize $30.0 million for the Air Force in PE 63401F to initiate reusable rocket technology development efforts, with the stipulation that DOD obligations shall not exceed amounts made available by NASA for such efforts for fiscal year 1995; (5) authorize $50.0 million for the Air Force in PE 35119F to initiate a competitive program to replace existing launch capabilities; and (6) limit the obligation of funds for both reusable and expendable rocket programs until coordinated DOD/NASA program plans are submitted to Congress.

The National Defense Authorization Act for Fiscal Year 1994 required the Administration to conduct another study of space launch capabilities, because Congress was unsatisfied by the space launch Bottom-Up Review, which concluded that acknowledged problems with current systems are not serious enough to warrant displacing other defense programs. The new study has resulted in the development of new national policy in this area. This policy assigns lead responsibility for reusable and expendable space launch vehicles to NASA and DOD, respectively. NASA has been instructed to determine by 1996 whether a reusable vehicle flight demonstration program is feasible and affordable, and by the end of the decade, whether a development program should be pursued. The Deputy Secretary of Defense is examining again whether a new launch initiative is warranted and affordable within the Department of Defense.

Accordingly, the conferees direct that the Department of Defense will not lead any government-financed reusable space vehicle flight demonstration or acquisition programs, at least until the Administration changes its policy. However, if the Department of Defense decides to conduct a

competition to replace current DOD launch capabilities, and if DOD concludes that an industry proposal to build a reusable system to meet requirements is realistic, affordable and cost-effective, the conferees will consider a well-justified acquisition plan.

The conferees doubt that DOD can afford to finance any expensive space launch acquisition program. The conferees are aware of claims that the private sector is willing to finance all or most of a new capability. The conferees encourage DOD to explore such claims. However, the conferees expect that such proposals would require commitments from the government, which may entail substantial risk, and therefore require careful consideration by Congress and the Administration.

Auth Conf, p. 620-621

HAC:

TRANSFER OF MAJOR SPACE PROGRAMS

As discussed elsewhere in the report under Space and Related Programs, a total of $1,096,150,000 has been transferred from RDT&E, Air Force to RDT&E, Defense-Wide. Details of the transfers are as follows:

Program	P.E.	Amount of Transfer
Advanced Spacecraft Technology	0603401F	$24,200,000
Space System Environment Interactions Tech.	0603410F	4,200,000
Space Test Program	0603402F	62,064,000
Advanced MILSATCOM	0603402F	22,095,000
DMSP Block 6	0603434F	7,601,000
Satellite Systems Survivability	0603438F	8,531,000
Advanced Space Based TW/AA	0603441F	150,000,000
MILSTAR LDR/MDR SatCom	0604479F	607,248,000
UHF Satellite Communications	0303606F	20,879,000
DSCS	0303110F	30,876,000
Medium Launch Vehicles	0305119F	21,042,000
Upper Stage Space Vehicles	0305138F	3,663,000
Titan Space Launch Vehicles	0305144F	4,000,000
DMSP	0305160F	21,135,000
NAVSTAR GPS (Space & Control Sys)	0305165F	51,125,000
Defense Support Program	0305911F	47,351,000
NUDET Detection System	0305913F	10,140,000

HAC, p. 233-234

ADVANCED SPACECRAFT TECHNOLOGY

As a part of the centralization of major space programs, $24,200,000 has been transferred from RDT&E, Air Force (P.E. 0603401F) for Advanced Spacecraft Technology. In addition, as discussed elsewhere in this report under Space and Related Programs, $40,000,000 is being provided for the Tactical Support Satellite being developed by the Advanced Research Projects Agency. A total of $64,200,000 is being provided for this

program.

HAC, p. 253 (Defense-wide RDT&E)

SAC:

Advanced spacecraft technology.-The Committee endorses $19,400,000, a decrease of $4,800,000 to the budget request for this program element. The action denies $4,000,000 for a new, undefined space technology operational evaluation satellite and $800,000 for advanced radio frequency and laser satellite communications technologies which are not required to accomplish ongoing and programmed satellite acquisition programs.

The House allowance recommended that all funds in this program element be transferred to the "RDT&E, defensewide" appropriations account.

SAC, p. 281

APPN CONF:

SPACE PROGRAMS

The conferees agree: (a) to fully fund the STEP-3 satellite attack warning and assessment flight experiment in the Space Test Program; (b) to delete $16,000,000 from the Defense Satellite Communications System due to termination by DOD of the beam forming network modifications; (c) that the prior approval of the Committees on Appropriations must be obtained before obligating any funds for enhancements or modernization of the Air Force Satellite Control Network, that $60,000,000 be withheld from obligation pending receipt of that approval, and that none of the reduction to the AFSCN shall be assessed against any activities or upgrades associated with SCN installations in the state of Hawaii; (d) not to close one Titan IV launch pad on the east coast in fiscal year 1995 as proposed by the House; (e) that $100,000,000 provided for the space-based infra-red Heritage Sensor satellite program not be obligated until the Space Acquisition Executive presents a detailed plan addressing requirements, cost, schedule, and technical risks, and consults with and notifies the Committees on Appropriations; (f) that the $30,000,000 provided for reusable space launch vehicle technology should be included in program element 0603401F; and (g) that the funds provided for the Have Gaze project may only be used for continuing the basic technology efforts and may not be used for initiating or conducting any flight test program.

Appn Conf, p. 127-128

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TITLE: SPACE SYS ENV INTERACTIONS TECH APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$4,200	4,200	4,200	4,200	0	4,200	4,200

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HAC:

TRANSFER OF MAJOR SPACE PROGRAMS

As discussed elsewhere in the report under Space and Related Programs, a total of $1,096,150,000 has been transferred from RDT&E, Air Force to RDT&E, Defense-Wide. Details of the transfers are as follows:

Program	P.E.	Amount of Transfer
Advanced Spacecraft Technology	0603401F	$24,200,000
Space System Environment Interactions Tech.	0603410F	4,200,000
Space Test Program	0603402F	62,064,000
Advanced MILSATCOM	0603402F	22,095,000
DMSP Block 6	0603434F	7,601,000
Satellite Systems Survivability	0603438F	8,531,000
Advanced Space Based TW/AA	0603441F	150,000,000
MILSTAR LDR/MDR SatCom	0604479F	607,248,000
UHF Satellite Communications	0303606F	20,879,000
DSCS	0303110F	30,876,000
Medium Launch Vehicles	0305119F	21,042,000
Upper Stage Space Vehicles	0305138F	3,663,000
Titan Space Launch Vehicles	0305144F	4,000,000
DMSP	0305160F	21,135,000
NAVSTAR GPS (Space & Control Sys)	0305165F	51,125,000
Defense Support Program	0305911F	47,351,000
NUDET Detection System	0305913F	10,140,000

HAC, p. 233-234

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TITLE: SPACE SUBSYSTEMS TECHNOLOGY APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$0	0	0	0	8,000	0	8,000

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HAC:

HAVE GAZE

The Committee has provided an increase of $8,000,000 in RDT&E, Air Force to continue development of the HAVE GAZE program.

HAC, p. 48

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TITLE: CONVENTIONAL WEAPONS TECHNOLOGY APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$35,100	35,100	35,100	35,100	35,100	17,464	31,250

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SAC:

Conventional weapons technology.-The budget request for this program element sought 101 percent growth compared with the fiscal year 1994 allocation. Several new start projects were proposed, including product improvements for weapons still being defined or under development. The affordability and likelihood of tran•si•tioning the technologies developed in this program element into current and future weapons systems is uncertain given future budget constraints.

Accordingly, the Committee recommends constraining this program element to the current fiscal year funding level, $17,464,000, and deleting $17,636,000. Specific subprojects denied are the advanced munitions control technology, subminiature telemetry for multiple submunitions, antimateriel warhead flight tests, counter proliferation ordnance, weapon carriage technology, velocity augmented munitions, autonomous synthetic aperture radar guidance II, and low cost antiarmor submunition risk reduction.

The House allowance approved the budget request for this program element.

SAC, p. 281-282

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TITLE: ADVANCED RADIATION TECHNOLOGY APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$59,500	59,500	59,500	69,500	79,500	86,500	96,500

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AUTH CONF:

LEGISLATIVE PROVISIONS NOT ADOPTED

High-resolution imaging

The Senate bill contained a provision (sec. 204) that would authorize $10.0 million in Air Force RDT&E funds for high-resolution imaging of space objects using excimer lasers.

The House amendment contained no similar provision.

The Senate recedes from the statutory provision. The conferees would include $10.0 million in PE 63605F to continue the excimer laser high-resolution imaging program.

Auth Conf, p. 642-643

HAC:

ADVANCED RADIATION TECHNOLOGY

The Air Force requested $59,500,000 for advanced radiation technology. The Committee recommends $79,500,000, an increase of $20,000,000 only for excimer laser technology.

HAC, p. 236

SAC:

Advanced radiation technology.-The Air Force exploits lasers and other electromagnetic sources for military purposes through the investments made in this program element. The Committee approves $86,500,000, an increase over the budget of $27,000,000 and an addition to the House amount of $7,000,000.

The Committee directs that $17,000,000 shall be made available only to complete the development of a field laser radar [FLD] which uses telescopes and facilities of the Air Force's Maui Space Surveillance Site [MSSS]. The remaining additional funds, $10,000,000, are available only to develop technologies for using an excimer laser for high resolution imaging of space objects.

SAC, p. 282

TITLE: C3 ADVANCED DEVELOPMENT APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$9,925	16,925	9,925	10,925	10,925	9,925	10,925

HASC:
Decision support technology

The budget request included $8.673 million in PE 603789F for command, control, and communications advanced technology development. The committee recommends an additional $7.0 million to conduct a technology demonstration of decision support technology that includes use of massively parallel computers to accomplish real time mission planning, three dimensional geographic information, and real time digital image transfer.

HASC, p. 115

AUTH CONF:
Decision support technology

The budget request included $9.925 million in PE 63789F for command, control, and communications advanced development.
The Senate bill would provide the requested amount.
The House amendment would provide an additional $7.0 million to conduct a technology demonstration of decision support technology.
The conferees agree to provide an additional $1.0 million for this purpose.

Auth Conf, p. 597

HAC:

C3 ADVANCED DEVELOPMENT

The Air Force requested $9,925,000 for command, control, and communications advanced development. The Committee recommends $10,925,000, an increase of $1,000,000 only for a technology demonstration at Rome AFB on decision support technology.

HAC, p. 236

APPN CONF:

C3 ADVANCED DEVELOPMENT

The conferees agree to provide $10,925,000 for C3 Advanced Development, an increase of $1,000,000 only for a decision support technology demonstration to be conducted by the Rome Laboratory. The conferees have also allocated $6,000,000 within the ARPA High Performance Computing (HPC) project to provide the total funds necessary for this activity.

Appn Conf, p. 124

TITLE: STRATEGIC MISSILE MODERNIZATION APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$36,018	36,018	36,018	36,018	36,018	0	0

SAC:

Strategic submarine and weapons system support.-This program element funds enhancements to the Trident I and II missiles and weapons systems aboard U.S. strategic nuclear ballistic missile submarines. Several adjustments are recommended.

First, the Committee approves the use of $2,100,000 of fiscal year 1994 funds in the fleet ballistic missile systems project to permit the Navy and the Air Force to accomplish a state-of-the-art technology survey, an industrial base assessment, and a technical program plan to support a reentry vehicle [RV] industrial base sustainment program for both submarine-launched and land-based intercontinental ballistic missiles. These funds are sufficient to support efforts during fiscal years 1994 and 1995. No other use of the funds is approved.

The Committee has recommended approval of $2,500,000 in an Air Force program element only to permit the Navy and the Air Force to identify and assess critical attributes to maintain ICBM-unique and SLBM-unique reentry vehicle industrial base capability.

Second, the Committee recommends a total of $29,223,000, a reduction of $23,138,000 to the budget request and an amount which is $8,138,000 below the House allowance, for this Navy program. The recommendation denies three new starts: $15,000,000 to begin the RV Industrial Base Sustainment Program, $6,038,000 to begin a Trident ownership reduction initiative, and $2,100,000 for a propellant program.

The RV activity is premature until the basic planning is accomplished with the fiscal year 1994 funds approved above and the fiscal year 1995 funds approved in the Air Force program element. The ownership cost reduction initiative and the propellant project are unjustified until the Congress has had the opportunity to assess the results of the nuclear posture review and the fiscal year 1996 budget request with respect to Navy strategic programs. The future of the C-4 Trident I missile and the size of the D-5 Trident II missile force are sufficiently uncertain to suggest caution in beginning initiatives which may not be required under future policy and budget plans.

SAC, p. 262 (Navy)

Strategic missile modernization; Minuteman squadrons; intercontinental ballistic missile [ICBM] modernization (demonstration/validation); ICBM modernization (engineering/manufacturing development).-The Committee has become concerned that Air Force programs to maintain and improve the capabilities of the Minuteman ICBM force are not sufficiently coordinated. There also are indications that the service's acquisition and operations communities, which share management and oversight responsibility for these programs, may disagree on the most effective approach to execute this multibillion-dollar activity.

The Committee further understands that there may have been instances in which operations and maintenance and procurement funds were used for research and development purposes, and in which projects were begun without necessary requirements documentation, acquisition decisions, and adequate provision for test and evaluation of the proposed product.

The Committee recommends a restructuring of the management and program elements arrangements for these programs to enable the Air Force to better manage, coordinate, and make tradeoffs among these activities, and to permit Congress to obtain maximum oversight and awareness of them.

The Committee recommends eliminating all funds in the Minuteman squadrons and strategic missile modernization program elements and reallocating them into two new program elements for ICBM modernization demonstration/validation and engineering and manufacturing development. The Committee directs that all future funding for these activities must be requested in these new program elements, which are to be managed by the Air Force as an integrated major acquisition program under the authority of the Assistant Secretary of the Air Force for Acquisition.

The Assistant Secretary also is directed to review promptly and thoroughly all ongoing Minuteman programs at the Silo Based ICBM System Program Office and determine whether any funds have been used inappropriately and contrary to established acquisition guidelines. The Assistant Secretary is directed to report to the congressional defense committees on these matters no later than March 1, 1995.

The Committee recommends $43,206,000 and the following allocations and adjustments in the new ICBM modernization (demonstration and validation) program element: (1) ICBM guidance applications, $12,650,000, the budget request; (2) ICBM propulsion applications, $301,000, the budget request; (3) ICBM reentry vehicle [RV] applications, $2,500,000, a decrease of $8,439,000 to the budget request; (4) Reentry System Launch Program [RSLP] $23,827,000, an increase of $12,000,000 to the budget request; (5) ICBM command and control applications $301,000, the budget request; and (6) long-range planning, $3,627,000, the budget request.

As addressed and governed by the discussion in the Navy RDT&E section of this report, the Committee directs that the $2,500,000 provided in the ICBM RV applications project shall be used only to permit the Air Force and the Navy to identify and assess critical attributes to maintain ICBM-unique and submarine-launched ballistic missile-unique RV industrial base capability. The Committee further directs that the services include in their assessments a thorough examination of the prospects and utility of establishing a cost-sharing program with private industry to finance any RV industrial base sustainment program.

The funds added to the RSLP project will support acceleration of the efforts to develop a relatively low cost space booster alternative primarily for small scientific payloads.

The Committee recommends $148,048,000 and the following allocations in the new ICBM modernization (engineering and manufacturing development) program element: (1) Minuteman rapid execution and combat targeting [REACT], $21,792,000, the budget request; (2) Minuteman III Guidance Replacement Program phase 1, $100,383,000, the budget request; (3) Minuteman III Propulsion Replacement Program, $25,873,000, the budget request.

The Committee directs that no funds may be reallocated between projects within either program element without prior consultation with, and notification to, the congressional defense committees.

The House allowance approved the budget requests for the strategic missile modernization and Minuteman squadrons program elements.

SAC, p. 283-284

TITLE: AIRBORNE LASER TECHNOLOGY APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$20,000	20,000	20,000	20,000	20,000	0	20,000

AUTH CONF:

Missile early warning and tracking

The budget request contained:

(1) $150.0 million for development of the alert, locate, and report missiles (ALARM) early warning satellite, the follow-on to the defense support program (DSP) system. Of this amount, $31.0 million was requested for a technology demonstration program;

(2) $120.0 million within the Ballistic Missile Defense Organization for development and demonstration of Brilliant Eyes (BE); and

(3) $76.4 million for further development of DSP, including new ground processing capabilities.

The Senate bill would deny funding for the ALARM technology demonstration. It would also transfer the BE program to the Air Force, and allow the Secretary of Defense to use the funds to correct technical intelligence and warning shortfalls, accelerate ALARM, continue a BE program focused on theater defense, or continue DSP procurement.

The House amendment contained a provision (sec. 141) that would provide $300.0 million for ballistic missile early warning risk mitigation. These funds could be used for continued procurement of defense support program satellite number 24, accelerated development of ALARM leading to launch of the first satellite no later than the first quarter of 2002, development of BE, acquisition of three additional interim theater missile sensors, or a combination of the above. The House amendment also would reduce the requested amount for DSP RDT&E by $20.0 million.

The House recedes.

The Department of Defense has undertaken a comprehensive review of all space-based infrared (SBIR) requirements and programs for ballistic missile detection, tracking, technical intelligence, and other ancillary missions. The conferees applaud this effort, but not that Congress has directed such an assessment every year for at least the last three years. The conferees also not that this new review follows a major assessment conducted just a year ago in the Bottom-Up Review (BUR). The BUR resulted in decisions to terminate one program, develop a DSP follow-on, and initiate another (ALARM); to terminate further procurement of DSP; and to scale back the BE program substantially.

The BUR process completely upended the fiscal year 1994 budget request, but Congress patiently provided wide latitude to the Secretary of Defense to allocate funds once the BUR was completed. Now Congress is once again in the same position. The conferees intend to provide DOD latitude in this critical area in fiscal year 1995, but their patience is wearing thin. Moreover, if the Department makes major changes in the current program, the planned deployment date of a follow-on capability could be jeopardized.

The conferees deny the $31.0 million requested for the ALARM technology demonstration program. The conferees agree to apply these funds, and an additional $19.0 million, to accelerate the advanced tactical warning and attack assessment system by two years. The conferees agree to authorize the requested amount for BE, but shift the program to the defense agencies, RDT&E account. The Secretary of Defense should determine the appropriate management organization for this program based on the ongoing review and notify the congressional defense committees within 45 days after the date of enactment of this act.

In addition, in light of the ongoing review of SBIR programs within the Department, and the potential for changes to existing programs as a result of the study, the conferees direct the Secretary to promptly report to the congressional defense committees on the results of the study, together with any

recommended programmatic, budgetary, and schedule changes. Should the Secretary determine that modifications to existing programs are necessary, the conferees would consider a reprogramming request to implement any such changes.

Auth Conf, p. 644-646

SAC:

Airborne laser technology; theater missile defense.-The Committee recommends the transfer of the full amount requested for development of airborne laser technology, $20,000,000, to the combined boost phase intercept [BPI] project established within the Ballistic Missile Defense Organization [BMDO] Follow-On Technologies Program element. The House fully funded the budget request in this Air Force program element.

Similarly, the Committee also transfers the full $52,000,000 sought for an ascent phase demonstration under this theater missile defense program element to the BMDO Program. The Committee's views are further detailed in the discussion contained in the "RDT&E, defensewide" section of this report.

The Committee provides $17,002,000 in the Air Force theater missile defense program element, adjusting the budget request downward by $62,300,000 and providing $10,300,000 less than the House allowance. The funding recommendation implements the following actions: (a) deletes $52,000,000, as noted above, to effect the transfer of the Boost Phase Intercept [BPI] Program into the Ballistic Missile Defense Organization [BMDO]; (b) adds $4,700,000 transferred to this program element from the Advanced Research Projects Agency [ARPA]; and (c) denies $15,000,000 as discussed under the high gear entry within this section of the report.

The $4,700,000 is transferred from ARPA only to support cooperative completion and transition of the multisensor target recognition systems [MUSTRS]. Within the available funds, the Committee also directs that $5,500,000 shall be made available only to operate, maintain, and utilize the Theater Air Command and Control Simulation Facility [TACCSF].

SAC, p. 282

BALLISTIC MISSILE DEFENSE ORGANIZATION [BMDO]

The following table summarizes the Committee's funding recommendations regarding the fiscal year 1995 Ballistic Missile Defense Organization [BMDO] programs. Within a number of new, discrete program elements, the Committee provides $2,558,855,000 for BMDO RDT&E programs as previously approved by the Senate. The Committee recommends specific reductions totaling $301,000,000 and transfer of $120,000,000 for the Brilliant Eyes Program to the Air Force. The combination of these actions decreases the BMDO budget request by $421,000,000, providing an amount $67,093,000 above the House allowance.

The recommended funds are provided within the discrete program elements already approved by the Senate. The Committee recognizes that this reallocation, based on data provided by BMDO, still includes some funds in the National Missile Defense [NMD] Program element related to theater missile defense [TMD] and other similar overlaps. The Committee directs that the fiscal year 1996 budget request be presented within the new program elements and with careful consideration given to budgeting funds in the correct program elements in accordance with the intended use of the moneys requested. The following table precisely details the Committee's realignment of funds between program elements. The Committee has deleted all funds in the budget request program elements to effect the transfer of funds into the newly established program elements.

SAC, p. 329 (Defense-wide RDT&E)

TITLE: SPACE TEST PROGRAM APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$62,084	62,084	62,084	62,084	0	67,998	67,998

HAC:

TRANSFER OF MAJOR SPACE PROGRAMS

As discussed elsewhere in the report under Space and Related Programs, a total of $1,096,150,000 has been transferred from RDT&E, Air Force to RDT&E, Defense-Wide. Details of the transfers are as follows:

Program	P.E.	Amount of Transfer
Advanced Spacecraft Technology	0603401F	$24,200,000
Space System Environment Interactions Tech.	0603410F	4,200,000
Space Test Program	0603402F	62,064,000
Advanced MILSATCOM	0603402F	22,095,000
DMSP Block 6	0603434F	7,601,000
Satellite Systems Survivability	0603438F	8,531,000
Advanced Space Based TW/AA	0603441F	150,000,000
MILSTAR LDR/MDR SatCom	0604479F	607,248,000
UHF Satellite Communications	0303606F	20,879,000
DSCS	0303110F	30,876,000
Medium Launch Vehicles	0305119F	21,042,000
Upper Stage Space Vehicles	0305138F	3,663,000
Titan Space Launch Vehicles	0305144F	4,000,000
DMSP	0305160F	21,135,000
NAVSTAR GPS (Space & Control Sys)	0305165F	51,125,000
Defense Support Program	0305911F	47,351,000
NUDET Detection System	0305913F	10,140,000

HAC, p. 233-234

SAC:

Space Test Program.-This program element funds the integration of scientific experiments and other research payloads onto Air Force space launch vehicles and the National Aeronautics and Space Administration [NASA] space shuttle. The Committee understands that the Air Force is reconsidering the already low priority of this program and may significantly reduce its budget in the future spending plan.

Within this context, the Committee approves $67,998,000, an increase of $5,914,000 to the budget request. The House allowance transferred all requested funds to an "RDT&E, defensewide" appropriations account program element.

Four adjustments are recommended. First, $2,886,000 is denied for the space test experiment platforms [STEP] follow-on one contract. No detailed justification was provided for the budget request.

Second, $2,527,000 is deleted to limit the piggybacks portion of the freeflyers project to the current fiscal year level. The action would deny new starts for fiscal year 1995 and fiscal year 1994 new starts not previously disclosed to the Committee.

Third, $1,673,000 is decreased to constrain the space shuttle secondaries project to the fiscal year 1994 level.

Fourth, $13,000,000 is added to this program element from the Air Force "Procurement" account for medium launch vehicles. The transferred funds were budgeted to continue the purchase of a now canceled Delta II booster. These funds are provided to continue operations of the miniature sensor technology integration [MSTI] satellites 2 and 3. Responsibility for the MSTI Program has been transferred to the Air Force from the Ballistic Missile Defense Organization, and these funds will allow the Air Force to implement its plan to operate and acquire data from the existing MSTI satellites. No funds are provided for further procurement of MSTI satellites until the Air Force develops a plan for future, competitive space-based sensor experiments.

The Committee directs that, within the funds provided for the program element, the Air Force shall fully fund at the budget request level the STEP-3 mission, which includes a satellite attack warning and assessment flight experiment. Step-3 is scheduled to be launched in fiscal year 1995 from Vandenberg Air Force Base.

SAC, p. 284-285

Air Force Space Test and Experimentation Program Office [SMC/CU].-The Committee understands that the Air Force intends to proceed with the consolidation of the Space Test and Experimentation Program Office [SMC/CU] but has not provided sufficient information to Congress about this action.

Therefore, the Committee directs the Secretary of the Air Force to submit a report to the Committees on Appropriations not later than December 31, 1994. The report should address the following aspects of the proposed SMC/CU consolidation: (1) the military and fiscal basis; (2) the specific implementation plan, including the timetable; (3) the impact on military, civilian, and contractor personnel, including the specific numbers and locations of personnel in each category who will be affected; (4) the total associated costs, including any direct and indirect costs, and the funding source by program element and fiscal years; (5) a cost-benefit analysis to compare the associated costs with the potential military and fiscal benefits; and (6) any impact, direct or indirect, on future base closure and realignment [BRAC] recommendations or actions.

The Committee further directs that not more than one-half of the funds available to the Space Test Program during fiscal year 1995 may be obligated or expended until this report has been submitted.

SAC, p. 285

TITLE: ADVANCED MILSATCOM APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$22,095	35,000	22,095	22,095	0	22,095	22,095

HAC:

TRANSFER OF MAJOR SPACE PROGRAMS

As discussed elsewhere in the report under Space and Related Programs, a total of $1,096,150,000 has been transferred from RDT&E, Air Force to RDT&E, Defense-Wide. Details of the transfers are as follows:

Program	P.E.	Amount of Transfer
Advanced Spacecraft Technology	0603401F	$24,200,000
Space System Environment Interactions Tech.	0603410F	4,200,000
Space Test Program	0603402F	62,064,000
Advanced MILSATCOM	0603402F	22,095,000
DMSP Block 6	0603434F	7,601,000
Satellite Systems Survivability	0603438F	8,531,000
Advanced Space Based TW/AA	0603441F	150,000,000
MILSTAR LDR/MDR SatCom	0604479F	607,248,000
UHF Satellite Communications	0303606F	20,879,000
DSCS	0303110F	30,876,000
Medium Launch Vehicles	0305119F	21,042,000
Upper Stage Space Vehicles	0305138F	3,663,000
Titan Space Launch Vehicles	0305144F	4,000,000
DMSP	0305160F	21,135,000
NAVSTAR GPS (Space & Control Sys)	0305165F	51,125,000
Defense Support Program	0305911F	47,351,000
NUDET Detection System	0305913F	10,140,000

HAC, p. 233-234

TITLE: DEFENSE METEOROLOGICAL SATELLITE PGM APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$7,601	7,601	3,601	7,601	0	7,601	7,601

SASC:
Defense meteorological satellite program

The budget request contained $7.6 million to continue development activities associated with a block change for the defense meteorological satellite program (DMSP). Budget documentation indicates that the Air Force intends to spend about $300 million on this block change development over the next five years, in anticipation of an "early 2000s" deployment.

The committee disputes the timing of this requirement. DOD has nine DMSP satellites in inventory; the National Oceanic and Atmospheric Administration (NOAA) of the Department of Commerce has five similar satellites; and NOAA plans to procure two more satellites in the near future-for a total of 16 satellites. This inventory will last far beyond the beginning of the next decade.

Last year, the committee recommended that NOAA forgo procurement of the two additional satellites, modify two DOD DMSP satellites instead, and use all or part of the savings to begin development of an improved, common satellite. The bus for the DOD satellite is 85 percent common with the bus for the NOAA satellite, and they are made by the same contractor. The committee cannot believe that modifying the DOD bus to carry NOAA instruments could be more expensive than buying new satellites. The Administration has evidently rejected this approach, however, which would have justified a near-term development program for a follow-on, common satellite.

The committee, therefore, recommends a reduction of $4.0 million to the budget request and urges the Administration to develop a more coherent and integrated plan for weather satellite modernization.

SASC, p. 87

HAC:

TRANSFER OF MAJOR SPACE PROGRAMS

As discussed elsewhere in the report under Space and Related Programs, a total of $1,096,150,000 has been transferred from RDT&E, Air Force to RDT&E, Defense-Wide. Details of the transfers are as follows:

Program	P.E.	Amount of Transfer
Advanced Spacecraft Technology	0603401F	$24,200,000

Space System Environment Interactions Tech.	0603410F	4,200,000
Space Test Program	0603402F	62,064,000
Advanced MILSATCOM	0603402F	22,095,000
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Titan Space Launch Vehicles	0305144F	4,000,000
DMSP	0305160F	21,135,000
NAVSTAR GPS (Space & Control Sys)	0305165F	51,125,000
Defense Support Program	0305911F	47,351,000
NUDET Detection System	0305913F	10,140,000

HAC, p. 233-234

SAC:
Defense meteorological satellite program block 6.-The Committee agrees with the budget request for $7,601,000 to support Air Force activities to develop a new weather satellite system. The Committee directs that these funds shall be made available only to support the converged weather satellite program now to be accomplished by the Air Force, the Department of Commerce, and NASA.

The House allowance transferred all requested funds to the an "RDT&E, defensewide" appropriations account program element.

SAC, p. 285

TITLE: SATELLITE SYSTEMS SURVIVABILITY APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$8,531	8,531	8,531	8,531	0	2,131	2,131

HAC:

TRANSFER OF MAJOR SPACE PROGRAMS

As discussed elsewhere in the report under Space and Related Programs, a total of $1,096,150,000 has been transferred from RDT&E, Air Force to RDT&E, Defense-Wide. Details of the transfers are as follows:

Program	P.E.	Amount of Transfer
Advanced Spacecraft Technology	0603401F	$24,200,000
Space System Environment Interactions Tech.	0603410F	4,200,000
Space Test Program	0603402F	62,064,000
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DMSP Block 6	0603434F	7,601,000
Satellite Systems Survivability	0603438F	8,531,000
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Titan Space Launch Vehicles	0305144F	4,000,000
DMSP	0305160F	21,135,000
NAVSTAR GPS (Space & Control Sys)	0305165F	51,125,000
Defense Support Program	0305911F	47,351,000
NUDET Detection System	0305913F	10,140,000

HAC, p. 233-234

SAC:

Satellite systems survivability.-The Committee provides $2,131,000, a decrease of $6,400,000 to the budget request for this program element. The House allowance transferred all funds to the "RDT&E, defensewide" appropriations account. The recommendation eliminates funds sought for the miniaturized satellite threat reporting system [MSTRS].

MSTRS was rejected last year by the Congress. It remains unjustified since the satellite attack warning and assessment flight experiment [SAFWE] discussed in the Space Test Program entry will help define technology and operational requirements for such systems. SAFWE is designed to demonstrate the fabrication of a space-qualified attack warning and assessment system which minimizes space, weight, and power requirements.

SAC, p. 285-286

TITLE: BRILLIANT EYES APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:			120,000	0			

SASC:
Ballistic missile defenses

In the statement of managers accompanying the conference report (H. Rept. 103-357) on the National Defense Authorization Act for Fiscal Year 1994, the conferees endorsed the major focus of the Ballistic Missile Defense Organization (BMDO) on the near-term deployment of effective theater missile defense (TMD) systems. The conferees further noted that their support for the proposed national missile defense (NMD) program would rest on a clear demonstration that that program would reduce the lead-time for deployment of a limited NMD system in the event a missile threat to the United States were to emerge. The conferees further noted that their funding reduction from the BMD request to a level below the long-term average recommended in the Bottom-Up Review (BUR) was in part based on their judgment that BMDO and the Department of Defense had not made the case for the proposed thrust and funding of the full ballistic missile defense (BMD) program.

The committee believes BMDO has worked hard to restructure and reorient parts of the program in response to the detailed guidance provided last year. The committee, in particular, congratulates the Administration and BMDO for the well-structured TMD program that has emerged. The committee's major concerns this year pertain to the NMD program, to the overall efficiency with which requested funds would be applied, and to further narrowing the BMDO focus to the engineering aspects of soon-to-be-deployed systems. In effect, BMDO must complete the transition from the "star-wars" era of the 1980s and early 1990s, with its focus on technology exploration and development, to an organization that is largely focused on systems engineering to speed deployment of badly-needed defenses. While some of those transition efforts have begun, more is needed.

In overview, the committee recommends reducing the request of $3253.2 million for BMDO (excluding military construction) by transferring $120.0 million for the Brilliant Eyes program to the Air Force and $50.0 million to maintain a national technology base program for high-energy laser research outside BMDO, and by recommending additional specific reductions of $326.0 million and additional specific increases of $75.0 million, for a net authorization of $2,832.2 million for fiscal year 1995. The committee recommends full funding of the procurement request, and recommends $2,558.8 million for research, development, testing, and evaluation (RDT&E).

The committee addresses specific funding and programmatic guidance for BMDO under the following subsections:
-Theater missile defenses
-National missile defenses
-Follow-on technologies
-Management support
-Compliance of THAAD flight testing during fiscal year 1995

-Compliance reviews

-Revisions to the Missile Defense Act
-Limitation on obligation of BMDO funds

(Table deleted)

THEATER MISSILE DEFENSES

The committee commends BMDO for its restructuring and consolidation of TMD programs, and endorses the priority shown in the funding request for near-term TMD systems. The committee also endorses the Department's selection of the ERINT missile as the Patriot PAC-3 interceptor. The committee takes note, however, of the comments by review panels that the ERINT program is not without technical risk. Therefore, in view of the importance of early deployment of improved TBM capabilities, the committee concludes that at the same time ERINT is entering the engineering and manufacturing development (EMD) phase, continued research and development on the multi-mode missile is a wise hedge against the possibility of technical problems with ERINT early in its EMD phase. The committee understands that some $58.5 million is already available within the total PAC-3 request for risk-mitigation efforts, the bulk of which, DOD has informally indicated, is to be allocated to the multi-mode missile program.

The committee notes BMDO testimony that, after funding the NMD, follow-on technologies, and near-term TMD programs as recommended in the BUR, the remaining TMD funding would be adequate to allow only one of three follow-on TMD systems to enter EMD in about 1998. In effect, BMDO claims the overall funding level approved by the Administration-$17.6 billion over five years-will force the Congress to choose one candidate from among Navy upper tier, CORPS SAM, and some candidate boost-phase intercept (BPI) programs. The committee believes a strong case could be made for pursuing EMD on all three systems, should the development of technologies be accomplished successfully.

In the following, the committee proposes a different solution to the BMDO "Hobson's choice": the committee intends to vigorously scrutinize and, where possible, reduce BMDO "overhead" functions, in order to devote more of the $17.6 billion in the Future Years Defense Program (FYDP) to specific defense programs like the three follow-on TMD candidates, as well as to a reinvigorated NMD program. The committee expects BMDO to facilitate the development and deployment of defenses against ballistic missiles, to provide "value added" to the process. BMDO overhead cannot and will not be allowed to become a burden, a "tax," on timely development and deployment of effective missile defenses.

For the past several years, the congressional defense committees have repeatedly tried to develop a system for funding, reporting on, and providing oversight over ballistic missile defense programs that would both provide the BMDO adequate flexibility to pursue promising avenues of research and provide appropriate oversight to the congressional defense committees. The results of this process continue to be disappointing. The current budgetary submission contains 13 separate line-items; four are labeled "Ballistic Missile Defense Technology," four others are labeled "Theater Missile Defenses," and the only NMD-related line-item requests no funding for fiscal year 1995.

As the Congress has reduced the portion of BMDO budgets devoted to exploratory research on a wide range of promising technologies, and increased the funding for development of well-defined programs, particularly in the TMD arena, it is now time for the congressional defense committees to authorize and appropriate funds for specific TMD programs and activities, much as they do for other major defense programs.

Therefore, the committee recommends the following specific amounts for the near-term TMD programs under BMDO purview:

-For Patriot PAC-3, including risk-mitigation funds, $600.0 million;
-For THAAD, $495.7 million;

-For the Navy lower-tier program, $194.0 million;
-For the ground based radar-tactical (GBR-T) program, $173.2 million;
-For the Hawk system upgrades, $30.6 million; and
-For battle management, command, control, communications, and intelligence for TMD systems, $34.1 million.

The committee also recommends the following allocations for support of additional TMD programs:
-For follow-on TMD programs, including Navy upper tier, CORPS SAM, and BMDO BPI programs, $96.6 million; and
-For a risk mitigation fund to accelerate development and deployment of TMD systems, $75.0 million.

BMDO and the Department of Defense Comptroller are directed to use these specific line-items in budget submissions and reports to the Congress as of October 1, 1994.

Funds contained in the risk mitigation fund may be used to increase funding for Patriot PAC-3 capabilities, including additional risk-mitigation activities, and for the acceleration of any or all of the follow-on TMD programs, at the discretion of the Secretary of Defense. Not less than 30 days prior to the obligation of any part of the risk mitigation fund, the Secretary shall inform the congressional defense committees of his proposed allocation of funds among the designated programs, including such funds as he may choose to reserve for subsequent obligation.

The committee has closely followed the selection of one of the two candidates-ERINT and multi-mode missile-for the PAC-3 system. We are pleased that the Department has finally completed the Defense Acquisition Board process and is moving to develop ERINT, the selected missile.

However, the committee recognizes that the multi-mode missile has substantial potential against various threats, especially cruise missiles and electronic countermeasures, that are worth developing in the context of the planned risk mitigation program. While the full scope of this program has not been finalized, the committee recommends that it include sufficient flight tests to validate these needed capabilities.

NATIONAL MISSILE DEFENSES

The committee continues to be troubled by the apparent inconsistencies in the Department's proposed NMD Technology Readiness proposal. In broad outline, it proposes to allocate $3.0 billion over the next five years to this activity, including more than $500 million for the development and deployment of prototype Brilliant Eyes (BE) satellites. No flight-test demonstrations of radar, interceptor technology, or kill vehicle technology are envisioned. This leads the committee to question the value of early-deployed BE satellites to the NMD program, when, according to the BUR description of the option selected, by the end of the decade, ". . . it would take 10 to 15 years to deploy an operationally effective system . . .". Thus, the committee does not believe the "Technology Readiness" program will serve to provide an adequate hedge against the possible emergence of a threat. CIA Director James Woolsey has testified that such a threat could arise on a timetable of eight to 15 years; yet the proposed program would leave us still 10 to 15 years away from effective defenses at the end of this decade. In addition, the threat could arise more rapidly than the intelligence community now projects.

BMDO and some contractors have suggested that BE could enhance the effectiveness of most TMD systems; however, no TMD funds are allocated to BE, and the TMD user community has not shown strong interest in BE availability. Moreover, for the wider-area TMD systems, where BE arguably provides the greatest benefit, use of BE data may compound compliance problems. (For example, the committee is aware of contractor briefings purporting to show that Navy vessels with the upper tier capability plus BE tracking data could provide a thin defense of most of the continental United States from East Coast and West Coast ports.)

FY 1995 CONGRESSIONAL TRACK

Last year, the committee posed a number of questions regarding the Department's missile warning and tracking programs. The committee is not fully satisfied with the Department's response to the issues it raised. Accordingly, elsewhere in this report, the committee provides additional guidance regarding these matters. As one element of that guidance, the requested funding for BE of $120.0 million is transferred to the Air Force, which shall also retain program management authority for fiscal year 1995.

The committee reluctantly accepts the lower priority placed on the NMD program, but does not accept the BMDO proposed "Technology Readiness" program or timetable. Given the limited resources allocated to NMD under the BUR, and the uncertain timing of a future threat, the committee believes BMDO should continue the development and testing of more mature demonstration technologies such as ERIS and LEAP, rather than focusing on further miniaturization of interceptors and kill vehicles. Since the scope of any contingency deployment is likely to be tens, rather than hundreds or thousands, of interceptors, continuing development of existing technologies seems a better strategy for a fiscally-constrained environment. The objective for such an effort should be to develop and test, as rapidly as available NMD funding will permit, a limited, "UOES-type" capability using existing flight-qualified hardware, even though such hardware may not incorporate the latest "state-of-the-art" technology.

The ERIS booster and LEAP kill vehicle both have demonstrated substantial flyout and engagement ranges. Thus, one early focus for an NMD program would be to provide adequate tracking data. Adequate tracking of hostile reentry vehicles might be accomplished by any of several means-BE satellites, if deployed; upgraded BMEWS and PAVE PAWS radars; GSTS-type probes; or a self-contained optical tracking stage carried aboard an ERIS-type interceptor. The development of a fixed, land-based NMD radar should be matched to technical progress on the TMD ground-based radar.

The budget request for NMD activities was $587.0 million; the transfer of BE to the Air Force reduces this level to $467.0 million. The committee directs the Secretary of Defense to conduct a detailed review of the concept of building upon ERIS- and LEAP-type hardware to provide early flight-testing and an early availability of a "UOES-type" NMD capability, within a budgetary range of $400-$500 million per year. The Secretary shall provide to the congressional defense committees not later than March 1, 1995, a report on the results of his review, including comparisons of its cost and timetable with the Technology Readiness program proposed by BMDO.

Because of the need to develop a revised NMD program direction and milestones oriented toward early demonstration of a UOES capability, the committee recommends reducing the request by an additional $67.0 million. The committee expects the Department to request funding consistent with the BUR projections for the NMD program for fiscal year 1996, and to reflect a robust NMD program in the next Future Years Defense Program.

FOLLOW-ON TECHNOLOGIES

BMDO funds and oversees numerous important high-technology programs within the follow-on technologies program element; some, such as high-energy laser research, are unique within the Department of Defense. However, the cost of follow-on technologies, in terms of program management and other BMDO resources, is high, and some of these programs tend to be "lightning-rods" for opponents of robust ballistic missile defenses. For this reason, for the past two years, the committee and the Congress have been urging the Secretary of Defense to transfer from BMDO to other agencies those research activities on technologies that may prove to be relevant to advanced missile defense concepts, but that have no prospect of reaching engineering and manufacturing development within the next decade or two. The Secretary, however, has transferred only a handful of projects; $409.0 million is still requested for this program area.

Transfer of these programs to other agencies requires two actions by the Department. One, involving transferring program responsibilities and funding, is easily accomplished. The other, insuring that the recipient agency protects the program and adequately funds it, is harder, and requires firm OSD oversight. Nonetheless, as BMDO moves inevitably toward an engineering development and deployment agency, its efforts need to be focused increasingly on those critical

BMD tasks. The committee again strongly urges the Secretary to continue the transfer of far-term follow-on BMD technologies from BMDO to other Services and agencies, and to ensure that they continue to receive high priority once transferred.

The committee notes that the statement of managers accompanying the conference report on the National Defense Authorization Act for Fiscal Year 1994 (H. Rept. 103-357) required the Department to develop a coherent management plan for high-energy laser research programs. That plan has not yet been provided to the committee. The committee, nonetheless, believes a focal point outside BMDO should be established to develop a national technology base in high-energy laser research and development to meet a broad spectrum of possible military missions, not just ballistic missile defenses. Accordingly, the committee recommends the transfer of $50.0 million to a new high-energy laser research line-item. The Secretary of Defense shall assign management responsibility for these funds to an appropriate military Service or defense agency other than BMDO. The committee encourages consolidation of this high-energy laser program with other programs, should the Secretary's ongoing review so recommend.

The request for follow-on technologies was $409.0 million; in addition to the transfer of $50.0 million for high-energy laser research, the committee recommends a reduction of $89.0 million to the request.

MANAGEMENT AND SUPPORT

Of the $3,253.2 million request for BMD procurement and research, development, testing, and evaluation, the committee notes that $587.0 million was requested for NMD, $409.0 million for follow-on technologies, and $1,624.1 million for specific, mainstream TMD programs. The balance, totalling $633.1 million, or just under 20 percent of the requested funds, represents the request for other programs and activities, including: BMDO program management; funds for studies and analyses; systems engineering and technical assistance (SETA) support; set-asides for small business innovative research and innovative science and technology; and a host of generic support activities such as test and evaluation activities and lethality studies.

Notwithstanding the important nature of many of these activities, the committee concludes that too much of the BMDO funding request is proposed to be spent on this category, to the detriment of more robust efforts on high-priority TMD and NMD activities. The committee notes that BMDO is requesting $215.2 million in management support, virtually the same amount as was appropriated for fiscal year 1993 for an SDI program funded at a half-billion-dollar higher level and containing a far more diverse set of activities than in the current BMDO request. The committee, accordingly, recommends a reduction of $70.0 million in management support.

The committee recognizes that test and evaluation and other supporting activities are necessary ancillary activities, and agrees with the BMDO Director that test and evaluation activities should be centrally directed, to avoid the appearance that specific program managers have "self-test" authority. However, the committee believes that much of the test and evaluation activity required by specific programs can be identified well in advance of need, and can be added to funding for those discrete programs, while perhaps maintaining a small contingency reserve. This would serve to reflect more of the true cost of specific programs, and reduce the appearance to outsiders that too much money is allocated to "overhead;" the committee is confident that the BMDO Director can retain control over the commitment of test and evaluation funds within specific programs. The committee recommends a further reduction of $100.0 million to the remainder of the supporting programs and activities. The committee further directs that, in the fiscal year 1996 budget request, BMDO include identifiable costs for test and evaluation activities for specific TMD and NMD programs and systems.

COMPLIANCE OF THAAD FLIGHT TESTING DURING FISCAL YEAR 1995

The committee applauds the Administration's efforts to seek among the successor states to the former Soviet Union an agreed clarification of permissible limits to the capabilities of theater missile defense (TMD) systems. The committee notes that, at those negotiations, all parties appear prepared in principle to accept a definition of permissible limits that would unambiguously define the U.S. theater high altitude area defense (THAAD) system as a TMD system. The committee also notes testimony that, absent such relief, the flight testing of the THAAD interceptor missile, now scheduled to begin in November 1994, could raise ABM Treaty compliance issues. The committee is concerned that failure to reach a successful agreement at the ongoing negotiations prior to November 1994 could lead the

Administration to delay the initial flight testing of the THAAD system, the timely development and deployment of which the Congress has repeatedly supported. Based on U.S. computer simulations, the Administration has determined that the THAAD system could possess a "significant" intercept probability against some strategic reentry vehicles, but only after the full UOES system is in place, including battle management software to receive cueing information from external sensor sources.

The committee is aware of the following facts regarding the planned THAAD test program:

(1) The first two THAAD interceptor flight tests will not involve a target reentry vehicle (RV).
(2) For the first six flight tests, the THAAD interceptor will be controlled only by an existing radar at White Sands.
(3) For the next four flights, encompassing the full fiscal year 1995 test plan, the THAAD interceptor will be controlled by a demonstration/validation (dem/val) radar system; a prototype (UOES) radar will only be incorporated into the THAAD system thereafter.
(4) U.S. computer simulations of the capability of each of the above THAAD system configurations show no capability to intercept strategic RVs.
(5) The maximum velocity of the THAAD interceptor missile is less than that of the deployed Russian SA-12 system, which the Administration appears to have accepted as a TMD system.

Finally, even if the fully-developed, deployed THAAD system achieves all planned performance specifications, the U.S. computer simulations indicate that the defended-area footprint against a strategic RV for the THAAD system will not include the THAAD battery itself; that is, the fully-developed THAAD system will have no self-defense capability against any strategic RV.

The committee understands that a specific review of the compliance of the THAAD dem/val program will be undertaken later this year. The committee strongly reiterates its views as expressed in section 234(a) of the National Defense Authorization Act for Fiscal Year 1994. The committee urges the Administration to adopt reasonable standards for the THAAD dem/val compliance review process, to include comparability of the standards the United States intends to apply to assessments of the compliance of both US and Russian missile defense systems. For example, the committee will find it difficult to accept a position that the initial flight test of an interceptor missile, which does not involve any physical target vehicle, can be found to be a "noncompliant" event. The committee would also question the operational military significance of a "defensive system" which is incapable of defending itself from attack.

If the THAAD dem/val compliance review does not determine that the planned dem/val program is fully compliant as proposed, and if the ongoing negotiations are not completed prior to November 1, 1994, the committee directs the Secretary of Defense to provide to the congressional defense committees not later than November 15, 1994, a report on the effects of additional delay on the planned THAAD test program. The report shall set forth for each quarter of fiscal year 1995 his assessment of the changes to the planned flight test schedule necessitated by the delay in completing the negotiations, together with his estimates of the delay in fielding both the UOES capability and the initial operational capability of the THAAD system, and the added cost to the THAAD program of such delay.

COMPLIANCE REVIEWS OF BALLISTIC MISSILE DEFENSE SYSTEMS

Last year, the committee required the Administration to provide preliminary reviews of the compliance with the ABM Treaty of all near-term, well-defined theater missile defense (TMD) systems, in addition to the proposed Brilliant Eyes (BE) space-based sensor system. The committee has carefully reviewed the compliance reports and commends the Administration for the timeliness and usefulness of all but one of these reports. The committee finds the compliance report on the BE sensor system unacceptable, as it fails to deal with the set of questions posed in section 234 of the National Defense Authorization Act for Fiscal Year 1994. The report submitted by the Administration on the BE sensor system failed to address the question of whether BE, as planned, would be compliant with, or could be made to be compliant with, either an ABM Treaty-compliant national missile defense (NMD) system, or an ABM Treaty-compliant TMD system, and whether its status as a legally-deployed component of an ABM Treaty-compliant TMD system would be jeopardized if the United States subsequently undertook to develop and deploy an NMD system that also used BE tracking data.

There appears to be no compliance issue with the use of space-based optical data, such as is provided today by defense support program satellites, nor have objections been raised to proposed follow-on systems (FEWS and ALARM). In the Missile Defense Act of 1991, the Congress declared the proposed ground-launched surveillance and tracking system (GSTS) compliant. The BE system appears to be analogous to these systems, relying on telescopic viewing of optical phenomena. Thus, it would appear that, if data from Brilliant Eyes satellites were transmitted, processed, and disseminated in similar fashion to data from existing optical systems, a determination of compliance should be straightforward.

The report submitted by the Administration avoided these (admittedly complex) questions, arguing instead that the first "two or three" developmental BE satellites would be so lacking in capability as to raise no compliance issue, and declining to formulate an opinion regarding a more robust constellation. The committee cannot accept this answer as a basis for continued substantial funding of the BE program. The Administration is already embarked on negotiations with Russia and many of the successor states to the former Soviet Union to clarify the boundaries on compliant TMD systems. The Congress has been urging the Administration since the passage of the Missile Defense Act of 1991 to undertake similar negotiations-if necessary-to clarify the permitted uses of space-based sensors. Thus, the committee has no choice other than to insist that the Administration determine whether a BE satellite constellation would be fully, partially, or not at all compliant with the current interpretation of the ABM Treaty if used in conjunction with a TMD system, an NMD system, and both systems. To encourage prompt reporting, the committee further limits the obligation of funds for BE to not more than $50.0 million until the required compliance report is submitted.

Finally, the committee notes that, in its compliance review provision in the National Defense Authorization Act for Fiscal Year 1994, it did not require a compliance review for the Navy upper tier program, on the grounds that it was not sufficiently well-defined. However, the Bottom-Up Review included this program in its designation of "core" TMD programs, and efforts may be made to increase Navy upper tier funding beyond the request of $17.7 million. Thus, the committee recommends a provision that would require a compliance review of the Navy upper tier program if the appropriated amount for this program exceeds the request, and that would limit the obligation of funds to $17.7 million until the required compliance review has been delivered to the congressional defense committees.

REVISIONS TO THE MISSILE DEFENSE ACT OF 1991

The committee recommends a provision that would make several non-substantive changes to the Missile Defense Act of 1991. The provision would delete three provisions pertaining to fiscal year 1992 funding and to the naming and description of several BMDO line-items. The Congress funds BMDO programs annually, and the titles and programmatic content of BMDO line-items have also been changed annually. The provision would also extend the current requirement in section 238 of the Missile Defense Act of 1991 for interim reports from the President on the progress of negotiations with Russia and the successor states to the former Soviet Union on changes or clarifications to the ABM Treaty.

LIMITATION ON OBLIGATION OF BMDO FUNDS

The committee notes that the theater missile defense master plan required by section 235 of the National Defense Authorization Act for Fiscal Year 1994 has not been delivered as required. The committee, therefore, recommends a provision that would prohibit the obligation of any fiscal year 1995 BMDO funds until the required report has been provided to the congressional defense committees.

SASC, p. 127-138

ADDITIONAL VIEWS OF MESSRS. THURMOND, WARNER, COHEN, MCCAIN, LOTT, COATS, SMITH, KEMPTHORNE, AND FAIRCLOTH, AND MRS. HUTCHISON

When the present Administration took office in 1993, it proceeded with a major reordering of priorities in the Nation's missile defense program. The Strategic Defense Initiative Organization became the Ballistic Missile Defense Organization. The change in title was not cosmetic, but reflected a new emphasis on

developing defenses against theater ballistic missiles to defend U.S. regional interests, troops deployed abroad, and our allies, instead of focusing primarily on defense of the homeland against strategic ballistic missiles. Also encompassed in the change was more emphasis on development and acquisition of defensive systems, and less emphasis on long-term research in BMD technologies.

Most Minority members of the Committee, and most Republicans in the Senate, agreed with this reordering of missile defense priorities. While homeland defense against strategic ballistic missiles continues to be a major goal of the Minority, we realize that the threat to the continental United States from an ICBM attack has diminished significantly with the end of the Cold War. At the same time, we realize that the proliferation of ballistic missile technology and weapons of mass destruction poses increasing threats to U.S. theater forces and regional interests. The Minority, reluctantly giving up early National Missile Defense deployment on the assurance that the Administration would pursue a robust TMD program, joined with our Majority counterparts last year to support the new emphasis on theater missile defense (TMD) and allocate the bulk of BMDO funds to TMD.

The strong, bi-partisan consensus on a redirected BMD program was clearly expressed in the Fiscal Year 1994 National Defense Authorization Act. In Section 234(a)(8) Congress established as a national security priority the development and deployment of treaty compliant, "highly effective theater missile defense systems capable of countering existing and expanding threats posed by modern theater ballistic missiles as soon as is technically possible."

In considering this year's defense authorization bill, the Minority continued to act on the basis of that consensus in support of a robust, highly effective TMD program. In particular, we shared the Committee's concerns about the Theater High Altitude Area Defense System (THAAD) Demonstration/Validation program. THAAD is the centerpiece of the current TMD effort. But THAAD might not be permitted to enter its flight testing phase in November, 1994 as currently scheduled because of specious questions about compliance with the ABM Treaty. The Committee examined the THAAD Dem/Val program and the THAAD compliance report of January 12, 1994, and expressed in its Report its view that THAAD testing should not be delayed because of concerns about ABM Treaty compliance.

In formulating its position on THAAD testing, the Minority carefully considered at the same time the Administration's present attempt to obtain an agreement with Russia clarifying the distinction between ABM systems, limited by the ABM Treaty, and TMD systems, which are not limited. We believe the U.S. proposal on TMD "demarcation" tabled in the Standing Consultative Commission (SCC) is consistent with Article VI (a) of the ABM Treaty, and with the Congressional finding contained in the Fiscal Year 1994 Defense Authorization Act. This finding states that TMD systems are compliant with the ABM Treaty unless they are tested against or have demonstrated capabilities to counter modern strategic ballistic missiles. The Minority believes that this finding and the Administration's proposal to the SCC are a sound basis for an agreement on TMD demarcation. They serve the Nation's pressing need to develop and deploy highly effective TMD systems within our existing Treaty obligations.

The Minority is aware that the Defense Department's Compliance Review Group has not yet rendered an official opinion regarding compliance of the THAAD Dem/Val testing program, but that preliminary analysis, which led to the January, 1994 compliance report, indicates that THAAD Dem/Val flight testing may raise compliance problems without an agreement on TMD demarcation. We do not find this analysis persuasive. We note that the planned THAAD Dem/Val system configuration to be used for flight testing during Fiscal Year 1995 and Fiscal Year 1996 will have no capability to counter modern strategic ballistic missiles. We believe that compliance judgements on the THAAD Dem/Val flight program should be based on the system configuration actually employed during such testing.

We acknowledge the Administration's view that the THAAD user operational evaluation system (UOES), with a capability to receive space-based sensor cueing, may have compliance implications unless an agreement on TMD demarcation is reached. But until this system as described is actually tested, we believe no legal impediment exists to executing the planned THAAD Dem/Val program for Fiscal Year 1995. (The Committee concurred in this view only with respect to THAAD flight tests in Fiscal Year 1995, but the Minority believes this position is valid for Fiscal Year 1996 flight testing as well.)

Thus the language on THAAD testing compliance in this Report is consistent with last year's defense authorization act, with the January 12, 1994 THAAD compliance report, and with the technical parameters of the THAAD program as we understand it. The Report clearly expresses the Committee's view that the FY 1995 THAAD flight test schedule should go forward without unnecessary impediments or delays caused by concerns over ABM Treaty compliance. We commend the Majority for its leadership in arriving at this position, and fully subscribe to the views expressed in this section of the Report.

However, the Minority is concerned that the Report language cited does not go far enough in addressing the underlying issue of the ABM Treaty's potential impact on all U.S. TMD programs, not just THAAD. We are further troubled that compliance issues related to THAAD might be used as a rationale for seeking an early, unnecessarily narrow and restrictive agreement in the SCC on TMD demarcation. We urge the Administration to resist such pressures and to pursue a TMD demarcation agreement that would allow more advanced TMD systems to proceed unencumbered by legal ambiguity.

The Minority believes that a "demonstrated capabilities" standard, consistent with section 234(a)(7) of the Fiscal Year 1994 Defense Authorization Act and the Administration's SCC proposal of November 1993, would achieve these goals. Such a demonstrated capabilities standard could not be satisfied by one-on-one computer simulations that will never be validated by flight testing. Hence, the Administration should adopt a demonstrated capabilities standard based on flight testing as the measure for determining capabilities to counter strategic ballistic missiles.

The Minority has fully supported the Defense Department's strong TMD development and acquisition program. Based in part on the Administration's TMD demarcation proposal and the Armed Services Committee's apparent commitment to advanced TMD development, we also supported the addition of $75 million for TMD in the BMDO account in this year's authorization bill.

However, the Minority is obliged to point out that if the Administration accepts limitations on the fly-out velocity of TMD interceptors or other limitations on TMD proposed by the states of the Former Soviet Union participating in the ABM Treaty negotiations, the Navy Upper Tier and Boost Phase Intercept advanced TMD programs could be severely restricted, if not killed outright.

Except for the aforementioned position taken on the compliance of THAAD testing, the Majority of the Armed Services Committee has not made its views clear on TMD demarcation, nor on the possibility that the Administration might accept new ABM Treaty limits on advanced TMD systems. In order to preserve the consensus that was established last year in favor of highly effective and quickly deployed TMD systems, the Minority hopes the Committee as a whole will see fit to express its views to the Executive branch on the need to sustain the original position on TMD demarcation in the current ABM Treaty negotiations. The Committee as a whole should demonstrate its commitment to a robust TMD program by protecting the right of the United States to develop and deploy technically advanced TMD systems capable of countering future as well as present theater ballistic missile threats.

Under Article II, Section 2 of the United States Constitution, the Senate shares the responsibility with the President for making treaties. Consequently, it is appropriate for individual members of the Senate, for Senate Committees, and for the Senate as a body to make their positions on treaty matters known to the Executive branch. Indeed, in our view it would be negligent of the Armed Service Committee not to make its position clear regarding changes in the ABM Treaty that could adversely impact vital TMD programs which the Committee has consistently said are a top national security priority.

The Constitution does not preclude Senators from conveying opinions to the Executive branch on treaty matters informally or via legislation before a treaty is formally presented for advice and consent under Article II, Section 2. The Senate advises, consents, instructs, directs, and compels the Executive branch in myriad matters, from spending priorities to appointments of Executive branch personnel. Since treaty-making is equally a prerogative of the Senate, Senators should feel no reticence to express a position on a pending treaty issue, especially one of such magnitude as changes to the ABM Treaty. We believe further that the defense authorization bill is an appropriate means for expressing such opinions.

If the Committee and the Senate as a whole do not take a clear position on ABM Treaty clarification that supports a robust TMD program, we fear the Administration may accept the counter-proposal tabled by the Russians in the SCC. That could impose additional limitations that would cripple promising, advanced TMD programs. By failing to insist that the U.S. Government do all it can-consistent with existing treaty obligations-to preserve the United States's right to pursue highly capable TMD systems, the Senate may by default allow the ABM Treaty to cast a net over TMD programs. That means the Treaty could be allowed to improperly "capture" an entire new class of weapons systems, contrary to the plain reading of the Treaty's language, contrary to its historical purpose, and contrary to the Nation's security interests. We would be accepting new legal obligations, in effect transforming the ABM Treaty into an "ABM-TMD Treaty."

Should this occur, the Defense Department will find itself constrained to artificially limit the performance and capabilities of some TMD systems, or eliminate them altogether. The Congress will find itself spending scarce defense funds on systems which are not technically competent to meet existing or future theater ballistic missile threats, systems which could in fact be obsolete by the time they are deployed. Faced with this possibility, the bi-partisan consensus on BMD and TMD arrived at with such promise last year could quickly erode. The Minority hopes this does not happen, and that the United States can rapidly proceed with the best theater missile defenses current technology will permit.

Strom Thurmond.
John Warner.
Bill Cohen.
John McCain.
Trent Lott.
Dan Coats.
Bob Smith.
Dirk Kempthorne.
Lauch Faircloth.
Kay Bailey Hutchison

SASC, p. 306-309

HAC:

BRILLIANT EYES

As discussed elsewhere in this report under Space and Related Programs, within the RDT&E, Defense-Wide appropriation the $120,000,000 requested for Brilliant Eyes under Ballistic Missile Defense Technology (P.E. 0604217C) has been transferred to a new program line.

HAC, p. 253 (Defense-wide RDT&E)

SAC:

BALLISTIC MISSILE EARLY WARNING SATELLITE PROGRAMS

The Committee is concerned about the continuing lack of firm direction in the Department of Defense's [DOD] efforts to upgrade and modernize the Nation's ballistic missile early warning satellite capability. To date, the Pentagon has spent billions of dollars on several different programs, yet the operational user is not one step closer to obtaining a new capability. The matter has been reviewed by multiple panels, advisory boards, and Pentagon committees. Yet, even now, a new Defense Department group has been formed to once again evaluate options and chart a course to develop a new family of early warning satellites.

Based on DOD's experience with the Defense Support Program [DSP], a geosynchronous satellite network has often been the only approach considered for enhancing our early warning capability. Such a network makes it possible for a relatively small number of satellites to observe virtually the entire Earth. The geostationary orbit avoids pointing, tracking, and motion compensation problems inherent in a low-Earth-orbit satellite constellation. However, these satellites are large and expensive, with associated high launch costs.

With each passing year, it becomes more clear that DOD can only afford one early warning satellite system. However, the Defense Department continues to pursue three related projects to develop this new systems: (1) ALARM; (2) ALARM technology demonstrations; and (3) brilliant eyes [BE]. The Alert Locate and Report [ALARM] Program reflects a significant compromise in the capabilities planned for the follow-on early warning system [FEWS], primarily because of cost.

The new study specifically includes an evaluation of the brilliant eyes [BE] distributed satellite system. To some extent, many of the past reviews were flawed because they failed to consider BE or some derivative of brilliant eyes.

A low-Earth-orbit satellite can track missiles with greater precision simply because the satellite and missile are much closer. According to DOD studies, it may be possible to modify brilliant eyes satellites to perform both the early warning and the missile tracking functions necessary to support a national missile defense. While a brilliant eyes-like satellite could be much cheaper, many more of these satellites would be required compared to a DSP-like constellation. Nevertheless, the total system life cycle cost of BE may still be less expensive. BE also raises Anti-Ballistic Missile [ABM] Treaty compliance questions which must be resolved later in its development cycle.

In the end, DOD has been concerned about the risk of a relying on a network of low-Earth-orbit warning satellites. Even the recent DOD space launch study largely neglected the potential effects on the space launch infrastructure of emerging distributed satellite network concepts. Nonetheless, the commercial world appears to be ready to move forward as private funds are being devoted to several new satellite communications networks relying on distributed low-Earth-orbit satellites.

Having considered these and many other aspects of this debate, the Committee has developed the following recommendation which adopt portions of the Pentagon's current early warning strategy while making adjustments that would benefit the Defense Department and the Nation.

As part of the ALARM Program, DOD proposed a technology demonstration effort to fly one or two experiments which would allow evaluation of new sensor technologies. However, the program is underfunded to demonstrate more than one new technology, and its schedules prevent the demonstration experiments from realistically supporting the ALARM Program. Drawing on DOD's concept, the Committee proposes an ALARM Demonstration/Validation Prototyping Program which would lead to a fly-off between competing concepts. The Committee directs DOD to fly two individual satellites, or a similar number of prototype, geosynchronous early warning sensors, and associated hardware aboard existing satellites. In parallel, the Committee directs that the Brilliant Eyes Program be accelerated moderately to permit prototype satellite flight tests on the same schedule as the revised ALARM Dem/Val Program.

It is the expectation of the Committee that these experiments be launched around the fourth quarter of fiscal year 1997, roughly the same schedules previously planned for the technology demonstrations supporting ALARM. Under this plan, DOD could make an informed decision based on the results of all of these prototype system tests. The Defense Department should then be able to proceed with a lower risk Engineering and Manufacturing Development [EMD] Program, with the first satellite being delivered in time to avoid further DSP purchases beyond satellite 23.

To achieve these goals, the Committee has provided $62,500,000 for the revised ALARM Demonstration/Validation Prototyping Program and $150,000,000 for the Brilliant Eyes Program. The Committee directs that no more than one-half of these funds may be obligated prior to the Congress receiving a plan outlining the detailed implementation of this Enhanced Competition Development Program. Furthermore, the Committee directs that the full amount appropriated for the ALARM Program may not be obligated until the full amount of funds are obligated for the brilliant eyes prototyping effort. The Committee has provided no funds for duplicative ALARM generic technology development efforts.

Summary table

FY 1995 CONGRESSIONAL TRACK

[In thousands of dollars]

	Committee recommendation
Advanced space-based TW/AA (dem val)	.....
Brilliant eyes	.....
ALARM dem/val prototyping	$222,50006
Technology demos/quick reaction capability [QRC]	(62,000)
Brilliant eyes	(150,000)
System Program Office/FFRDC Support	(10,500)

SAC, p. 231-233

Airborne laser technology; theater missile defense.-The Committee recommends the transfer of the full amount requested for development of airborne laser technology, $20,000,000, to the combined boost phase intercept [BPI] project established within the Ballistic Missile Defense Organization [BMDO] Follow-On Technologies Program element. The House fully funded the budget request in this Air Force program element.

Similarly, the Committee also transfers the full $52,000,000 sought for an ascent phase demonstration under this theater missile defense program element to the BMDO Program. The Committee's views are further detailed in the discussion contained in the "RDT&E, defensewide" section of this report.

The Committee provides $17,002,000 in the Air Force theater missile defense program element, adjusting the budget request downward by $62,300,000 and providing $10,300,000 less than the House allowance. The funding recommendation implements the following actions: (a) deletes $52,000,000, as noted above, to effect the transfer of the Boost Phase Intercept [BPI] Program into the Ballistic Missile Defense Organization [BMDO]; (b) adds $4,700,000 transferred to this program element from the Advanced Research Projects Agency [ARPA]; and (c) denies $15,000,000 as discussed under the high gear entry within this section of the report.

The $4,700,000 is transferred from ARPA only to support cooperative completion and transition of the multisensor target recognition systems [MUSTRS]. Within the available funds, the Committee also directs that $5,500,000 shall be made available only to operate, maintain, and utilize the Theater Air Command and Control Simulation Facility [TACCSF].

SAC, p. 282

BALLISTIC MISSILE DEFENSE ORGANIZATION [BMDO]

The following table summarizes the Committee's funding recommendations regarding the fiscal year 1995 Ballistic Missile Defense Organization [BMDO] programs. Within a number of new, discrete program elements, the Committee provides $2,558,855,000 for BMDO RDT&E programs as previously approved by the Senate. The Committee recommends specific reductions totaling $301,000,000 and transfer of $120,000,000 for the Brilliant Eyes Program to the Air Force. The combination of these actions decreases the BMDO budget request by $421,000,000, providing an amount $67,093,000 above the House allowance.

The recommended funds are provided within the discrete program elements already approved by the Senate. The Committee recognizes that this reallocation, based on data provided by BMDO, still includes some funds in the National Missile Defense [NMD] Program element related to theater missile defense [TMD] and other similar overlaps. The Committee directs that the fiscal year 1996 budget request be presented within the new program elements and with careful consideration given to budgeting funds in the correct program elements in accordance with the intended use of the moneys requested. The following table precisely details the Committee's realignment of funds between program elements. The Committee has deleted all funds in the budget request program elements to effect the transfer of funds into the newly established program elements.

SAC, p. 329 (Defense-wide RDT&E)

APPN CONF:

SPACE-BASED INFRARED ARCHITECTURE

The conferees also direct the Department of Defense to conduct an independent assessment of areas evaluated under the Space-Based Infrared Review panel. The review should provide a detailed assessment of the Heritage sensors ability to meet the current and objective tactical warning and attack assessment (TW/AA) operational requirements; the Heritage sensor modifications required and the associated technical risk; the cost of the associated Heritage sensor modification efforts; the estimated cost of an early warning satellite based on the Heritage sensor; and the merits, alternate approaches, and schedule impacts of conducting a demonstration or prototyping effort for the modified Heritage sensor. The conferees believe that this review should be conducted by a party without excessive linkages to the Air Force; the Intelligence community; the Alert, Locate and Report Missiles (ALARM) program; or the Brilliant Eyes program. The conferees direct all elements of the DoD to cooperate fully and provide all information necessary to conduct this review. The conferees further direct that this review be completed by February 15, 1995.

Appn Conf, p. 128

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TITLE: ADVANCED SPACE BASED TW/AA (DEM VAL) APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$150,000	150,000	119,000	169,000	0	0	0

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SASC:

Missile warning and tracking

The National Defense Authorization Act for Fiscal Year 1994 combined the requests for several ballistic missile warning and tracking programs together, reduced the requested amount, and directed the Secretary of Defense to decide which programs merited investment. The Secretary responded by limiting additional defense support program (DSP) satellite procurement to one satellite; canceling the follow-on early warning system (FEWS); initiating a cheaper alternative to FEWS, called the alert, locate, and report missile (ALARM) program; and reduced the scope of the Brilliant Eyes mid-course tracking program.

The committee endorses these measures, but believes that problems remain in DOD missile warning programs.

According to DOD, the FEWS program was terminated because it was too expensive and the requirements for the system were excessive. However, the life-cycle cost for ALARM is estimated to be almost identical to that of the FEWS program. The explanation provided by the Air Force is that the ALARM system initially will be less capable than FEWS, but will be improved in stages to achieve virtually the same set of performance specifications that were established for the FEWS system. The initial design of ALARM will be capable of detecting dim, short-burn missiles over enough area at a given time to support the two major regional contingency strategy. The objective design, in contrast, will be able to provide such capabilities worldwide. The difference in life-cycle costs between the initial and objective systems is estimated to be on the order of three-to-four billion dollars. The missions that the objective system will be able to perform that the initial design would not are technical intelligence collection and missile proliferation monitoring.

Technical intelligence collection has previously been the responsibility of the national foreign intelligence program (NFIP). This mission was transferred to the Air Force when requirements were established for the FEWS system. The Secretary of Defense and the Director of Central Intelligence (DCI) must consider whether this mission is worth billions of dollars, whether cheaper alternatives are available to satisfy the requirement, and whether the DCI or the Secretary of Defense should be responsible for the mission. The committee directs the Secretary and the DCI to resolve this issue and to incorporate the results in the fiscal years 1996-2001 Future Years Defense Program and fiscal year 1996 budget request.

Senior Department of Defense officials have testified that there is an acceptably small risk of a gap in missile warning coverage of a major regional contingency during the transition from DSP to the ALARM system. However, this assessment does not address shortfalls in strategic missile warning and technical intelligence collection, and assumes the availability of classified capabilities for regional contingencies that are not funded. The shortfall could be in excess of $300.0 million.

Meanwhile, DOD intends to spend over $500 million on a Brilliant Eyes (BE) demonstration even though there are no plans to deploy any national missile defense capabilities, and no plans to incorporate BE into theater missile defenses. DOD also intends to spend $150.0 million on a technology demonstration for ALARM that at best could affect the design of the first block change for ALARM, which is not scheduled for launch for another 15 years. The issue is whether these funds would be better spent fixing the serious funding shortfalls outlined above or accelerating the ALARM program.

In addition, the committee notes that Congress transferred the Brilliant Eyes program to the Air Force last year because of concerns that the Ballistic Missile Defense Organization (BMDO) and the Air Force were not taking the necessary steps to ensure that BE and the next-generation missile warning satellites were integrated and complementary. The Department of Defense, however, now proposes transferring BE back to BMDO without addressing the problem identified by Congress.

Accordingly, the committee recommends:

(1) reducing the amount requested for ALARM by $31.0 million, which is the amount requested for the technology demonstration program outlined above;

(2) transferring the BE program to the Air Force, placing the funds in PE 603441F, and giving the Secretary of Defense the latitude to use the funds to correct technical intelligence and warning shortfalls, to accelerate ALARM, to continue a BE program geared to theater defense, or to continue DSP procurement; and

(3) requiring the Secretary of Defense to report to the congressional defense and intelligence committees by April 1, 1995, on his views on all the issues raised in this report.

SASC, p. 87-89

AUTH CONF:

Missile early warning and tracking

The budget request contained:

(1) $150.0 million for development of the alert, locate, and report missiles (ALARM) early warning satellite, the follow-on to the defense support program (DSP) system. Of this amount, $31.0 million was requested for a technology demonstration program;

(2) $120.0 million within the Ballistic Missile Defense Organization for development and demonstration of Brilliant Eyes (BE); and

(3) $76.4 million for further development of DSP, including new ground processing capabilities.

The Senate bill would deny funding for the ALARM technology demonstration. It would also transfer the BE program to the Air Force, and allow the Secretary of Defense to use the funds to correct technical intelligence and warning shortfalls, accelerate ALARM, continue a BE program focused on theater defense, or continue DSP procurement.

The House amendment contained a provision (sec. 141) that would provide $300.0 million for ballistic missile early warning risk mitigation. These funds could be used for continued procurement of defense support program satellite number 24, accelerated development of ALARM leading to launch of the first satellite no later than the first quarter of 2002, development of BE, acquisition of three additional interim theater missile sensors, or a combination of the above. The House amendment also would reduce the requested amount for DSP RDT&E by $20.0 million.

The House recedes.

The Department of Defense has undertaken a comprehensive review of all space-based infrared (SBIR) requirements and programs for ballistic missile detection, tracking, technical intelligence, and other ancillary missions. The conferees applaud this effort, but not that Congress has directed such an assessment every year for at least the last three years. The conferees also not that this new review follows a major assessment conducted just a year ago in the Bottom-Up Review (BUR). The BUR resulted in decisions to terminate one program, develop a DSP follow-on, and initiate another (ALARM); to terminate further procurement of DSP; and to scale back the BE program substantially.

The BUR process completely upended the fiscal year 1994 budget request, but Congress patiently provided wide latitude to the Secretary of Defense to allocate funds once the BUR was completed. Now Congress is once again in the same position. The conferees intend to provide DOD latitude in this critical area in fiscal year 1995, but their patience is wearing thin. Moreover, if the Department makes major changes in the current program, the planned deployment date of a follow-on capability could be jeopardized.

The conferees deny the $31.0 million requested for the ALARM technology demonstration program. The conferees agree to apply these funds, and an additional $19.0 million, to accelerate the advanced tactical warning and attack assessment system by two years. The conferees agree to authorize the requested amount for BE, but shift the program to the defense agencies, RDT&E account. The Secretary of Defense should determine the appropriate management organization for this program based on the ongoing review and notify the congressional defense committees within 45 days after the date of enactment of this act.

In addition, in light of the ongoing review of SBIR programs within the Department, and the potential for changes to existing programs as a result of the study, the conferees direct the Secretary to promptly report to the congressional defense committees on the results of the study, together with any

recommended programmatic, budgetary, and schedule changes. Should the Secretary determine that modifications to existing programs are necessary, the conferees would consider a reprogramming request to implement any such changes.

Auth Conf, p. 644-646

HAC:

TRANSFER OF MAJOR SPACE PROGRAMS

As discussed elsewhere in the report under Space and Related Programs, a total of $1,096,150,000 has been transferred from RDT&E, Air Force to RDT&E, Defense-Wide. Details of the transfers are as follows:

Program	P.E.	Amount of Transfer
Advanced Spacecraft Technology	0603401F	$24,200,000
Space System Environment Interactions Tech.	0603410F	4,200,000
Space Test Program	0603402F	62,064,000
Advanced MILSATCOM	0603402F	22,095,000
DMSP Block 6	0603434F	7,601,000
Satellite Systems Survivability	0603438F	8,531,000
Advanced Space Based TW/AA	0603441F	150,000,000
MILSTAR LDR/MDR SatCom	0604479F	607,248,000
UHF Satellite Communications	0303606F	20,879,000
DSCS	0303110F	30,876,000
Medium Launch Vehicles	0305119F	21,042,000
Upper Stage Space Vehicles	0305138F	3,663,000
Titan Space Launch Vehicles	0305144F	4,000,000
DMSP	0305160F	21,135,000
NAVSTAR GPS (Space & Control Sys)	0305165F	51,125,000
Defense Support Program	0305911F	47,351,000
NUDET Detection System	0305913F	10,140,000

HAC, p. 233-234

ADVANCED SPACE-BASED TW/AA/ALARM

As discussed elsewhere in this report under Space and Related Programs, the Committee has provided a total of $330,000,000, an increase of $180,000,000, in RDT&E, Defense-Wide for accelerated development of the ALARM program.

HAC, p. 253 (Defense-wide RDT&E)

SAC:

BALLISTIC MISSILE EARLY WARNING SATELLITE PROGRAMS

The Committee is concerned about the continuing lack of firm direction in the Department of Defense's [DOD] efforts to upgrade and modernize the Nation's ballistic missile early warning satellite capability. To date, the Pentagon has spent billions of dollars on several different programs, yet the operational user is not one step closer to obtaining a new capability. The matter has been reviewed by multiple panels, advisory boards, and Pentagon committees. Yet, even now, a new Defense Department group has been formed to once again evaluate options and chart a course to develop a new family of early warning satellites.

Based on DOD's experience with the Defense Support Program [DSP], a geosynchronous satellite network has often been the only approach considered for enhancing our early warning capability. Such a network makes it possible for a relatively small number of satellites to observe virtually the entire Earth. The geostationary orbit avoids pointing, tracking, and motion compensation problems inherent in a low-Earth-orbit satellite constellation. However, these satellites are large and expensive, with associated high launch costs.

With each passing year, it becomes more clear that DOD can only afford one early warning satellite system. However, the Defense Department continues to pursue three related projects to develop this new systems: (1) ALARM; (2) ALARM technology demonstrations; and (3) brilliant eyes [BE]. The Alert Locate and Report [ALARM] Program reflects a significant compromise in the capabilities planned for the follow-on early warning system [FEWS], primarily because of cost.

The new study specifically includes an evaluation of the brilliant eyes [BE] distributed satellite system. To some extent, many of the past reviews were flawed because they failed to consider BE or some derivative of brilliant eyes.

A low-Earth-orbit satellite can track missiles with greater precision simply because the satellite and missile are much closer. According to DOD studies, it may be possible to modify brilliant eyes satellites to perform both the early warning and the missile tracking functions necessary to support a national missile defense. While a brilliant eyes-like satellite could be much cheaper, many more of these satellites would be required compared to a DSP-like constellation. Nevertheless, the total system life cycle cost of BE may still be less expensive. BE also raises Anti-Ballistic Missile [ABM] Treaty compliance questions which must be resolved later in its development cycle.

In the end, DOD has been concerned about the risk of a relying on a network of low-Earth-orbit warning satellites. Even the recent DOD space launch study largely neglected the potential effects on the space launch infrastructure of emerging distributed satellite network concepts. Nonetheless, the commercial world appears to be ready to move forward as private funds are being devoted to several new satellite communications networks relying on distributed low-Earth-orbit satellites.

Having considered these and many other aspects of this debate, the Committee has developed the following recommendation which adopt portions of the Pentagon's current early warning strategy while making adjustments that would benefit the Defense Department and the Nation.

As part of the ALARM Program, DOD proposed a technology demonstration effort to fly one or two experiments which would allow evaluation of new sensor technologies. However, the program is underfunded to demonstrate more than one new technology, and its schedules prevent the demonstration experiments from realistically supporting the ALARM Program. Drawing on DOD's concept, the Committee proposes an ALARM Demonstration/Validation Prototyping Program which would lead to a fly-off between competing concepts. The Committee directs DOD to fly two individual satellites, or a similar number of prototype, geosynchronous early warning sensors, and associated hardware aboard existing satellites. In parallel, the Committee directs that the Brilliant Eyes Program be accelerated moderately to permit prototype satellite flight tests on the same schedule as the revised ALARM Dem/Val Program.

It is the expectation of the Committee that these experiments be launched around the fourth quarter of fiscal year 1997, roughly the same schedules previously planned for the technology demonstrations supporting ALARM. Under this plan, DOD could make an informed decision based on the results of all of these prototype system tests. The Defense Department should then be able to proceed with a lower risk Engineering and Manufacturing Development [EMD] Program, with the first satellite being delivered in time to avoid further DSP purchases beyond satellite 23.

To achieve these goals, the Committee has provided $62,500,000 for the revised ALARM Demonstration/Validation Prototyping Program and $150,000,000 for the Brilliant Eyes Program. The Committee directs that no more than one-half of these funds may be obligated prior to the Congress receiving a plan outlining the detailed implementation of this Enhanced Competition Development Program. Furthermore, the Committee directs that the full amount appropriated for the ALARM Program may not be obligated until the full amount of funds are obligated for the brilliant eyes prototyping effort. The Committee has provided no funds for duplicative ALARM generic technology development efforts.

Summary table

[In thousands of dollars]

	Committee recommendation
Advanced space-based TW/AA (dem val)	.....
Brilliant eyes	.....
ALARM dem/val prototyping	$222,50006
Technology demos/quick reaction capability [QRC]	(62,000)
Brilliant eyes	(150,000)
System Program Office/FFRDC Support	(10,500)

SAC, p. 231-233

APPN CONF:

SPACE-BASED INFRARED ARCHITECTURE

The conferees also direct the Department of Defense to conduct an independent assessment of areas evaluated under the Space-Based Infrared Review panel. The review should provide a detailed assessment of the Heritage sensors ability to meet the current and objective tactical warning and attack assessment (TW/AA) operational requirements; the Heritage sensor modifications required and the associated technical risk; the cost of the associated Heritage sensor modification efforts; the estimated cost of an early warning satellite based on the Heritage sensor; and the merits, alternate approaches, and schedule impacts of conducting a demonstration or prototyping effort for the modified Heritage sensor. The conferees believe that this review should be conducted by a party without excessive linkages to the Air Force; the Intelligence community; the Alert, Locate and Report Missiles (ALARM) program; or the Brilliant Eyes program. The conferees direct all elements of the DoD to cooperate fully and provide all information necessary to conduct this review. The conferees further direct that this review be completed by February 15, 1995.

Appn Conf, p. 128

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TITLE: JOINT ADVANCED STRIKE TECHNOLOGY PROGRAM APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$101,354	101,354	101,354	101,354	101,354	101,354	86,354

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HASC:

Tactical aircraft modernization programs

The budget request included $100.037 million and $101.354 million, for the Navy and Air Force Joint Advance Strike Technology (JAST) programs, respectively. The objective of the JAST program is to develop an affordable next generation strike fighter aircraft that would optimize commonality among the military services through design modularity and common components. The fiscal year 1995 request would fund the following technology areas: air vehicle; manufacturing and producibility; propulsion; avionics; weapons integration; supportability; strategy to technology analysis; and strike weapons system concept studies.

The budget request also includes $8.721 million for the Navy and $20.014 million for the Advanced Research Projects Agency (ARPA) for Phase II of a four phase program for the Advanced Short Takeoff and Vertical Landing (ASTOVL)/Conventional Takeoff and Landing (CTOL) demonstrator aircraft. The program's objective is to investigate the technical feasibility of designing an affordable aircraft, using modular design and common engine, airframe, and avionics. Fiscal year 1995 funds would be used for wind tunnel and propulsion system tests of competing concepts. No funds are identified in the budget for Phases III and IV.

The committee commends the Department's efforts to achieve a common, affordable multi-service solution to satisfy future aircraft requirements. The committee, however, has the following concerns:

(1) No agreed upon multi-service requirement exists, yet the Department has requested over $230 million for the next fiscal year for a variety of disparate tasks that include conceptual, studies and analysis, modeling and simulation ($111.612 million), wind tunnel and propulsion system tests. The Department's goal is to enter engineering and manufacturing development at the turn of the century;

(2) JAST has similar objectives to ASTOVL/CTOL, yet each exists as separate programs;

(3) The Navy and Air Force JAST scope of work replicates a significant amount of technology development within individual service program elements. It appears that the Navy and Air Force JAST budgets, and their other related technology budgets, were developed independently. For example, the Navy and Air Force JAST request for a ground demonstrator engine is $32.769 million. At the same time the Navy and Air Force budget request included at least $85 million, level of effort funding, for exploratory and advanced development in turbine engine programs. This does not include the funding for ASTOVL, the majority of which is for developmental engine funding. Similar overlap and duplication exist in the scope of work described for JAST and other military service technology efforts for structures, materials and processes, subsystems and power, avionics, weapons integration, and supportability.

The committee supports the potential of the JAST office to provide the multi-service focus required to manage the acquisition of the next generation tactical aircraft. Therefore, the committee believes that ASTOVL/CTOL must be an integral part of the JAST effort, with funding provided by JAST for ASTOVL/CTOL through Phase II, and execution remaining with ARPA. The committee also believes there must be closer coordination and integration of military service technology efforts with the JAST office. This will provide the necessary focus for JAST development.

Accordingly, the committee recommends the following adjustments to the requested levels to achieve central management of JAST and ASTOVL/CTOL and to minimize redundancy and unnecessary duplication between JAST and other JAST-related technology efforts:

[In millions of dollars]

	Request	Change	Recommendations
ARPAASTOVL/CTOL 603226E/EE24	$20.104	($20.014)	0
Navy:			
ASTOVL/CTOL 603217N/R2152	8.721	(8.721)	0
Propulsion 603217N/W2014	8.354	(5,000)	$3.354
JAST 603800N	100.037	n/c	100.037
Air Force:			
Propulsion 603202F	25.636	(8.000)	17.636
603216F/P681B	28.991	(10.000)	18.991
JAST 603800f	101.354	n/c	101.354

Finally, the committee expects the fiscal year 1996 request to be accompanied by a complete joint requirements and cost and operational effectiveness analysis. The document should address, at a minimum, the two cockpit versus one cockpit issue, and the two engine versus single engine issue.

HASC, p. 79-81

SASC:
Tactical aviation

Two years ago, the committee devoted substantial attention to the Department's modernization plans for tactical aviation. The committee faulted the Department for three failings. First, the committee concluded that there was virtually no inter-Service coordination of tactical aviation modernization plans. Each of the Services was pursuing its own priorities, and no one in the Defense Department was rationalizing those priorities on a Department-wide basis. Second, the committee noted that no overall acquisition strategy guided the modernization programs. One program would have a flying prototype phase and another would press directly into engineering development after a paper competition. Third, the committee found that none of the modernization plans flowed from a rigorous assessment of roles and missions.

Last spring the Department provided a non-responsive, pro-forma response to the committee's concerns, but deferred all questions on tactical aviation modernization to the Bottom-Up Review. Unfortunately, the Bottom-Up Review has now produced a plan that has many features in common with the previous plan. The Air Force and Navy abandoned their commitment to the AFX attack aircraft in order to place highest priority on the F-22 and the F-18E/F. They abandoned their only joint aircraft program-a long range attack fighter, which the committee believes should have the highest priority. The Navy does not intend to operate the F-22, and the Air Force has no intention to operate the F-18E/F.

One potentially bright spot in the Bottom-Up Review is the joint advanced strike technology program (JASTP). While the committee remains concerned about where JASTP is headed, the committee believes that the Department has been able to bring much more focus to the program than was apparent last year when the Department briefed the concept to Congress.

However, this is not the first time that the Department has said, "The next aircraft program will be a joint one," only later to have the Services adopt diverging programs. The committee concludes that the only affordable long-term modernization plan must maximize commonality, where the Air Force and the Navy procure and operate the same aircraft. The committee also believes that both the Air Force and the Navy could face the same threats and operate side by side, necessitating a common technological approach. The committee will carefully monitor the JASTP and potential subsequent efforts to ensure that Service programs remain converged.

In the shorter term, the committee is disappointed that the Department has chosen to ignore a requirement to inform the Congress on the potential for merging Navy requirements into the F-22 program.

Last year, the committee noted that there are two potential approaches to a joint program. One approach would be to establish a Navy modification program running parallel to the Air Force's F-22 program. This approach would provide maximum component commonality. The second approach would suspend further development of the F-22 and develop a carrier-suitable F-22 that could be purchased by both Services. This approach would provide complete commonality, though it would disrupt the current F-22 program. The committee directed the Under Secretary of Defense for Acquisition to evaluate the second approach to determine its advantages and disadvantages. The committee directed the Under Secretary to provide this report to the congressional defense committees by December 31, 1993.

The Department has provided no report. The committee finds this response unacceptable. As a result, the committee recommends the following actions:

(1) The Department shall obligate no more than 80 percent of fiscal year 1995 funds available for F-22 and F/A-18 E/F development until the Under Secretary of Defense for Acquisition and Technology provides the report required last year.

(2) The Department of Defense shall establish a joint Air Force, Navy, and Office of the Secretary of Defense (OSD) program office to design a Navy variant of the F-22. The committee recommends $10.0 million to fund the first year of this effort.

SASC, p. 82 (Navy RDT&E)

AUTH CONF:
Air systems and advanced technology

The budget request included $30.293 million for air systems and advanced technology in PE 63217N.

The Senate bill would provide the requested amount.

The House amendment would reduce the program element by $8.721 million for the advanced short takeoff and vertical landing (ASTOVL) technology demonstrator program and $5.0 million for the integrated high performance turbine engine technology (IHPTET) program, transferring the management and funding of these activities to the joint advanced strike technology (JAST) program (PE 63800N). The House amendment would also provide an additional $4.5 million for the advanced anti-radiation guided missile (AARGM) program in PE 63217N, as well as $3.0 million in PE 63203F.

The conferees agree to transfer $8.721 million to JAST, restore $5.0 million for IHPTET, and provide an additional $7.5 million for AARGM for the purposes described in the House report (H. Rept. 103-499).

Auth Conf, p. 578 (Navy)

Joint advanced strike technology program

The budget request included $100.037 million in PE 63800N and $101.354 million in PE 63800F for the Navy and Air Force joint advanced strike technology (JAST) program. The budget request also included $8.721 million in PE 63271N and $20.014 million in PE 63226E for the Navy and ARPA, respectively, to support the advanced short takeoff and vertical landing (ASTOVL)/conventional takeoff and landing (CTOL) demonstrator aircraft.

The Senate bill would authorize the requested amounts, and provide an additional $10.2 million for the ASTOVL direct lift propulsion concept.

The House amendment would:
(1) delete the funding for the Navy and ARPA ASTOVL;
(2) transfer the management of the ASTOVL program to the JAST program office;
(3) direct that the ASTOVL phase II program be funded from the funds provided to JAST; and
(4) direct the JAST program to continue to manage the ASTOVL phase II program through ARPA.

The House amendment would also reduce several propulsion programs (PE 63217N, PE 63202F, and PE 63216F would be reduced by $5.0 million, $8.0 million, and $10.0 million, respectively), because of perceived redundancies in propulsion research and development between these programs and the JAST program.

The conferees agree that:

(1) JAST and ASTOVL program management should be consolidated, with execution of the ASTOVL phase II program continuing to be performed by ARPA;
(2) Navy and ARPA ASTOVL funding should be shifted to the Navy JAST Program (PE 63800N); and
(3) the separate propulsion programs should be approved as requested.

The conferees would not object if the JAST program office were to determine that additional ASTOVL competitive propulsion concepts, such as direct lift and lift plus lift, should be funded.

Finally, the conferees understand that the Navy Department may be evaluating the potential of existing Air Force and Navy aircraft to meet its immediate long-range, stealthy, strike aircraft requirement. The conferees expect to be kept informed in a timely manner by all the services of such studies and analyses, and how such analyses may affect JAST requirements. This information should be provided to the congressional defense committees no later than the submission of the fiscal year 1996 budget request.

Auth Conf, p. 584-5

HAC:

TACTICAL AIRCRAFT
TACTICAL AIRCRAFT MODERNIZATION

The Committee is concerned that there has been no comprehensive assessment, including the Bottom Up Review, of Air Force interdiction and multi-role aircraft which serve as a complement to the long range heavy bomber fleet. While robust modernization plans for the bomber and air superiority fleets proceed, the Department of Defense has yet to present a viable strategy to address future modernization requirements for its strike and multi-role aircraft forces. Accordingly the

Committee directs the Secretary of Defense to provide a report on its modernization plans for the strike and multi-role tactical air force structure (i.e. F-111, F-117, F-15E, and F-16) by May 1, 1995. The report should address at a minimum:

1. The problems of near term F-16C/D and F-15E attrition shortfalls.
2. Modification plans to modernize the existing strike and multi-role fleets to maximize their combat effectiveness.
3. Plans to preserve the national capability to produce strike and multi-role fighter aircraft.
4. Alternatives if the JAST program fails to yield an affordable multi-role platform.

HAC, p. 175

JOINT ADVANCED STRIKE TECHNOLOGY PROGRAM

The Navy requested $100,037,000 and the Air Force requested $101,354,000 for the Joint Advanced Strike Technology Program (JAST), both of which the Committee approves in full. The Committee agrees with the observations of and recommendations by the House Armed Services Committee to incorporate the Advanced Research Projects Agency's ASTOVL program into JAST, and to reduce the following programs:

Navy Air systems and weapons advanced technology	-14,221
Air Force Aerospace propulsion subsystems integration	-8,000
Air Force Aerospace propulsion and power technology	-10,000
ARPA Experimental evaluation of major innovative technologies	-20,014
	-52,235

The Committee directs that within the total of $201,391,000 recommended for JAST, $52,235,000 is only for the ASTOVL program of which $10,000,000 is only to continue the ASTOVL direct lift demonstration.

HAC, p. 200

SAC:

JOINT ADVANCED STRIKE TECHNOLOGY [JAST] PROGRAM

The Committee believes that there is duplication, excessive redundancy, and insufficient coordination among the many projects and program elements which contain activities to develop advanced and more affordable capabilities for current and future Air Force and Navy tactical combat aircraft. The Committee believes that the JAST Program has established a management and project evaluation structure which permits: (1) establishing priorities among all these efforts; (2) coordinating them to avoid duplication; and (3) focussing them to ensure that usable products are acquired.

The Committee concludes that the JAST Program is the appropriate mechanism for managing and guiding the Department's midterm and longer-term efforts to develop both more affordable and more advanced tactical aircraft technologies. Accordingly, the Committee recommends several modifications to the Air Force and Navy budget requests to eliminate funds for JAST-like projects outside the $201,391,000 requested by the Defense Department and approved by the Committee for JAST for fiscal year 1995. The Committee also recommends an increase of $40,000,000 to that amount for fiscal year 1995. The Committee regards the resulting large amount-$241,391,000-as more than adequate to fund the highest priority/highest payoff projects during fiscal year 1995. The Committee also notes that the $2,374,000,000 now programmed for JAST in fiscal years 1995-99 is a large enough amount for continuing such activities.

The JAST Program Office is directed to give high priority consideration to funding these projects originally outside its program which most contribute to achieving the goals of developing more affordable, more capable technologies which meet the most important military requirements.

The Committee also is convinced that the JAST Program is the most effective mechanism by which to manage an ASTOVL project. The JAST management should be more able to ensure that deliverables from the project are best configured to permit a decision whether an ASTOVL aircraft should be funded as one of the JAST Program's two flying prototypes.

To reflect these conclusions, the Committee recommends the following adjustments:

[In thousands of dollars]

Navy:	
Air systems and weapons advanced technology:	
ASTOVL	-8,721
Moving spherical convergent flap nozzle	-5,000
Advanced technology transition: Intelligent damage adaptive flight control	-4,320
Air Force:	
Aerospace vehicle technology:	
Mission reconfigurable cockpit	-2,671
Subsystem integration technology [SUIT]	-4,000
Subsystem integration/vehicle management [SIVMAT]	-300
Fighter lift and control	-350
Aerospace structures:	
Advanced metallic structures	-6,396
Advanced composite structures	-5,604
Aerospace propulsion and power technology: Aerospace power technology/more electric aircraft	-3,327
Advanced fighter technology integration:	
Within visual range VISTA system upgrade	-5,100
Innovative aero controls	-4,000
Advanced avionics integration:	
Avionics integration technology	-8,187
Modular avionics subsystems technology	-7,629
Office of the Secretary of Defense:	
Manufacturing technology/manufacturing 2005:	
Military products from commercial lines (avionics)	-9,850
Manufacturing technology for multifunctional radomes	-2,150
Design/manufacture of low cost engines	-3,000
Advanced Research Projects Agency [ARPA]:	
Experimental evaluation of major innovative technologies [EEMIT]:	

STOVL	-20,014
GGP phase II	-7,500

The Committee further directs that the JAST Program Office consider funding several Navy core avionics tasks in avionics architecture, processors, interconnects, packaging, and advanced situational awareness and crew work reduction technology for a total of $6,900,000. The House allowance added $10,000,000 to the Navy's Air Systems and Weapons Advanced Technology Program element for emphasis on accelerating the advanced aircrew situational awareness system and other projects. The House allowance also reduced the same program element by $14,221,000 to address the JAST-related technologies in this program element.

Other program elements reduced by the House for JAST-related proposes are: Air Force aerospace propulsion subsystems integration, -$8,000,000; Air Force aerospace propulsion and power technology, -$10,000,000; and ARPA EEMIT ASTOVL, $20,014,000.

The Committee also directs that no funds from any Defense Department program element may be obligated or expended for the Airborne Shared Aperture Program, which was denied by the Congress during the fiscal year 1994 budget review, without prior consultation with, and notification to, the Committee.

The Committee directs that the restriction placed on the use of fiscal year 1994 funds for the advanced lightweight aircraft fuselage structure [ALAFS] project shall no longer apply.

SAC, p. 229-231

Air systems and weapons advanced technology.-The Committee approves $7,881,000, a reduction of $22,412,000 for this program element. The Committee denies two new start projects: (1) $6,000,000 for strapdown seeker technology for guided projectiles; and (2) $2,691,000 for advanced airframe/structures for advanced short-range missiles.

The first project is premature until the Army and Navy reconcile their ongoing separate activities in this area, eliminate duplication, and establish a joint precision guided munitions program for advanced projectiles. The second project is unnecessary since the Navy and Air Force already have begun a costly development program for a new AIM-9X advanced short range air-to-air missile. The baseline airframes for AIM-9X already are established and developed.

The Committee's other modifications to this program element are related to the Joint Advanced Strike Technology [JAST] Program and are discussed in the "Principal committee observations" section of this report.

The House allowance recommended $33,572,000 for this program element.

SAC, p. 255 (Navy)

APPN CONF:

JOINT ADVANCED STRIKE TECHNOLOGY (JAST)

The conferees agree to provide $186,391,000, of which $86,354,000 is in the Air Force appropriation and $100,037,000 is in the Navy appropriation. Within the total program amount, $38,735,000 is only for the ASTOVL program, and within that amount $10,000,000 is only for the direct lift project.

Appn Conf, p. 124

TITLE: ICBM - DEM/VAL APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:						43,206	43,206

APPN CONF:

ICBM MODERNIZATION (DEMONSTRATION/VALIDATION)

The conferees agree that the expenditure of the funds approved for the Reentry System Launch Program (RSLP) project shall be limited to suborbital purposes. It is the conferees' expectation that these funds shall be utilized in a manner consistent with the National Space Transportation Policy (PDO/NSTC-4) of August 5, 1994.

Appn Conf, p. 124

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TITLE: NUCLEAR WEAPONS SUPPORT APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$5,637	3,637	5,637	5,637	3,637	5,637	5,637

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HAC:

COMMITTEE RECOMMENDATIONS
AUTHORIZATION CHANGES

The Committee recommends the following changes in accordance with authorization action:

[In thousands of dollars]

	Request	HASC	HAC	Change
Command, Control and Communications Exploratory Development	$95,444	$85,444	$85,444	-$10,000
Nuclear Weapons Support	5,637	3,637	3,637	-2,000
C-17	221,454	105,154	105,154	-116,300
Systems Survivability (Nuclear Effects)	2,786	0	0	-2,786
Submunitions	26,680	12,680	12,680	-14,000
MEECN	40,795	35,795	35,795	-5,000
Information Systems Security Program	10,293	11,793	11,793	+1,500

HAC, p. 233

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TITLE: C-17 PROGRAM APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$221,454	105,154	221,454	221,454	105,154	210,154	190,154

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HAC:

STREAMLINING THE ACQUISITION PROCESS

The Committee understands that the Army has adopted an innovative new approach to acquisition. The Army stated at its Research, Development, Test and Evaluation hearing this year that "acquisition programs take too long and the cost of inefficiencies in the acquisition system is a price we can no longer afford to pay". The Army has decided to streamline the acquisition process by emphasizing concurrent development and production, early integration of test and evaluation, and extensive early simulation. The Army also plans to obtain commercial products where possible, use commercial specifications and standards, and eliminate paperwork and reports. The Army provides two examples of programs on which the streamlined acquisition process is being implemented: the Comanche helicopter and the Advanced Field Artillery System (AFAS) and the companion Future Armored Resupply Vehicle (FARV).

The Committee agrees with the Army about the need to shorten and improve the acquisition process. However, the Army's effort to streamline the acquisition process may be premature. OSD is supportive of the acquisition reform legislation which Congress is currently considering, but has not yet passed. Until such legislation is passed, the Committee believes the Army should adhere to existing acquisition practices.

Furthermore, other services have attempted to incorporate elements of the Army's acquisition improvement in their acquisitions, frequently with great detriment to the program. For example, the B-2 Bomber, the C-17 aircraft, and the Tri-Service Standoff Attack Missile are all examples of acquisitions that used concurrent development and production. All three programs have experienced significant cost growth, schedule slips, or both. A more recent example is the Clementine program, a joint NASA/DOD effort that launched a sensor-laden satellite after only 2 years and at a cost of only $80 million. The satellite initially worked well and was touted as an example of the benefits of streamlined acquisition. Recently, however, the satellite has experienced technical problems and has spun off course. Clearly, streamlined acquisition can lead to some of the problems it attempts to prevent.

The Committee is also concerned that the Army is applying its new acquisition approach to some of its most significant research and development efforts, instead of first testing it out on less critical programs. The Army has selected the Comanche and the AFAS/FARV, two of the Army's most important programs, to streamline first. The Committee is sympathetic to the Army's need to control costs now in order to fully fund acquisitions in the future, but is concerned about the possible detrimental effects of streamlining these important programs.

Finally, the Committee expresses these concerns for all the services and any attempts they are making on streamlining the acquisition process before acquisition reform legislation has been enacted.

Therefore, the Committee requests that the services notify the Committee of each exception to DOD Directives 5000.1, 5000.2, and 5000.2-M for any of their research and development programs, along with a justification comparing the acquisition as it would have been under the above DOD Directives to the proposed acquisition process, including: schedule, acquisition milestones, number of test articles and tests, and anticipated cost savings. The services should continue such notification until the acquisition reform initiative is complete and all implementing legislation is enacted.

HAC, p. 202-203

COMMITTEE RECOMMENDATIONS
AUTHORIZATION CHANGES

The Committee recommends the following changes in accordance with authorization action:

[In thousands of dollars]

	Request	HASC	HAC	Change
Command, Control and Communications Exploratory Development	$95,444	$85,444	$85,444	-$10,000
Nuclear Weapons Support	5,637	3,637	3,637	-2,000
C-17	221,454	105,154	105,154	-116,300
Systems Survivability (Nuclear Effects)	2,786	0	0	-2,786
Submunitions	26,680	12,680	12,680	-14,000
MEECN	40,795	35,795	35,795	-5,000
Information Systems Security Program	10,293	11,793	11,793	+1,500

HAC, p. 233

SAC:

C-17 Program.-The Committee recommends $210,154,000, a reduction of $11,300,000 to the budget request for this program element, which supports continued RDT&E on the Air Force's advanced cargo aircraft. The action deletes $6,800,000 due to the carryover into fiscal year 1995 of unused current fiscal year engineering change order funds. Another $4,500,000 is unneeded since it was budgeted for legal support for the program office if Congress rejected the claims settlement package crafted by the Defense Department and the C-17 prime contractor. The Senate has approved the settlement. Full funding for the fiscal year 1995 RDT&E share of the settlement is included in the Committee's recommendation.

The House allowance deleted $116,300,000 from this program element.

SAC, p. 286

APPN CONF:

C-17

The conferees agree to provide $190,154,000 for C-17, a reduction of $31,300,000 to the budget request. The conferees direct that no research and development funds may be obligated to expand the C-17 flight test program beyond the number of presently programmed flight test months unless the prior approval of the Appropriations Committees is obtained by the Department of the Air Force.

Appn Conf, p. 124

TITLE: SPECIALIZED UNDERGRAD PILOT TRAINING (SUPT) APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$41,633	41,633	41,633	37,433	20,000	37,433	37,433

HAC:

ENGINEERING AND MANUFACTURING DEVELOPMENT
SPECIALIZED UNDERGRADUATE PILOT TRAINING

The Air Force requested $41,633,000 for specialized undergraduate pilot training. The Committee recommends $20,000,000, a reduction of $21,633,000 to the Joint Primary Aircraft Training System (JPATS). The Air Force's plan to spend $285,000,000 on research and development for a program which started as an "off-the-shelf" procurement is not affordable in a declining budget environment. The Committee believes that the fiscal year 1995 RDT&E request for JPATS is overstated since exact requirements will not be known until the contract source selection has been made in 1995.

HAC, p. 236

SAC:

Specialized undergraduate pilot training.-This program element supports acquisition of the Air Force's main trainer aircraft-the enhanced flight screener, the T-1A, and the joint primary aircraft training system [JPATS]. The Committee provides $37,433,000, a reduction of $4,200,000 to the budget request. The House allowance deleted $21,633,000 from this program element.

The Committee deletes $2,200,000 identified by the Air Force as excess to known JPATS Program funding requirements and $2,000,000 to eliminate excessive program office costs for the T-1A system.

SAC, p. 286

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TITLE: F-22 EMD APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$2,461,149	2,461,149	2,461,149	2,461,149	2,443,349	2,399,849	2,351,000

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SASC:

Tactical aviation

Two years ago, the committee devoted substantial attention to the Department's modernization plans for tactical aviation. The committee faulted the Department for three failings. First, the committee concluded that there was virtually no inter-Service coordination of tactical aviation modernization plans. Each of the Services was pursuing its own priorities, and no one in the Defense Department was rationalizing those priorities on a Department-wide basis. Second, the committee noted that no overall acquisition strategy guided the modernization programs. One program would have a flying prototype phase and another would press directly into engineering development after a paper competition. Third, the committee found that none of the modernization plans flowed from a rigorous assessment of roles and missions.

Last spring the Department provided a non-responsive, pro-forma response to the committee's concerns, but deferred all questions on tactical aviation modernization to the Bottom-Up Review. Unfortunately, the Bottom-Up Review has now produced a plan that has many features in common with the previous plan. The Air Force and Navy abandoned their commitment to the AFX attack aircraft in order to place highest priority on the F-22 and the F-18E/F. They abandoned their only joint aircraft program-a long range attack fighter, which the committee believes should have the highest priority. The Navy does not intend to operate the F-22, and the Air Force has no intention to operate the F-18E/F.

One potentially bright spot in the Bottom-Up Review is the joint advanced strike technology program (JASTP). While the committee remains concerned about where JASTP is headed, the committee believes that the Department has been able to bring much more focus to the program than was apparent last year when the Department briefed the concept to Congress.

However, this is not the first time that the Department has said, "The next aircraft program will be a joint one," only later to have the Services adopt diverging programs. The committee concludes that the only affordable long-term modernization plan must maximize commonality, where the Air Force and the Navy procure and operate the same aircraft. The committee also believes that both the Air Force and the Navy could face the same threats and operate side by side, necessitating a common technological approach. The committee will carefully monitor the JASTP and potential subsequent efforts to ensure that Service programs remain converged.

In the shorter term, the committee is disappointed that the Department has chosen to ignore a requirement to inform the Congress on the potential for merging Navy requirements into the F-22 program.

Last year, the committee noted that there are two potential approaches to a joint program. One approach would be to establish a Navy modification program running parallel to the Air Force's F-22 program. This approach would provide maximum component commonality. The second approach would suspend further development of the F-22 and develop a carrier-suitable F-22 that could be purchased by both Services. This approach would provide complete commonality, though it would disrupt the current F-22 program. The committee directed the Under Secretary of Defense for Acquisition to evaluate the second approach to determine its advantages and disadvantages. The committee directed the Under Secretary to provide this report to the congressional defense committees by December 31, 1993.

The Department has provided no report. The committee finds this response unacceptable. As a result, the committee recommends the following actions:

(1) The Department shall obligate no more than 80 percent of fiscal year 1995 funds available for F-22 and F/A-18 E/F development until the Under Secretary of Defense for Acquisition and Technology provides the report required last year.

(2) The Department of Defense shall establish a joint Air Force, Navy, and Office of the Secretary of Defense (OSD) program office to design a Navy variant of the F-22. The committee recommends $10.0 million to fund the first year of this effort.

SASC, p. 82-83 (Navy RDT&E)

Report on F-22 program

The committee wants to be fully informed about any excessive concurrency in the F-22 program, if it exists, and the risks associated with it. Accordingly, the committee directs the Department of Defense and the General Accounting Office each to assess the degree of concurrency and risk in the F-22 program, and to report to the congressional defense committees by December 31, 1994.

SASC, p. 89

F-22 live fire testing

The Department of Defense has requested a retroactive waiver to the live fire testing requirements contained in section 2366 of title 10, United States Code. Section 2366 requires realistic survivability and lethality testing of systems prior to full-rate production. Systems covered by section 2366 must be tested for vulnerability in combat by firing munitions likely to be encountered in combat at the system configured for combat.

The Secretary of Defense is permitted to waive these requirements, before a system enters full-scale engineering development, if the Secretary certifies that live fire testing would be unreasonably expensive and impractical. The Secretary has determined that such testing would be unreasonably expensive and impractical for the F-22. However, the F-22 has already entered full-scale engineering development, legislation is needed to allow the Secretary to grant a waiver. The committee recommends such a provision.

The committee understands that the Department intends to conduct robust testing and analysis of potential F-22 vulnerabilities to ensure that testing and evaluation adheres to the spirit of section 2366, and that the production configuration of the F-22 reflects the results of lessons learned from that testing.

SASC, p. 140 (Defense-wide RDT&E)

AUTH CONF:

Study regarding live-fire survivability testing of F-22 aircraft (sec. 254)

The Senate bill contained a provision (sec. 246) that would direct the Secretary of Defense to request the National Research Council of the National Academy of Sciences to study the desirability of waiving the live-fire survivability testing requirements for the F-22 aircraft.

The House amendment contained no similar provision.

The House recedes.

Auth Conf, p. 641

HAC:

F-22

The Air Force requested $2,461,149,000 for engineering and manufacturing development of the F-22 aircraft. The Committee recommends $2,443,349,000, a decrease of $17,800,000 to the amount included in the request for contract award fees. DOD policy requires budgeting for the full cost of award fees. In the case of the F-22, in the six award fee determinations which have been made for each six month period since the EMD contract was signed, the Air Force has not awarded 100 percent of the award fee to the airframe and engine contractors. Given the magnitude of the amount of award fees involved in this program, for which about $169,000,000 is requested in the fiscal year 1995 budget alone, this has resulted in a significant windfall to the F-22 program which is not necessary. The Committee recommends a reduction of $17,800,000 to adjust the fiscal year 1995 award fee request to what has been the historical level of funding. This action is not intended to in any way preclude the Air Force from awarding up to the entire possible amount allowed under the contract, but the additional funds for so doing would have to come from program management reserves that currently have no defined purpose for which the Committee has provided a full allocation.

HAC, p. 236

SAC:

F-22 engineering/manufacturing development [EMD].-This program element supports development of the Air Force's advanced tactical air superiority fighter. The Committee allocates $2,399,849,000, a reduction of $61,300,000 to the budget request and an amount which is $43,500,000 below the House allowance. These funds were identified by the Air Force as excess to known program funding requirements.

The Committee is concerned that the F-22 test and evaluation master plan [TEMP] may not include sufficient electronic combat effectiveness testing before the beginning of operational test and evaluation and the onset of production. The Committee believes that it is important for the F-22 to demonstrate its capabilities in an offensive air superiority mission against a full array of likely threats. Those threats should include a modern integrated air defense system, at a minimum on a simulated basis to the extent practicable, affordable, and cost effective.

Therefore, the Committee directs that no more than 65 percent of the funds provided for the F-22 program for fiscal year 1995 may be obligated until the Assistant Secretary of the Air Force (acquisition) submits to the congressional defense committees a report outlining the cost and schedule impacts on the F-22 program, and the technical and operational advantages and disadvantages, of revising the TEMP to include significantly more thorough electronic combat effectiveness testing before initiation of: (1) pre-production vehicle procurement; (2) commitment to low-rate initial production; and (3) commencement of initial operational test and evaluation.

This report shall include, as a baseline, thorough electronic combat testing at the real-time electromagnetic digitally controlled analyzer and processor [REDCAP] and the Air Force electronic warfare evaluation simulator [AFEWES], and an installed system test facility with a capable wide-spectrum radio frequency generator that is interfaced for real-time control from remote facilities and a high capability dome, visual system cockpit simulator.

The report also shall identify the funding required between fiscal years 1996-99 to allow the electronic combat test facilities cited in the preceding paragraph to thoroughly undertake effectiveness testing on integrated avionics suites.

SAC, p. 286-287

APPN CONF:

F-22 EMD

The conferees agree to provide $2,351,000,000 for the F-22. The conferees do not agree to the Senate recommendation to restrict obligation of funds until a report on the Test and Evaluation Master Plan is submitted to Congress. However, the conferees direct that the report mandated by the Senate be submitted by March 1, 1995.

The conferees believe that the Air Force should undertake an evaluation of new, cost effective techniques and systems to improve RCS testing technologies, utilizing ultra wide band holographic radar imaging unit systems. The conferees direct that the Air Force submit a report on this evaluation to the Committees on Appropriations by March 1, 1995.

App Conf, p. 124-125

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TITLE: B-2 ADV TECH BOMBER APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$408,543	408,543	408,543	408,543	408,543	408,543	388,543

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HAC:

STREAMLINING THE ACQUISITION PROCESS

The Committee understands that the Army has adopted an innovative new approach to acquisition. The Army stated at its Research, Development, Test and Evaluation hearing this year that "acquisition programs take too long and the cost of inefficiencies in the acquisition system is a price we can no longer afford to pay". The Army has decided to streamline the acquisition process by emphasizing concurrent development and production, early integration of test and evaluation, and extensive early simulation. The Army also plans to obtain commercial products where possible, use commercial specifications and standards, and eliminate paperwork and reports. The Army provides two examples of programs on which the streamlined acquisition process is being implemented: the Comanche helicopter and the Advanced Field Artillery System (AFAS) and the companion Future Armored Resupply Vehicle (FARV).

The Committee agrees with the Army about the need to shorten and improve the acquisition process. However, the Army's effort to streamline the acquisition process may be premature. OSD is supportive of the acquisition reform legislation which Congress is currently considering, but has not yet passed. Until such legislation is passed, the Committee believes the Army should adhere to existing acquisition practices.

Furthermore, other services have attempted to incorporate elements of the Army's acquisition improvement in their acquisitions, frequently with great detriment to the program. For example, the B-2 Bomber, the C-17 aircraft, and the Tri-Service Standoff Attack Missile are all examples of acquisitions that used concurrent development and production. All three programs have experienced significant cost growth, schedule slips, or both. A more recent example is the Clementine program, a joint NASA/DOD effort that launched a sensor-laden satellite after only 2 years and at a cost of only $80 million. The satellite initially worked well and was touted as an example of the benefits of streamlined acquisition. Recently, however, the satellite has experienced technical problems and has spun off course. Clearly, streamlined acquisition can lead to some of the problems it attempts to prevent.

The Committee is also concerned that the Army is applying its new acquisition approach to some of its most significant research and development efforts, instead of first testing it out on less critical programs. The Army has selected the Comanche and the AFAS/FARV, two of the Army's most important programs, to streamline first. The Committee is sympathetic to the Army's need to control costs now in order to fully fund acquisitions in the future, but is concerned about the possible detrimental effects of streamlining these important programs.

Finally, the Committee expresses these concerns for all the services and any attempts they are making on streamlining the acquisition process before acquisition reform legislation has been enacted.

Therefore, the Committee requests that the services notify the Committee of each exception to DOD Directives 5000.1, 5000.2, and 5000.2-M for any of their research and development programs, along with a justification comparing the acquisition as it would have been under the above DOD Directives to the proposed acquisition process, including: schedule, acquisition milestones, number of test articles and tests, and anticipated cost savings. The services should continue such notification until the acquisition reform initiative is complete and all implementing legislation is enacted.

HAC, p. 202-203

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TITLE: NIGHT/PRECISION ATTACK APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$21,672	21,672	21,672	21,672	4,672	21,672	21,672

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HAC:

NIGHT/PRECISION ATTACK

The Air Force requested $21,672,000 for night/precision attack. The Committee recommends $4,672,000, a reduction of $17,000,000 to defer funds for the LANTIRN "spot-mode" development. The Committee notes that the Air Force's budget justification predicts contract award for these funds very late in the fiscal year, and the Air Force has not yet obligated either the 1993 or 1994 funds for this project.

HAC, p. 237

TITLE: AIRCRAFT ENGINE COMP IMP PROGRAM APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$97,399	97,399	97,399	97,399	95,399	97,399	95,399

HAC:

AIRCRAFT ENGINE COMPONENT IMPROVEMENT PROGRAM

The Air Force requested $97,399,000 for engine component improvement. The Committee recommends $95,399,000, a reduction of $2,000,000. The Committee recommends that $1,000,000 requested for improvements to the B-2 engine be denied without prejudice since there are no known deficiencies in the engine at this time. The Committee also recommends that funds for improvements to the F-111 engine be reduced by $1,000,000 due to fiscal constraints.

HAC, p. 237

SAC:

Aircraft engine component improvement program.-The Committee approves the budget request of $97,399,000, an amount which is $2,000,000 above the House allowance, for this program element. Of the funds provided, the Committee directs that $2,000,000 shall be available only to permit the Air Force to explore further the military utility, logistic impacts, engine and control system modifications, costs, and other issues associated with retrofitting new, composite propellers on C-130H transport aircraft. None of the funds for C-130H composite propeller applications may be obligated until the Air Force provides the congressional defense committees with a detailed report on the issues remaining to be resolved about such a retrofit project. This report shall include a specific plan for using the funds provided to address these issues.

SAC, p. 287

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TITLE: COMPOSITE PROPELLER DEVELOPMENT APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:			8,000	4,000			

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SASC:

Composite propellers

The committee report on S. 1298 (S. Rept. 103-112) directed the Secretary of the Air Force to provide an analysis of:

(1) the costs to develop and procure all-composite propellers;

(2) the technical development challenges that must be overcome to develop a composite propeller for new or existing aircraft;

(3) the potential operating and support cost savings from using all-composite propellers; and

(4) the potential costs and benefits of backfitting existing aircraft with such a propeller.

The committee believed that there may be an opportunity to develop all-composite propellers for tactical transport aircraft to improve performance and to reduce operating and support costs. The Secretary has not yet provided this report. Informally, the committee understands that the report will recommend moving forward with such a program. The committee recommends $8.0 million to begin fabrication and component-level testing that would lead to qualification of an all-composite propeller.

SASC, p. 89

AUTH CONF:

Composite propellers

The Senate bill provided an additional $8.0 million for the Air Force to begin the fabrication and component-level testing that would lead to qualification of an all-composite propeller.

The House amendment contained no similar funding.

Significant life cycle cost savings could be achieved through the use of composite propeller technology. The conferees, therefore, recommend $4.0 million to initiate a composite propeller technology program.

The conferees express their dismay over the apparent frivolous manner in which the Secretary of the Air Force responded to the direction contained in the Senate report on the National Defense Authorization Act for Fiscal Year 1994 (S. Rept. 103-112). The report asked for an analysis of the costs and benefits of composite propellers. The report was late, and it was unresponsive. The two-page report provided very little useful analysis of the issue. Further, when Air Force personnel were requested to provide the quantitative data to support the qualitative statements made in the report, they were unable to provide any data whatsoever.

Auth Conf, p. 597

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TITLE: EW DEVELOPMENT APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$88,774	88,774	88,774	88,774	88,774	118,275	119,275

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HAC:

REPROGRAMMING LIMITATIONS

The Committee in the past has agreed in conference to a number of reprogramming limitations affecting RDT&E programs. The Director of ARPA testified to the Committee that nearly 70 percent of the ARPA budget is restricted by either project level restrictions or special interest designations. The Air Force has not moved funds between projects within its electronic warfare program without prior Congressional approval for many years, even though the issues which originally prompted the Congressional restriction on electronic warfare programs have subsided. The Committee does not believe that reprogramming restrictions beyond those described in DOD Instruction 7250.10 should be continued in perpetuity, but should be reviewed annually to assess their relevance. The Committee therefore directs that no further reprogramming limitations beyond those described in DOD Instruction 7250.10 shall apply to fiscal year 1995 and subsequent RDT&E funds unless stated in one of the Committee reports and agreed to in conference. This would not affect Congressional interest items designated in Congressional reports.

HAC, p. 199

SAC:

Electronic warfare development.-This program element funds several projects to upgrade the electronic combat capabilities of Navy aircraft and ships. The Committee recommends $104,980,000, an increase of $25,000,000 to the budget request and the same amount above the House allowance. The additional funds are provided to support Navy efforts to acquire an improved support jammer capability to replace the now-terminated, EA-6B advanced capability [ADVCAP] project.

The Committee directs that none of these funds may be obligated before the Under Secretary of Defense (acquisition and technology) submits to the congressional defense committees a detailed plan for replacing the ADVCAP project. This plan shall present a comparison of options considered, including schedules, military objectives, annual and total costs, technical risks, an independent cost assessment, and a statement of how the selected option relates to the results of the ongoing joint tactical aircraft electronic warfare study. The Department is directed to fully fund the acquisition of the selected option in the fiscal years 1996-2001 Future Years Defense Program.

This program element also contains funds for the advanced special receiver (ASR/ALR-67(V)3) project. The Committee is concerned that the Navy is proceeding with a high-risk acquisition plan for the ASR. Thus, the Under Secretary of Defense (acquisition and technology) is directed to submit to the congressional defense committees a report whether the acquisition plan should be revised. This report, which is due no later than April 1, 1995, should address whether additional rigorous testing of existing ASR systems is needed before obligation of funds for the acquisition of long-lead procurement components.

To reflect these concerns, the Committee also recommends a general provision which establishes certain certification and reporting requirements which must be met before funds may be obligated for ASR low-rate initial production.

Finally, the Committee directs that the $4,000,000 sought for the direction of arrival improvement project may only be used as justified by the Navy-for funding a joint cost and operational effectiveness analysis with the Air Force and for development of acquisition documentation, specifications, and a statement of work.

Provision of these funds does not constitute approval of initiation of this new start project, and the Navy is directed not to enter into any contracts to begin actual development during fiscal year 1995.

SAC, p. 259 (Navy)

Electronic warfare [EW] development.-This program element finances development of advanced electronic combat systems-jammers, warning receivers, et cetera-for Air Force aircraft. The Committee recommends $118,275,000, an increase of $29,501,000 to the budget request and the same amount above the House allowance.

The Committee endorses three budget adjustments.

First, $5,400,000 is added to the EF-111 System Improvement Program for increased risk reduction under the revised program plan. The funds are provided to productionize tested units and may not be used to reaccelerate the digital-based exciter [DBE] subsystem. The Committee rejected a similar acceleration last year when it questioned the overall cost growth, concurrency, and technical problems occurring in the program. The restructured program has yet to demonstrate that these problems have been resolved. For the same reasons, the Committee also approves the Air Force request to begin the risk reduction efforts by reallocating fiscal year 1994 funds. However, the Committee approves only the reallocation of $1,200,000 to productionize the tested units. The request to reallocate $3,500,000 to reaccelerate the DBE is denied.

Second, $3,440,000 is added to the advanced missile warning system [MAWS] project to restore fiscal year 1994 funds diverted from the activity to absorb a congressional general reduction made to the program element. The Committee directs that the Air Force should try to avoid developing a MAWS which is incompatible with the C-17 transport and B-1B bomber.

Third, $20,661,000 is added to continue the on-board electronic warfare simulator [OBEWS] project. The Committee directs the Air Force to combine these funds with $9,798,000 in fiscal year 1994 OBEWS funding to support program activities in both fiscal years.

The Committee observes that, for several years, the Air Force claimed that OBEWS was a high priority and essential system to provide realistic and effective combat training for F-16 pilots and F-15E aircrews. OBEWS would enable pilots and aircrews to simulate, and respond to, engagements with threat air defenses without being required to travel to instrumented training ranges. Thus, training opportunities would be more available, more productive, and less costly.

Nevertheless, late last year, the Air Force decided to terminate OBEWS during fiscal year 1994 because the program did not have sufficient priority to retain funding in the current restrained fiscal environment.

The Committee notes that the total acquisition cost for OBEWS was estimated to be $120,600,000 for approximately 900 aircraft systems and 40 squadron debriefing stations. That amount is less than the probable cost of a single advanced combat aircraft in the future.

The Committee understands further that the Air Force will be operating F-16 and F-15E aircraft as the mainstay of its fighter forces well into the next century. The Committee also has heard repeatedly from Air Force leaders that a smaller force structure requires the maximization of training effectiveness and combat readiness.

Given these facts, the Committee must question the Air Force's spending priorities with respect to OBEWS. Therefore, the Air Force also is directed to include full funding in the fiscal years 1996-2001 Future Years Defense Program to finish development and begin procurement and deployment of the OBEWS system for aircraft and squadrons.

The Committee further directs that no funds may be reallocated between projects within this program element without prior consultation with, and notification to, the congressional Defense committees.

SAC, p. 287-288

APPN CONF:

ELECTRONIC WARFARE DEVELOPMENT

The conferees agree with the Senate recommendations with respect to fiscal year 1994 and fiscal year 1995 funds for the EF-111 System Improvement Program (SIP). In addition to the Senate recommendations, the conferees have provided the following additional funds to the fiscal year 1995 budget request for the

EF-111 SIP project: +$700,000 to begin acquisition of a system integration test station (SITS) trouble-shooting capability and +$300,000 for installation, integration, and test of a radio frequency (RF) scenario generator. The conferees further direct that $500,000 of fiscal year 1994 funds be used to acquire the RF scenario generator for the EF-111 SIP.

The conferees also strongly support the Senate's recommendations with respect to the on-board electronic warfare simulator (OBEWS) project.

Appn Conf, p. 125

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TITLE: NATIONAL LAUNCH SYSTEM APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$10,176	3,976	10,176	0	0	0	0

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HASC:

National launch system

The budget request included $10.176 million in PE 604408F under the category of engineering manufacturing development (EMD). However, the scope of work described in the accompanying descriptive material did not relate to EMD-type activity. The committee recommends only $3.976 million of the requested amount for concept and other studies for fleet-wide launch vehicle improvements and upgrades.

HASC, p. 117

HAC:

NATIONAL LAUNCH SYSTEM

The Air Force requested $10,176,000 for the National Launch System. The Committee has deleted the entire request based upon the significant increases being provided for Space Launch initiatives discussed elsewhere in this report under Space and Related Programs.

HAC, p. 237

SAC:

National launch system.-Funds in this program element were sought to compile space launch requirements, develop and demonstrate existing space launch technologies, and conduct concept studies on future improvements to U.S. space lift capabilities.

The Committee notes that the Defense Department has just completed another major study of current and future national space launch capabilities, requirements, and technologies. The results of this study still are under review by the Pentagon's senior leadership. Until the Department can make fundamental decisions about its current and future space launch programs, the Committee concludes that the funds sought in this program element are unjustified.

The Committee denies the $10,176,000 requested in this program element. The House allowance transferred these funds to the "RDT&E defensewide" appropriations account.

SAC, p. 289

TITLE: MILSTAR LDR/MDR SAT COMM APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$607,248	607,248	607,248	607,248	0	607,248	607,248

HASC:
Military satellite communications

The budget request contained $607.248 million for research and development of the Milstar communications satellite, and $22.095 million for advanced military satellite communications.

Milstar is a complex and expensive communications satellite system that was originally designed to ensure secure communications between the national command authority and U.S. strategic nuclear forces throughout a protracted nuclear war. With the Cold War's end, Milstar has been modified to be more relevant to the new security conditions. However, it still retains important features from its Cold War origins, and relies upon costly Titan IV boosters for launch.

The committee understands that the advanced Milstar under development, Milstar III, will incorporate technologies not available when Milstars I and II were designed, allowing it to be launched on a less expensive medium launch vehicle. The committee believes that development of Milstar III, the follow-on to Milstar II, should be accelerated so that it can be deployed early in the next decade. In these circumstances, the committee directs the Secretary of Defense to modify Milstar plans accordingly.

The committee has recommended authorization of $607.248 million in PE 604479F for research and development for Milstar. The committee also recommends authorization of $35 million in PE 603430F for the advanced extremely high frequency (EHF) military satellite communications program. Of the $607.248 million, $12 million may be used either for long lead funding for Milstar II satellites 5 and 6 or to further accelerate the advanced EHF military satellite communications program. This is subject to the restriction that such funds (the $12 million) may not be obligated until 30 days after the Secretary of Defense has reported to the congressional defense committees on plans to spend these funds, and has commented on the statement the Comptroller General made concerning the Milstar II. (The Comptroller General's testified before the committee on Milstar on April 14, 1994 and submitted a prepared statement.)

The committee is concerned about the fragmented nature of the variety of military communications satellites and the disturbing tendency of such programs to remain isolated from the burgeoning advances of the commercial telecommunications industry. The committee is also concerned about the serious gap that exists between those who establish the requirements and create the demand for military communications networks and those who must pay for them. The committee believes the Department needs to develop a plan for military communications that takes advantages of the commercial telecommunications infrastructure and establishes appropriate interservice funding support so that those who make the decisions concerning quantity and quality of use must fund the impact of those decisions.

Accordingly, section 234 would require the Secretary of Defense to develop a military communications master plan that would address: the Department of Defense's projected military communications requirements; alternative and innovative ways of meeting those requirements; and methods to ensure that those elements of the Department that create the demand for such communications services are required to have an important role in paying for the services.

The provision also would prohibit the obligation of $50 million for the Milstar program until the congressional defense committees receive the master plan. The committee expects the Secretary to submit this plan to the congressional defense committees no later than April 15, 1995.

HASC, p. 115-116

SASC:
Satellite communications

The National Defense Authorization Act for Fiscal Year 1991 directed the Secretary of Defense to terminate the Milstar communications satellite program or restructure it to reflect changing military requirements and reduced defense budgets. The committee concluded that the requirements for Milstar at that time placed excessive emphasis on survivability in a prolonged strategic nuclear war and insufficient emphasis on the needs of tactical, conventional military forces. In addition, the committee believed that the program was too expensive. The committee's position prevailed and forced the Department of Defense to fundamentally restructure the Milstar program.

This restructuring eliminated nuclear warfighting capabilities and other outdated capabilities, dramatically improved capabilities to support the tactical, conventional forces of the Army and Navy, reduced the constellation size from eight to six satellites, and reduced life-cycle costs by 25 percent. As a result, the Army and the Navy, and the combatant commands charged with responding to regional security threats, became strong supporters of the Milstar program.

Subsequently, former Secretary of Defense Cheney further reduced costs substantially by reducing the constellation size from six satellites to four. Secretary Cheney also approved requests to Congress for funds to begin to develop a smaller and cheaper satellite to perform the Milstar mission early in the next century. This satellite concept would have used miniature electronics and other advances not available when Milstar was first developed, and would have led to the development of a "common bus" for a variety of communications payloads. In the appropriations process, however, Congress denied these requests for several years, on the grounds that such efforts were premature given that the first Milstar satellite had not been launched.

The Bottom-Up Review (BUR) conducted by Secretary Aspin specifically reaffirmed the need for Milstar despite its cost. The BUR addressed the following specific issues: whether Milstar was affordable; whether an advanced satellite concept could be developed in time to eliminate the requirement for all or some of the planned Milstar satellites; and whether DOD could do without the capabilities Milstar would provide until the advanced system could be fielded. The BUR concluded that the technologies for replacing Milstar with a cheaper satellite were not mature enough to accelerate appreciably and that DOD tactical forces could not wait another 10 years for jam-resistant satellite communications. The BUR also concluded that the advanced satellite concept initiated by the previous Administration should be vigorously pursued and should replace Milstar by the middle of the next decade. This action resulted in additional cost savings in the Milstar program, so that Milstar now will cost less than half of its projected cost in fiscal year 1991. The committee believes that the BUR examined the right issues and the committee accepts the BUR findings.

However, the General Accounting Office (GAO) has asserted that the advanced extremely high frequency (EHF) satellite planned to replace the Milstar series can in fact be accelerated by at least several years at acceptable risk; therefore, DOD could forgo procurement of the last two Milstar II satellites. The committee directs the Secretary of Defense to assess the GAO findings and report to the congressional defense committees at the earliest possible date, but no later than December 15, 1994.

The committee is convinced that the jam-resistant digital communications provided by Milstar are very important to tactical, conventional forces and that no near-term alternative to Milstar could provide this capability. The committee is also convinced that Milstar would have been canceled abruptly if it had not been strongly supported by the Chairman of the Joint Chiefs of Staff, the Army, the Navy, and the combatant commands for the tactical capabilities it now provides.

The committee does believe, however, that the Milstar program management should be changed from the Air Force to the Navy. When Milstar ceased to be primarily a strategic nuclear system, and the strategic threat receded dramatically, the Air Force lost interest in the program because it provides little additional capability to deployed tactical air wings. The Air Force faces a very minimal jamming threat to its air bases located in the rear. In contrast, the Navy and the Army must operate in close proximity to enemy forces, and must have protected communications.

The Air Force has proposed termination of the Milstar program many times in recent years, over the objections of the other Services, the Office of the Secretary of Defense, and the combatant commands. When the Air Force wasn't trying to undermine the program, it was complaining about having to pay for the system by itself, without contributions from the other Services. The Air Force has taken this position even though it always argues that it should be the lead Service for all space programs. Indeed, most recently, the Air Force has proposed that it become the sole acquisition authority for space programs. The committee doubts that Air Force actions on the Milstar program will inspire confidence within the Department that the Air Force can be trusted with a monopoly on funding and managing space programs of common concern.

The committee recommends a provision that would require the Secretary of Defense to shift management of the Milstar program to the Navy over the next year. The provision also would require the Secretary to transfer all programmed outyear resources along with the program management responsibility.

The committee notes that replacements for the defense satellite communications system (DSCS) and the ultra-high frequency follow-on (UFO) satellite will have to be deployed around the same time as the advanced extremely high frequency (EHF) Milstar follow-on. The committee believes that DOD must seriously address the issue of consolidating these separate satellite systems and frequency bands on a common satellite, or at least a common bus, and manage them in an integrated fashion. The committee believes furthermore that DOD must seriously examine the military requirements that must be met by a dedicated military satellite and those that could be met by buying or leasing commercial satellites. DOD also must determine the long-haul communications for regional conflicts that must be carried by satellite and those that could be shifted to the emerging global fiber-optic cable network. Finally, DOD must determine the extent to which future military satellites will be dedicated to serving mobile, battlefield users within a theater.

DOD currently plans to develop an operational requirements document and an architecture for the advanced EHF system over the next several years. The committee believes that DOD should instead expand this effort to address the issues raised above. The committee directs the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence to submit a report on this expanded study by March 1, 1996.

The fiscal year 1995 budget request included $9.4 million to begin development of an improvement to the existing DSCS satellites. This improvement would at best be available for deployment on only the last few satellites in the DSCS III constellation, and would cost several hundred million dollars to acquire. The committee believes that the benefits of this initiative do not justify the cost and that there are other higher priority problems facing the Department of Defense. The committee therefore recommends no authorization for this program.

SASC, p. 122 (Defense-wide RDT&E)

HAC:

TRANSFER OF MAJOR SPACE PROGRAMS

As discussed elsewhere in the report under Space and Related Programs, a total of $1,096,150,000 has been transferred from RDT&E, Air Force to RDT&E, Defense-Wide. Details of the transfers are as follows:

Program	P.E.	Amount of Transfer
Advanced Spacecraft Technology	0603401F	$24,200,000
Space System Environment Interactions Tech.	0603410F	4,200,000
Space Test Program	0603402F	62,064,000
Advanced MILSATCOM	0603402F	22,095,000
DMSP Block 6	0603434F	7,601,000
Satellite Systems Survivability	0603438F	8,531,000
Advanced Space Based TW/AA	0603441F	150,000,000
MILSTAR LDR/MDR SatCom	0604479F	607,248,000
UHF Satellite Communications	0303606F	20,879,000
DSCS	0303110F	30,876,000
Medium Launch Vehicles	0305119F	21,042,000

Upper Stage Space Vehicles	0305138F	3,663,000
Titan Space Launch Vehicles	0305144F	4,000,000
DMSP	0305160F	21,135,000
NAVSTAR GPS (Space & Control Sys)	0305165F	51,125,000
Defense Support Program	0305911F	47,351,000
NUDET Detection System	0305913F	10,140,000

HAC, p. 233-234

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TITLE: ARMAMENT/ORDNANCE DEVELOPMENT APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$10,853	10,853	10,853	10,853	18,853	10,853	18,853

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HAC:

ARMAMENT/ORDNANCE DEVELOPMENT

The Air Force requested $10,853,000 for armament/ordnance development. The Committee recommends $18,853,000, an increase of $8,000,000 only for initial design and trade studies of the conventional air launched cruise missile anti-armor variant.

HAC, p. 237

APPN CONF:

ARMAMENT/ORDNANCE DEVELOPMENT

The conferees direct that none of the funds provided for the conventional air-launched cruise missile (CALCM) anti-armor variant may be obligated until the Air Force reports to the Committees on Appropriations on the programmatic objectives, schedule, technical risks, annual and total costs of the project, and whether a validated military requirement exists for the weapon.

Appn Conf, p. 125

TITLE: SUBMUNITIONS APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$26,680	12,680	26,680	26,680	12,680	28,680	28,680

HAC:

COMMITTEE RECOMMENDATIONS

AUTHORIZATION CHANGES

The Committee recommends the following changes in accordance with authorization action:

[In thousands of dollars]

	Request	HASC	HAC	Change
Command, Control and Communications Exploratory Development	$95,444	$85,444	$85,444	-$10,000
Nuclear Weapons Support	5,637	3,637	3,637	-2,000
C-17	221,454	105,154	105,154	-116,300
Systems Survivability (Nuclear Effects)	2,786	0	0	-2,786
Submunitions	26,680	12,680	12,680	-14,000
MEECN	40,795	35,795	35,795	-5,000
Information Systems Security Program	10,293	11,793	11,793	+1,500

HAC, p. 233

SUBMUNITIONS

The Air Force requested $26,680,000 for development of submunitions. The Committee recommends $12,680,000, a decrease of $14,000,000 which defers the new start "wind corrected munition" development due to fiscal constraints as recommended by the House Armed Services Committee in its fiscal year 1995 report.

HAC, p. 237

SAC:

Joint standoff weapon systems [JSOW].-The Committee approves $126,127,000, an increase of $15,000,000 to the budget request and the same amount above the House allowance, for this program element. JSOW is a new family of affordable, standoff air-to-surface weapons being developed by both the Navy and the Air Force. The recommendation adds $10,000,000 to finance Navy efforts to assist the Air Force to accelerate the integration of the BLU-108 sensor fused weapon antiarmor munition into the JSOW platform. The Committee has provided additional funds to the Air Force to begin this acceleration.

Another $5,000,000 is added to pay the Navy's share of a new effort with the Air Force to develop improved weapons ejector racks, or smart racks. This improvement would double a fighter aircraft's capability to carry smart munitions (JSOW, joint direct attack munitions, and wind corrected munitions dispensers).

SAC, p. 260 (Navy)

Submunitions.-The Committee allocates $28,680,000, an increase of $2,000,000 to the budget request, for this program element. The additional funds are provided to support activities to integrate the wind corrected munitions dispenser onto the B-52 bomber.

The House allowance approved $12,680,000 for this program element.

SAC, p. 289

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TITLE: AIR BASE OPERABILITY APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$9,580	9,580	9,580	9,580	5,606	9,580	5,606

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HAC:

AIR BASE OPERABILITY

The Air Force budgeted $9,580,000 for air base operability. The Committee recommends $5,606,000, a reduction of $3,974,000. The reduction includes $3,224,000 for the Mobile Ordnance Disrupter System (MODS) and $750,000 for the Armored Multi-Role Vehicle (ARMRV).

The Committee believes that the MODS is a high cost, high tech successor to the discredited MARV/SMUD, which was terminated by the Air Force several years ago after being criticized by the Committee. The Committee recommendation for MODS terminates the program.

With respect to the ARMRV, the Committee believes that this program should be coordinated and funded by the Office of the Secretary of Defense and avoid proliferation of such vehicles within the Department.

HAC, p. 237

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TITLE: JOINT DIRECT ATTACK MUNITION APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$84,995	84,995	84,995	84,995	84,995	84,995	67,583

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SASC:

Improving the bomber force and preserving bomber options

The committee has demonstrated a steadfast commitment over the years to supporting, and initiating when necessary, the programs needed to ensure a robust and effective bomber force, including the needed weapons. Thus, the committee has strongly supported the recommendations in the Air Force "Bomber Roadmap" of June 1992. This report identified a requirement for 184 total bombers, armed with precision conventional munitions, to deal with a single major regional contingency (MRC) in which an enemy armored force had begun a short-warning invasion of the territory of an ally.

The new Administration undertook a comprehensive review of future force requirements necessary to successfully deal with a variety of possible contingencies. This Bottom-Up Review (BUR) ultimately determined that the United States should retain the capability to deal with two "nearly simultaneous" MRCs. The BUR also called for a total force of 184 bombers, in order to provide "100 deployable" heavy bombers for each MRC. This analysis assumes that the highly-capable and stealthy B-2s would be shifted from the first theater to the second, once that second MRC began to unfold.

The BUR identified important roles for bombers armed with advanced conventional munitions. It concluded that, under many short-warning scenarios, long-range bombers and carrier-based tactical aircraft would be the only U.S. forces available early in a conflict to help a beleaguered ally defend itself against an invading armored force. This long-range offensive strike capability would be operational while U.S. ground and tactical air reinforcements were being deployed to the theater, and waiting for their required logistics chain to be established. U.S. reinforcements might have to "fight their way in" against future theater air and missile threats.

Viewed in the context of these demanding requirements, the committee finds the Department of Defense's bomber force posture and funding proposals unacceptable:

(1) The "Bomber Roadmap" and the BUR called for a force structure of 184 bombers, yet the budget request funds only 100 during fiscal year 1995, and only 80 thereafter. The committee believes this is inadequate to meet current and future requirements.

(2) Four recent independent studies all find that the planned DOD force structure of 80 to 100 non-stealthy bombers with only 20 B-2s is inadequate to deal with two MRCs. DOD has been unable to offer a coherent and consistent explanation for these discrepancies.

(3) DOD appears unwilling to consider options for interim precision weapons for bombers, preferring to wait until the end of the decade for the tri-Service standoff attack missile (TSSAM) and the joint direct attack munitions (JDAM) family of weapons. Should conflict be thrust upon the United States before then, the bomber force would have only "dumb" iron bombs available. The committee believes interim precision weapon capabilities for bombers are both feasible and an inexpensive hedge.

(4) DOD has settled on a force structure and modernization plan before it has completed numerous ongoing analyses and tests that bear on those plans:

(a) The Nuclear Posture Review, which includes bomber requirements for maintaining nuclear deterrence, is still ongoing. The Secretary of Defense has testified that the bomber review is "unfinished business."

(b) The independent Roles and Missions Commission is examining bomber force structure tradeoffs with other military forces. The Commission will not submit its report on force structure tradeoffs until next summer.

(c) An important test of B-1B bomber operational readiness has just begun; results will not be available before next spring.

(5) The committee believes that, if DOD intends to reduce the bomber force level to between 80 and 100 non-stealthy bombers, then more than 20 B-2 stealth bombers will be required to meet the demands of a two-MRC scenario. Yet the final B-2 bombers are moving down the assembly lines, and more and more subcontractors and facilities are completing deliveries. The production base for bombers is rapidly disappearing.

Thus, the committee found itself with many unanswered questions as it addressed the current budget request. The committee decided to set in motion a process to ensure that DOD and the committee will be better prepared to address bomber requirement issues during the fiscal year 1996 budget cycle. To accomplish this, the committee directs specific actions in the following subsections in order to:

(1) preserve all bomber force structure options for one year;

(2) preserve the bomber industrial base for one year;

(3) receive the results of further bomber force structure and effectiveness analyses prior to next year's defense budget deliberations; and

(4) begin procurement of improved interim conventional weapons for bombers.

In summary, the committee recommendations would prevent DOD from retiring any B-52 or B-1 bombers this year, fully fund planned conventional upgrades for those bombers, preserve the B-2 industrial base for one year, initiate a program to acquire limited numbers of effective bomber weapons within the next two years, and direct numerous analyses to better prepare DOD and the Congress to decide future bomber force structure issues next year.

PRESERVATION OF BOMBER FORCE STRUCTURE OPTIONS

The committee has concluded that the planned bomber force level of between 80 and 100 is insufficient to meet current and future requirements, unless additional B-2 bombers are to be procured. Further, the ongoing Nuclear Posture Review is to address additional requirements for bombers to contribute to the maintenance of deterrence. The Roles and Missions Commission is to examine force tradeoffs including bombers. In other sections of this report, the committee also directs several independent studies of bomber issues. Therefore, the committee believes that all force structure options should be kept open at least through the next budget cycle.

First, the committee directs the Secretary of Defense not to retire any B-52H or B-1B bomber aircraft. All 95 B-52H and all 95 B-1B bombers (excluding one non-flying weapons-loading trainer B-1B aircraft) shall be retained, and any B-52H bombers transferred to Davis Monthan AFB before the date of this report shall be promptly returned to the Air Force Air Combat Command, for incorporation in an expanded B-52H attrition reserve. The committee understands that $18.0 million in operation and maintenance funds is required in fiscal year 1995 to retain all 47 B-52H aircraft in attrition reserve status. The committee adds O&M funds for this purpose.

Second, although the Air Force plans to retain 26 B-1B bombers in attrition reserve status through the period of the Future Years Defense Program (FYDP), it has not funded the incorporation of either the conventional weapons upgrades or the new ECM system on those B-1s. Third, the Air Force has seriously under-funded the conventional improvements and ECM upgrades on the active inventory of B-1B bombers. This underfunding results in a one-year delay in the introduction of the JDAM family of weapons and a six-year delay in TSSAM capability on the B-1B, relative to their incorporation on B-52H bombers. The B-1B ECM program is also under-funded, resulting in a delay in installation until 2003. This, for the Air Force's self-proclaimed "backbone of the bomber force."

In the next FYDP submission, the committee directs the Air Force to fully fund the bomber conventional munitions upgrade programs for both B-1 and B-52 bombers, including funds for full modifications to all bombers proposed to be retained, whether in the active inventory or in an attrition reserve category. The committee understands this requires no increase in fiscal year 1995 funding, but will increase FYDP funding requirements for the B-1B bomber by approximately $70 million, if all 95 B-1B bombers are retained.

The committee recommends fully funding the respective budget requests for RDT&E and procurement for fiscal year 1995 for the B-52H, the B-1B, and the B-2 bomber programs.

PRESERVING THE BOMBER INDUSTRIAL BASE

The committee has received testimony from Air Force and other witnesses regarding the desirability of maintaining an industrial base for the production of bombers, as DOD already is implementing for submarines, naval nuclear propulsion, and the tank industrial base. The committee also is in receipt of testimony and recent studies on the contributions that additional B-2 bombers could provide in future conventional conflicts. The committee is also aware of a proposal by the Northrop Corporation to produce a variant of the B-2 bomber that would have only a conventional weapons capability. Deletion of items on the B-2 related to nuclear missions would reportedly reduce the unit flyaway cost of a conventional-only stealth bomber by some $25-30 million per aircraft.

In view of the unsettled future requirements for heavy bombers, together with the additional studies and analyses of bomber force structure and industrial base options requested elsewhere in this report, the committee considers it prudent to recommend $150.0 million in order to preserve a portion of the bomber industrial base for one year.

Funds appropriated pursuant to this authorization are to preserve tooling in ready status, preserve a production capability for spare parts within the lower-tier vendor structure, and develop detailed production plans for a conventional-capability-only B-2 bomber. Funds may not be used to procure any major structural B-2 item that would not be procured by the Air Force as an item of initial or sustaining spares. This recommendation would not authorize a twenty-second B-2 bomber; rather, it would allow DOD and the Congress time to gather further information on future bomber requirements, including industrial base requirements. Funds appropriated pursuant to this authorization would be exempt from section 131(d) of Public Law 103-160.

FURTHER BOMBER FORCE ANALYSES

The committee has directed bomber force structure questions to Department of Defense and other witnesses at more than a dozen hearings since the fiscal year 1995 budget request was submitted. The answers are, in totality, incomplete; many are inconsistent with others. The thrust of testimony from DOD witnesses is inconsistent with the published results of the Bottom-Up Review, as well as with the Air Force's 1992 "Bomber Roadmap", and with recent detailed analyses carried out by major defense contractors such as Boeing and Rockwell, by "think tanks" such as the RAND Corporation, and by respected independent analysts.

DOD has not revealed its own detailed analyses supporting its decisions to sharply reduce the bomber force structure. Nor has it attempted to refute any of the studies noted above, all of which call for substantially larger bomber forces than proposed in the budget request. Results of several of the independent studies show that a heavy bomber force reduced to the size and composition that DOD proposes to fund would be inadequate to prevent major losses in the opening phases of a two-MRC scenario, and would run high risk of failure even in single-MRC scenarios.

Given these substantial and unresolved differences between the new DOD bomber force levels and those derived in widely-available outside analyses, the committee is reluctant to make the irrevocable commitment to a smaller bomber force that would be brought about by approval of the current budget request for bombers.

Accordingly, the committee directs the Secretary of Defense to reconstitute the independent review group originally mandated under section 121(e) of Public Law 101-189 for the purpose of reconciling the analyses of bomber forces conducted by the Department in support of the Bottom-Up Review and the recent analyses conducted by outside experts. The committee is seeking to understand how such striking differences in overall outcomes can arise-whether they are the result of different assumptions about numbers of targets, or about warning and deployment times available, or about munitions effectiveness. The review group should also pay particular attention to assumptions about the length of time required to establish full supply lines to theater-based forces in the presence of a theater ballistic missile threat. The committee directs the Secretary to ensure full access by the independent review group to models, personnel involved, and assumptions used in Bottom-Up Review analyses, including the illustrative scenario presented to this committee at a classified hearing on March 9, 1994. The independent review group should provide its analysis and results in both classified and unclassified form to the Secretary and the congressional defense committees not later than February 1, 1995.

Second, the committee urges the Roles and Missions Commission established by subtitle E of title IX of Public Law 103-160 to review thoroughly the capabilities of bombers and carrier-based air forces in the early phases of a short-warning MRC when enemy actions may constrain our ability to provide land-based tactical air power and ground force reinforcements. The committee believes that an important early contribution by carriers to the defeat of an armored incursion may reside in Navy combat air patrols (CAP) and suppression of organic enemy air defense assets (SEAD), allowing non-stealthy Air Force bombers to

deliver large weapons payloads with improved survivability. Traditional tactical air support missions, such as CAP, SEAD, and jamming, may only be available from carriers until land bases can be secured and supply lines to the theater established.

The committee expects the Commission to also consider tradeoffs between more stealthy aircraft and fewer support assets such as those for CAP and SEAD, to reduce the deployment lift requirements, the personnel placed at risk in the theater of operations, and the extensive resupply requirements. The Commission should evaluate, in particular, the kinds of tradeoffs presented by the Air Force during testimony on the Department of Defense Authorization Act for Fiscal Years 1992 and 1993 (S. Hrg. 102-255, Pt. 7, p. 794).

The committee looks forward with keen anticipation to the recommendations of the Roles and Missions Commission, and hopes its findings will shed additional light on future bomber requirements in time for action on the fiscal year 1996 request. To ensure the Commission has adequate independent expertise, the committee also recommends a provision that would authorize the Commission to draw upon the capabilities of the Department's federally funded research and development centers during fiscal years 1994 and 1995, for up to $20.0 million in assistance.

Third, by the Secretary's own admission, the need to maintain some sort of bomber industrial base was not well-analyzed in the BUR. The Congress has, on several past occasions, relied upon the RAND Corporation to examine sensitive aspects of the B-2 bomber program. The committee believes that this background and RAND's long experience in acquisition and industrial base research warrant its directing the Secretary of Defense to ask the RAND Corporation to conduct an independent analysis of the need for the Defense Department to provide some industrial base protection for future bomber production requirements, as it has already determined to be necessary for the submarine and tank industrial bases. The RAND analysis and recommendations for whether, and, if so, how, to preserve an industrial base capability for bombers should be provided to the congressional defense committees not later than March 1, 1995.

None of these outside efforts are intended to preclude the Secretary of Defense from continuing to evaluate bomber force structure and effectiveness options and tradeoffs; to the contrary, he is encouraged to do so. The committee hopes that the defense budget request for fiscal year 1996 and the accompanying FYDP will present a clear and coherent bomber roadmap to the Congress.

"INTERIM" CONVENTIONAL WEAPONS FOR BOMBERS

There are several possibilities for adding interim precision weapons capabilities to existing bombers. All would be limited in numbers and higher in cost than the precision munitions-the JDAM family of weapons-now in development for deployment near the end of the decade. The initial JDAM weapon, a guided 2000 lb. bomb, will greatly improve bomber effectiveness against fixed targets. However, it is not well-suited to defeat armored formations. Apart from the TSSAM, which offers both anti-armor submunitions and standoff delivery, bomber capabilities against armored incursions will remain limited into the next decade. Current tactical munitions dispensers (TMDs) containing anti-armor submunitions require low-altitude direct overflight delivery; as the British Tornado experience during Operation Desert Storm makes plain, this is a costly delivery tactic. The Air Force has announced plans to develop a "wind-corrected TMD" containing an inertial guidance unit, to allow delivery with some standoff capability from medium altitude and above of anti-armor submunitions from a wide variety of fighter and bomber aircraft. Unfortunately, the Air Force has yet to identify funding requirements for this approach and the planned initial operating capability (IOC) is not earlier than the end of the decade. Thus, this approach will not provide an "interim" capability.

The interim weapons possibilities include the following: further conversions of the nuclear-armed air launched cruise missile (ALCM) to any of several improved conventionally-armed ALCM capabilities (CALCM); a limited purchase of additional GPS-aided munitions system (GAMS) R&D weapons being developed as part of the GATS/GAMS capability to be tested on both B-1 and B-2 bombers; and incorporation of brilliant anti-tank (BAT) anti-armor submunitions in a TMD for high-altitude bomber delivery against armored formations.

For the CALCM, there are three separate options, each with a different delivery date and cost: (1) a modest improvement on the CALCMs used at the beginning of Operation Desert Storm; (2) a major improvement including better stealth and a penetrating warhead capability; and (3) a more ambitious effort to incorporate various anti-armor submunitions (WAM, SFW, and/or BAT) in a significantly modified ALCM. Any of the CALCM versions would be deliverable by B-52s, B-1Bs and Block 30 B-2s, and would provide substantial standoff range for the non-stealthy bombers. The committee understands that ALCM missiles are in such over-supply that some 150 ALCMs have been sent to storage areas outside of main operating bases.

The GAMS options would continue the production of the weapon guidance kits beyond the 42 that will be required for the B-2 GATS-GAMS test program. Additional production of GAMS kits would provide additional test weapons for the B-2, and for the B-1B bomber if its radar is found suitable, providing a limited contingency stockpile of precision bomber weapons. Northrop has proposed to deliver 128 additional GAMs weapons kits starting in mid-1996, for $25.0 million.

A third option is to explore delivery of the BAT submunition from a slightly-modified, unguided TMD, for delivery from medium altitude. The BAT submunition has a large target acquisition range and footprint, which could offset somewhat the effect of wind drift on a TMD descending from medium altitude. An interim approach using the BAT would be to test its capability in an unguided TMD to determine whether medium-altitude release of this weapon from a platform with self-contained precision target location capabilities (such as the B-2) could reliably place the unguided dispenser within the lethal range of the submunitions. It appears this concept could be demonstrated and flight tested by mid-1996 for about $25.0 million. If these tests were successful, interim BAT/TMD weapons could be available by late 1997.

Of the interim options discussed above, the committee considers all but the second CALCM option to be worth pursuing vigorously, under streamlined acquisition procedures to ensure early availability of interim weapons. Three hundred of the CALCM-I version could be delivered during the last half of 1996 and the first half of 1997 at a unit cost of less than $200,000. If an early demonstration of the anti-armor version of the CALCM were successful, 300 CALCM-III weapons could be delivered in late 1997 and 1998, at a unit cost of about $400,000. Therefore, the committee recommends $40.0 million for modifications to demonstrate the capability to dispense anti-armor submunitions from a modified ALCM, develop in-flight targeting updates for a proposed CALCM-III missile, and begin conversion of existing ALCM missiles to the CALCM-I configuration. The Air Force is authorized to procure up to 100 CALCM-I missiles with the recommended funds. The committee expects the Air Force to request both adequate funds to demonstrate the CALCM-III concept, and to procure an additional 200 CALCM-I missiles in fiscal year 1996, so long as the contracted unit price per missile for a lot of 300 conversions remains below $200,000 per missile, not including government-furnished equipment. The committee expects the Department to negotiate a firm fixed-price contract for the additional CALCM-I conversions.

The committee also recommends $25.0 million to procure an additional 128 GAMS kits, in order to provide an interim capability for B-2 and, should GATS tests prove successful, B-1 bombers.

The committee further recommends $25.0 million to conduct a flight-test demonstration of the possibility of delivering BAT submunitions with sufficient accuracy from an unguided TMD released from medium altitude.

The committee stresses to the Secretary of Defense the urgency it attaches to all of these interim weapons proposals, and directs him to ensure that these programs are carried out expeditiously, under streamlined acquisition procedures, and with a minimum of bureaucratic red-tape.

The committee observes that, even if all of the programs discussed above were successfully carried to fruition, the resulting inventory of interim precision weapons would be modest-no more than a few sorties per bomber. Therefore, the committee sees no need to increase the planned bomber force structure from the proposed level of 40 active B-52H and 60 active B-1B bombers, until such time as JDAM and TSSAM deliveries have increased the available precision munitions stockpiles.

Finally, the committee directs the Secretary to evaluate the recommendation by the RAND Corporation contained in testimony before the committee that the JDAM program be extended to include 1,000-lb. and 500-lb. iron bombs. The Secretary shall provide to the congressional defense committees a report on the cost-effectiveness of this action not later than April 30, 1995.

SASC, p. 54-61

Global positioning system

The committee is informed that the Air Force intends to issue a request for proposals (RFP) for the follow-on to the Block IIR global positioning system (GPS) satellite in January 1995. The committee is very concerned about this schedule. A number of studies are underway in the Department of Defense, some in response to congressional direction, that are designed to answer important questions on the future design and management of the GPS satellite system. Several of these studies will not even be complete by the time the Air Force now plans to issue the RFP.

The committee fully supports the GPS program. However, the committee also recognizes that DOD, civilian federal agencies, the private sector, and indeed the world will depend on this block of GPS satellites to meet a wide variety of critical and rapidly evolving navigation, guidance, and timing requirements 15 or more

years in the future. The committee believes that care must be taken to ensure that mistakes are not made to jeopardize the future utility of GPS simply to meet a particular schedule. Although changes can be made to an RFP and even to a development and procurement contract, they will be more costly and uncertain if made later.

Moreover, it is already clear that DOD will have to procure additional Block IIR satellites to prevent a gap in coverage before the follow-on satellite is deployed. Adding more satellites to that purchase is certainly feasible if the schedule for the follow-on satellite is delayed. If that gap-filler procurement is large enough, in fact, it could be competed to ensure that unit costs are reasonable. The committee also notes that DOD has yet to determine how many satellites are required to fill that gap, even if it is assumed that the follow-on RFP is released as planned.

Accordingly, the committee directs the Office of the Secretary of Defense (OSD) to carefully monitor the ongoing GPS studies and ensure that the results are fully considered before allowing the Air Force to release the RFP. OSD should also scrutinize Air Force plans for gap-filler procurement to ensure that unit costs are controlled and that the size of the procurement is sufficient to eliminate coverage gaps. The committee directs the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence (ASD(C3I)) to consult with the congressional defense committees and to provide a copy of the RFPs for gap-filler satellites or for the Block IIR follow-on prior to release to industry.

The committee remains concerned about the potential for adversaries to jam GPS-aided munitions, such as the Joint Direct Attack Munition (JDAM), which DOD plans to procure by the thousands. The GPS program office believes it will be impractical to substantially alter the performance parameters of GPS spacecraft in the future. The program office believes that increased jam resistance and other improvements in system performance must be achieved through improvements to user equipment. GPS users, however, such as the JDAM program, claim that it would be too expensive to modify weapons delivery platforms to improve weapon jamming resistance. The Defense Science Board is examining such issues now. The committee directs the Under Secretary of Defense for Acquisition and Technology (USD(A&T)) to forward the DSB report to the congressional defense committees when it is completed, and to convey the actions the Department intends to take in response to the study when such decisions are made.

The committee is not persuaded that DOD has adequately defined the countermeasures threat faced by GPS users. Without a threat definition, requirements for protection cannot be justified for development. The committee directs the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence to coordinate the definition of the threat to GPS users.

In general, the committee concludes that the technique for acquiring the GPS encrypted signal is too vulnerable to disruption. In addition, the signal acquisition sequence precludes jamming hostile receivers in the vicinity of friendly forces. It is imperative that DOD find solutions to these problems.

The committee has found that a large number of separate initiatives are underway to develop new applications of GPS and new countermeasures. These initiatives are too often pursued in isolation. In addition, solutions to most problems and limitations with GPS will require a systems approach and coordination among the space, ground, and user segments of the GPS system. The committee believes that the GPS Joint Program Office should be the focal point and center of expertise for GPS initiatives. The committee therefore directs that the GPS program office, and the Office of the ASD(C3I), be made aware of all GPS-related initiatives within the Department of Defense, regardless of classification.

The committee is also concerned about the ability of the intelligence and mapping communities to provide targeting support to a major air campaign in which GPS-aided munitions are used on a large scale. Not only must many targets be located with great accuracy, but also the throughput on a daily basis would have to be enormous. The committee doubts the ability and the commitment of the intelligence and mapping communities to support this critical requirement, particularly in adverse weather conditions. The committee directs that the next Defense Acquisition Board (DAB) review of the JDAM program formally examine this issue and provide a certification to the congressional defense committees that campaign-scale, all-weather targeting support for JDAM is programmed and will be fielded on the same schedule as the JDAM program. If no such certification can be made, the committees shall be informed of the reasons why and of necessary corrective measures.

The committee directs that $10.0 million of unobligated or unexpended funds from the terminated Landsat earth resources satellite program shall be applied to upgrading the Defense Mapping Agency's digital production system to process data collected by classified imaging systems. These imaging systems are discussed in the classified annex to this report.

The committee urges the Air Force to continue its investigations of the potential benefits of developing a differential navigation and guidance capability based on the encrypted GPS P code signal.

SASC, p. 90-92

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TITLE: SYSTEMS SURVIVABILITY (NUC EFFECTS) APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$2,786	0	2,786	0	0	2,786	0

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HAC:

COMMITTEE RECOMMENDATIONS
AUTHORIZATION CHANGES

The Committee recommends the following changes in accordance with authorization action:

[In thousands of dollars]

	Request	HASC	HAC	Change
Command, Control and Communications Exploratory Development	$95,444	$85,444	$85,444	-$10,000
Nuclear Weapons Support	5,637	3,637	3,637	-2,000
C-17	221,454	105,154	105,154	-116,300
Systems Survivability (Nuclear Effects)	2,786	0	0	-2,786
Submunitions	26,680	12,680	12,680	-14,000
MEECN	40,795	35,795	35,795	-5,000
Information Systems Security Program	10,293	11,793	11,793	+1,500

HAC, p. 233

TITLE: JOINT STANDOFF WEAPONS SYSTEMS APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$48,966	48,966	48,966	48,966	48,966	80,966	55,966

SAC:

Joint standoff weapon systems [JSOW].-The Committee approves $126,127,000, an increase of $15,000,000 to the budget request and the same amount above the House allowance, for this program element. JSOW is a new family of affordable, standoff air-to-surface weapons being developed by both the Navy and the Air Force. The recommendation adds $10,000,000 to finance Navy efforts to assist the Air Force to accelerate the integration of the BLU-108 sensor fused weapon antiarmor munition into the JSOW platform. The Committee has provided additional funds to the Air Force to begin this acceleration.

Another $5,000,000 is added to pay the Navy's share of a new effort with the Air Force to develop improved weapons ejector racks, or smart racks. This improvement would double a fighter aircraft's capability to carry smart munitions (JSOW, joint direct attack munitions, and wind corrected munitions dispensers).

SAC, p. 260 (Navy)

Joint standoff weapon systems [JSOW].-The Committee approves $80,966,000, an increase of $32,000,000 to the budget request and the same amount above the House allowance, for this program element. JSOW is a new family of affordable, standoff air-to-surface weapons being developed by both the Air Force and the Navy. The recommendation adds $25,000,000 to permit the Air Force to accelerate the integration of the BLU-108 sensor fused weapon antiarmor munition into the JSOW platform. The Committee directs the Air Force not to reprogram any funds away from the BLU-108 project.

Another $5,000,000 is added to pay the Air Force share of a new effort with the Navy to develop improved weapons ejector racks, or smart racks. This improvement would double a fighter aircraft's capability to carry smart munitions (JSOW, joint direct attack munitions, and wind corrected munitions dispensers).

An additional amount of $2,000,000 also is provided to expand the electronic and software interfaces between the JSOW weapons and their launching aircraft. The use of both military standard 1760 "A" and "B" protocols, as is done in the Joint Direct Attack Munitions Program, will make JSOW more compatible with B-2 and B-52 bombers and F-15E fighter-bombers. Thus, aircraft integration costs are expected to decrease.

SAC, p. 288-289

TITLE: RANGE IMPROVEMENT APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$18,301	18,301	18,301	18,301	18,301	5,101	14,101

SAC:

Range improvement.-The Committee approves $5,101,000 to support combat training range systems and develop interoperability improvements. The amount provided represents a reduction of $13,200,000 to the budget request and to the House allowance. The Committee eliminates $13,200,000 requested to develop the joint air combat training system [JACTS]. The Air Force now plans to participate with the Navy in the joint tactical combat training system [JTCTS] development effort, which allows the JACTS Program to be canceled.

SAC, p. 294

APPN CONF:

RANGE IMPROVEMENT

The conferees agree to provide $14,101,000 for Range Improvement, specifically only for the Nellis Air Combat Training System (NACTS). Within this amount, the conferees direct that the computer upgrades receive first priority. The conferees direct that funds provided for activities other than the computer upgrades may not be obligated until the Air Force submits an implementation plan to the Congressional defense committees. The plan should identify all procurement and development activities, provide the associated costs of each activity, clearly identify all NACTS components and efforts that will not be compatible with the Joint Tactical Combat Training System (JTCTS), and provide the rationale in each case for developing incompatible systems which will become obsolete when the joint program, JTCTS, is fielded.

Appn Conf, p. 126

TITLE: COMPUTER RESOURCES TECH TRANS (CRTT) APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$6,621	6,621	6,621	6,621	21,121	15,121	21,121

HAC:

COMPUTER RESOURCE TECHNOLOGY TRANSITION

The Air Force requested $6,621,000 for computer resource technology transition. The Committee recommends $21,121,000, an increase of $14,500,000, of which $4,000,000 is only for the Central Archives for Reusable Defense Software (CARDS) project and $8,500,000 is only for the IMIS/CAMS-REMIS/TICARRS test as explained in the Information Technology Systems section of this report.

HAC, p. 238

SAC:

AIR FORCE AUTOMATED MAINTENANCE SYSTEMS

For several years there has been continuing controversy regarding competing Air Force capabilities for managing maintenance processes at base level. In short, there has been a notable lack of progress in providing more accurate maintenance data and in eliminating duplicate data input requirements. It now appears that technology has overtaken this controversy. Neither of the competing systems, CAMS/REMIS and TICARRS, was deemed adequate by a recent Institute of Defense Analyses report to serve, by itself, as a long-term solution.

It has come to the Committee's attention that research by the Air Force's Armstrong Laboratory now provides the basis for an integrated maintenance data system comprised of an open system architecture, modern data base technology, and hand-held data input devices that can be used on the flightline. In fact, the Armstrong Laboratory approach seems to provide the greatest opportunity for a modern system to support the requirements of the Air Force into the next century. Such capability would include one-time data entry, interactive technical information, and integration of on-board diagnostics outputs.

It has been proposed that the Air Force demonstrate this concept and the Committee agrees. The Air Force should demonstrate this concept at one base for each of CAMS/REMIS and TICARRS in fiscal year 1995. If this proof of concept is successful, the Air Force is directed to prepare a business plan for a competitive acquisition to migrate from the existing closed architectures to a modern open system, interactive integrated maintenance data system [IMDS] with development to begin in fiscal year 1996. This business plan for implementing IMDS shall be consistent with the Air Force plans for base level systems modernization [BLSM].

Pending implementation of IMDS, the existing systems (CAMS/REMIS and TICARRS) should be maintained at a level of sufficiency to assure that aircraft and other weapon system readiness is not compromised. Accordingly, the Committee appropriates $15,000,000 for continued support of TICARRS, $5,000,000 for improvements and corrections to REMIS, and an additional $8,500,000 to the "Research and development" account to conduct the proof-of-concept demonstrations.

SAC, p. 108-109

Computer resource technology transition [CRTT].-The Committee recommends $15,121,000, an increase of $8,500,000 to the budget request but an amount which is $6,000,000 below the House allowance, for this program element. The additional funds are provided only for the IMIS/CAMS-REMIS/TICARRS test as explained in the procurement overview section of this report.

SAC, p. 289

APPN CONF:

SOFTWARE DESIGN FOR RELIABILITY AND REUSE (SDRR)

The conferees are concerned with the delay in release of funds appropriated in fiscal year 1994 for the Air Force's ongoing Software Design for Reliability and Reuse program initiated in fiscal year 1993 through funds provided in the service's Computer Resources and Management Technology program element. The conferees direct the Air Force to release the fiscal year 1994 funds to continue this program under contract F19628-93-C-0069 as originally intended. The conferees expect this release to occur not later than November 1, 1994.

Appn Conf, p. 123

TITLE: JT TAC INFORM DISTRIBUTION SYS (JTIDS) APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$11,634	11,634	11,634	11,634	11,634	11,634	11,634

HAC:

JOINT TACTICAL INFORMATION DISTRIBUTION SYSTEM
(JTIDS)

The Air Force initiated an F-15 Fighter Data Link (FDL) Operational Special Program (OSP) at Mt. Home AFB in September 1993. The Committee understands that the results obtained since the beginning of the OSP are strongly supportive of JTIDS as a force multiplier and show that the F-15's combat effectiveness is significantly increased. The Committee therefore directs the Department of the Air Force to provide a report which addresses the results of the F-15 FDL OSP and details the Air Force's near-term plan for implementation of JTIDS in the F-15 force structure. This report should be provided no later than January 15, 1995.

HAC, p. 176 (Aircraft Proc)

ENGINEERING AND MANUFACTURING DEVELOPMENT
JOINT TACTICAL INFORMATION DISTRIBUTION SYSTEM (JTIDS)

The Defense Department requested $84,409,000 for the Joint Tactical Information Distribution System. Included in this amount is $73,309,000 for the Multifunctional Information Distribution System (MIDS). The MIDS program is a multinational cooperative development effort to design, develop, and procure lightweight tactical information system terminals for U.S. fighter aircraft, as well as foreign fighter aircraft, helicopters, ships, and ground sites. The total program cost will exceed $1 billion, half of which will be paid by the U.S.

According to a DOD audit published last year, in the past three years no Defense Acquisition Board review was held, no acquisition program baseline was approved, and no exit criteria were established as prerequisites for entry into Engineering and Manufacturing Development (EMD). The Audit also notes that the Air Force withdrew from the program and that the only U.S. platform that will use MIDS will be the Navy's F-18.

Based upon the above major program deficiencies, the Committee is deleting the entire request of $73,309,000 for the MIDS program.

HAC, p. 255-6 (Defense-wide RDT&E)

TITLE: JOINT SURV/TGT ATT RADAR SYS (JSTARS) APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$190,408	160,408	190,408	190,408	190,408	191,908	175,408

SAC:

Joint surveillance/target attack radar system [JSTARS].-The Committee recommends $191,908,000, an increase of $1,500,000 to the budget request and the same amount above the House allowance, for this program element. JSTARS is an Air Force aircraft operating with Army ground stations to observe and target ground formations and combat vehicles.

The increase is provided to support Air Force and Army costs associated with demonstrating the JSTARS air and ground components to the NATO allies as part of the consideration of a possible NATO JSTARS Program based on the U.S. system.

The Committee directs that none of the additional funds may be obligated without prior consultation with, and notification to, the Committee. The Committee expects that the Assistant Secretaries of the Army and Air Force for Acquisition and the Under Secretary of Defense (acquisition and technology) will present a joint plan to the Committee for the proposed use of these funds and will inform the Committee on a regular basis as to the status of efforts to create a NATO JSTARS Program. The Committee also directs that no funds available to the Defense Department during fiscal year 1995 may be used to begin any NATO JSTARS development program without prior consultation with, and notification to, the congressional Defense committees.

SAC, p. 289

TITLE: UHF SATELLITE COMMUNICATIONS APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$20,879	20,879	20,879	20,879	0	20,879	20,879

HAC:

TRANSFER OF MAJOR SPACE PROGRAMS

As discussed elsewhere in the report under Space and Related Programs, a total of $1,096,150,000 has been transferred from RDT&E, Air Force to RDT&E, Defense-Wide. Details of the transfers are as follows:

Program	P.E.	Amount of Transfer
Advanced Spacecraft Technology	0603401F	$24,200,000
Space System Environment Interactions Tech.	0603410F	4,200,000
Space Test Program	0603402F	62,064,000
Advanced MILSATCOM	0603402F	22,095,000
DMSP Block 6	0603434F	7,601,000
Satellite Systems Survivability	0603438F	8,531,000
Advanced Space Based TW/AA	0603441F	150,000,000
MILSTAR LDR/MDR SatCom	0604479F	607,248,000
UHF Satellite Communications	0303606F	20,879,000
DSCS	0303110F	30,876,000
Medium Launch Vehicles	0305119F	21,042,000
Upper Stage Space Vehicles	0305138F	3,663,000
Titan Space Launch Vehicles	0305144F	4,000,000
DMSP	0305160F	21,135,000
NAVSTAR GPS (Space & Control Sys)	0305165F	51,125,000
Defense Support Program	0305911F	47,351,000
NUDET Detection System	0305913F	10,140,000

HAC, p. 233-234

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TITLE: C-130J APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:					5,000		5,000

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HAC:

C-130J

The Air Force requested no funds for the C-130J program in fiscal year 1995. The Committee recommends $5,000,000 for this program. The additional funding provided by the Committee shall be available only for trade studies and actual flight testing of the C-130J aircraft in support of active Air Force tactical airlift modernization plans. It is the Committee's understanding that the Air Force intends to transfer two C-130J aircraft to the active force to begin evaluation of this latest version of the C-130 aircraft series. The Committee strongly endorses this approach and urges the Air Force to continue with acquisition of the C-130J upon completion of successful flight testing.

The Committee also understands that the Marine Corps has a valid requirement to replace its aging active duty KC-130F airborne refueler/tanker fleet. It is also understood that meeting this requirement would require only minimal changes to the C-130J configuration. The Committee encourages the Air Force to coordinate with the Marine Corps to consider and incorporate Marine Corps mission requirements during the C-130J research and development effort.

HAC, p. 238

TITLE: ICBM - EMD APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:						148,048	138,048

SAC:
Strategic submarine and weapons system support.-This program element funds enhancements to the Trident I and II missiles and weapons systems aboard U.S. strategic nuclear ballistic missile submarines. Several adjustments are recommended.

First, the Committee approves the use of $2,100,000 of fiscal year 1994 funds in the fleet ballistic missile systems project to permit the Navy and the Air Force to accomplish a state-of-the-art technology survey, an industrial base assessment, and a technical program plan to support a reentry vehicle [RV] industrial base sustainment program for both submarine-launched and land-based intercontinental ballistic missiles. These funds are sufficient to support efforts during fiscal years 1994 and 1995. No other use of the funds is approved.

The Committee has recommended approval of $2,500,000 in an Air Force program element only to permit the Navy and the Air Force to identify and assess critical attributes to maintain ICBM-unique and SLBM-unique reentry vehicle industrial base capability.

Second, the Committee recommends a total of $29,223,000, a reduction of $23,138,000 to the budget request and an amount which is $8,138,000 below the House allowance, for this Navy program. The recommendation denies three new starts: $15,000,000 to begin the RV Industrial Base Sustainment Program, $6,038,000 to begin a Trident ownership reduction initiative, and $2,100,000 for a propellant program.

The RV activity is premature until the basic planning is accomplished with the fiscal year 1994 funds approved above and the fiscal year 1995 funds approved in the Air Force program element. The ownership cost reduction initiative and the propellant project are unjustified until the Congress has had the opportunity to assess the results of the nuclear posture review and the fiscal year 1996 budget request with respect to Navy strategic programs. The future of the C-4 Trident I missile and the size of the D-5 Trident II missile force are sufficiently uncertain to suggest caution in beginning initiatives which may not be required under future policy and budget plans.

SAC, p. 262 (Navy)

Strategic missile modernization; Minuteman squadrons; intercontinental ballistic missile [ICBM] modernization (demonstration/validation); ICBM modernization (engineering/manufacturing development).-The Committee has become concerned that Air Force programs to maintain and improve the capabilities of the Minuteman ICBM force are not sufficiently coordinated. There also are indications that the service's acquisition and operations communities, which share management and oversight responsibility for these programs, may disagree on the most effective approach to execute this multibillion-dollar activity.

The Committee further understands that there may have been instances in which operations and maintenance and procurement funds were used for research and development purposes, and in which projects were begun without necessary requirements documentation, acquisition decisions, and adequate provision for test and evaluation of the proposed product.

The Committee recommends a restructuring of the management and program elements arrangements for these programs to enable the Air Force to better manage, coordinate, and make tradeoffs among these activities, and to permit Congress to obtain maximum oversight and awareness of them.

The Committee recommends eliminating all funds in the Minuteman squadrons and strategic missile modernization program elements and reallocating them into two new program elements for ICBM modernization demonstration/validation and engineering and manufacturing development. The Committee directs that all future funding for these activities must be requested in these new program elements, which are to be managed by the Air Force as an integrated major acquisition program under the authority of the Assistant Secretary of the Air Force for Acquisition.

The Assistant Secretary also is directed to review promptly and thoroughly all ongoing Minuteman programs at the Silo Based ICBM System Program Office and determine whether any funds have been used inappropriately and contrary to established acquisition guidelines. The Assistant Secretary is directed to report to the congressional defense committees on these matters no later than March 1, 1995.

The Committee recommends $43,206,000 and the following allocations and adjustments in the new ICBM modernization (demonstration and validation) program element: (1) ICBM guidance applications, $12,650,000, the budget request; (2) ICBM propulsion applications, $301,000, the budget request; (3) ICBM reentry vehicle [RV] applications, $2,500,000, a decrease of $8,439,000 to the budget request; (4) Reentry System Launch Program [RSLP] $23,827,000, an increase of $12,000,000 to the budget request; (5) ICBM command and control applications $301,000, the budget request; and (6) long-range planning, $3,627,000, the budget request.

As addressed and governed by the discussion in the Navy RDT&E section of this report, the Committee directs that the $2,500,000 provided in the ICBM RV applications project shall be used only to permit the Air Force and the Navy to identify and assess critical attributes to maintain ICBM-unique and submarine-launched ballistic missile-unique RV industrial base capability. The Committee further directs that the services include in their assessments a thorough examination of the prospects and utility of establishing a cost-sharing program with private industry to finance any RV industrial base sustainment program.

The funds added to the RSLP project will support acceleration of the efforts to develop a relatively low cost space booster alternative primarily for small scientific payloads.

The Committee recommends $148,048,000 and the following allocations in the new ICBM modernization (engineering and manufacturing development) program element: (1) Minuteman rapid execution and combat targeting [REACT], $21,792,000, the budget request; (2) Minuteman III Guidance Replacement Program phase 1, $100,383,000, the budget request; (3) Minuteman III Propulsion Replacement Program, $25,873,000, the budget request.

The Committee directs that no funds may be reallocated between projects within either program element without prior consultation with, and notification to, the congressional defense committees.

The House allowance approved the budget requests for the strategic missile modernization and Minuteman squadrons program elements.

SAC, p. 283-284

TITLE: THREAT SIMULATOR DEVELOPMENT APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$40,075	49,075	40,075	45,075	45,075	45,664	41,075

HASC:
Threat simulator development

The budget request included $7 million in PE 604256F for threat simulator development for the real-time electromagnetic digitally controlled analyzer processor (REDCAP) to continue software improvements. The committee recommends an additional $9 million for a total of $16 million to complete software upgrades; to transition existing voice and data links and radars to a new computer architecture; to establish common data and modeling baselines for threat integrated air defense systems; and to support B-2 testing.

HASC, p. 119

HAC:

RDT&E MANAGEMENT SUPPORT
THREAT SIMULATOR DEVELOPMENT

The Air Force requested $40,075,000 for threat simulator development. The Committee recommends $45,075,000, an increase of $5,000,000 only for REDCAP options "C" and "E" upgrades.

HAC, p. 238

SAC:
Threat simulator development.-The Committee provides $45,664,000, an increase to the budget request of $5,589,000 and an amount $589,000 above the House recommendation.

The Committee deletes $4,000,000 to slow the pace of upgrades to the Air Force electronic warfare evaluation simulator [AFEWES]. The Air Force may make substantial adjustments in its test and evaluation infrastructure, so accelerated modernization efforts are premature at this time.

The Committee adds $9,589,000 to the budget request for the real-time electromagnetic digitally controlled analyzer and processor [REDCAP] project. The Committee directs that the full amount, $16,589,000, shall be made available only to complete the option C upgrade of the REDCAP facility, to initiate the option E REDCAP upgrade; and to perform data reduction updates.

The Committee provides $912,000, the budget request amount, only to continue activities under the Have Note Program.

The Committee also approves the requested amount, $2,000,000, only to fully fund ongoing activities at the Rome Laboratory Antenna Measurement Facility.

Furthermore, the Committee is aware of proposals to consolidate threat hardware-in-the-loop electronic combat test facilities at a single site. Data linking, rather than moving, facilities could prove to be far more efficient and cost effective. Therefore, at least 120 days prior to the approval of any effort to consolidate, transfer, realign, alter, or downsize any mission or activity at any threat hardware-in-the-loop electronic combat test facilities, the Secretary of Defense shall provide to the congressional Defense committees a study clearly demonstrating that data linking is: (1) technically infeasible, or (2) less efficient and cost effective than consolidation.

SAC, p. 293-294

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TITLE: MAJOR T&E INVESTMENT APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$53,544	53,544	48,544	51,044	53,544	52,530	52,530

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HAC:

MAJOR TEST AND EVALUATION INVESTMENT

The Committee strongly supports the Air Force's budget request to upgrade the Electronic Combat Integrated Test Facility at Edwards AFB.

HAC, p. 241

SAC:

Major T&E investment; test and evaluation support.-The Committee approves $52,530,000 for the Major T&E Investment Program element, a reduction of $1,014,000 to the budget request and an equal amount below the House allowance. The Committee also recommends $370,300,000 for the Test and Evaluation Support Program element, providing a decrease of $3,076,000 compared to the budget request and the House allocation. All of the reductions are made to the request for the developmental manufacturing and modification facility [DMMF]. These funds support modernization and operation of the DMMF. The primary DMMF customer, the 4950th Test Wing has moved to Edwards Air Force Base. The Air Force intends to transition this facility to reliance on reimbursable customer funding, and the Committee's recommendation initiates this transition.

SAC, p. 294

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TITLE: RAND PROJECT AIR FORCE APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$28,039	28,039	28,039	23,039	27,000	27,000	27,000

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HAC:

PROGRAM GROWTH/BUDGET EXECUTION ADJUSTMENTS

The budget request included amounts for some programs which exceed by unjustifiably large margins the amounts provided for fiscal year 1993 or 1994. Other programs had significant prior year unobligated balances, and budget adjustments are necessary due to poor budget execution. The Committee therefore recommends the following reductions:

[In thousands of dollars]

	Request	HASC	HAC	Change
Aerospace Flight Dynamics Exploratory Development	$64,046	$65,046	$60,000	-$4,046
Human Systems Technology Exploratory Development	52,518	52,518	49,000	-3,518
Aerospace Avionics Exploratory Development	74,673	74,673	67,000	-7,673
Civil Engineering and Environmental Quality Exploratory Development	7,045	7,045	6,500	-545
Logistics Systems Technology Advanced Development	18,200	18,200	15,000	-3,200
Aerospace Propulsion Subsystems Integration	29,941	21,941	21,941	-8,000
Aerospace Vehicle Technology Advanced Development	14,339	14,339	13,500	-839
Personnel Training and Simulation Advanced Development	9,241	9,241	9,000	-241
Electronic Warfare Technology Advanced Development	27,700	27,700	24,000	-3,700
Rand Project Air Force	28,039	28,039	27,000	-1,039
Development Planning	9,959	9,959	7,500	-2,459
Wargaming/Simulation	19,110	19,110	14,110	-5,000
Mission Planning Systems	14,483	14,483	9,483	-5,000

HAC, p. 233

SAC:

RAND project Air Force.-The Committee agrees with the House recommendation to provide $27,000,000, a reduction of $1,039,000 to the budget request, for this program element, which funds the service's studies and analyses federally funded research and development center.

SAC, p. 294

TITLE: NAV/RADAR/SLED TRACK TEST SUPPORT APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$26,023	26,023	30,023	30,023	30,023	29,123	30,023

SASC:
Sled tracks

The committee has been aware for some time that sled track capacity within the Department of Defense is greater than the Department's testing requirements. The committee received testimony on April 22, 1994 that the sled track at Holloman Air Force Base would be the focus of future DOD investments in high speed sled track facilities. This heavily utilized facility is the most capable of the DOD tracks. Therefore, the Department has initiated plans to upgrade the facility to meet future DOD requirements for high-speed sled tracks.

The committee has also been informed that the recent study of the Department's test and evaluation infrastructure conducted by the Service vice chiefs of staff has recommended the consolidation of all Air Force and Navy sled test activity at Holloman Air Force Base. The committee concurs in this recommendation.

The committee accordingly directs the Department of Defense to begin the consolidation of Air Force and Navy sled testing at Holloman Air Force Base and the closure of excess facilities as soon as possible. It directs DOD to provide a plan for this consolidation to the Committees on Armed Services of the House of Representatives and the Senate no later than December 1, 1994. The committee recommends an additional $4.0 million in PE 65708F to accelerate the modernization of the Holloman track.

SASC, p. 89

AUTH CONF:
Sled tracks

The budget request contained funding for operation of Air Force and Navy sled tracks.

The Senate bill would add $4.0 million to the Air Force sled track program. The Senate report (S. Rept. 103-282) directed the Department of Defense to consolidate all sled track testing at Holloman Air Force Base, and to accelerate modernization of the Holloman sled track.

The House amendment contained no additional funding for sled track operation.

The conferees agree to authorize an additional $4.0 million to accelerate the modernization of the Holloman sled track. However, the conferees agree that it is premature to direct consolidation of all sled track testing pending the outcome of the 1995 base closure process. The conferees agree that the reporting requirement in the Senate report is unnecessary.

Auth Conf, p. 596

HAC:

NAVIGATION/RADAR/SLED TEST TRACK SUPPORT

The Air Force requested $26,023,000, for navigation/radar/sled test track support. The Committee recommends $30,023,000, an increase of $4,000,000 only for upgrades to the Holloman AFB sled track.

HAC, p. 238

SAC:
Navigation/radar/sled track test support.-The Committee recommends $29,123,000, adding $3,100,000 to the budget request and providing $900,000 less than the House allowance. The Committee adds $4,000,000 only to accelerate the modernization of the sled track at Holloman Air Force Base. The Committee denies $900,000 sought to develop next generation pylons, an effort which has been proposed to the OSD Central Test and Evaluation Investment Program [CTEIP] for funding.

SAC, p. 294

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TITLE: INITIAL OPERATIONAL TEST & EVAL APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$33,504	33,504	28,504	31,004	33,504	33,504	33,504

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SAC:

Initial operational test and evaluation.-In the past, $6,300,000 was spent in this program element to develop an open air comparison test plan to evaluate whether the F-22's mission effectiveness is twice that of the F-15. Conducting these tests is estimated to cost $71,000,000. The Committee directs that no fiscal year 1995 funds be spent to continue such test planning activities. The Committee directs the Air Force to prepare a report outlining the advantages and disadvantages of conducting this program, and carefully discussing the impacts on the overall F-22 test program of deleting this open air test requirement. The Committee urges the Under Secretary of Defense (acquisition and technology) to consider deleting this requirement. While the test may provide some data, it is highly unlikely that the F-22 Program would be stopped or altered based on the outcome of these costly tests.

SAC, p. 294

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TITLE: TEST AND EVALUATION SUPPORT APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$373,376	373,376	373,376	373,376	373,376	370,300	370,300

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SAC:

Major T&E investment; test and evaluation support.-The Committee approves $52,530,000 for the Major T&E Investment Program element, a reduction of $1,014,000 to the budget request and an equal amount below the House allowance. The Committee also recommends $370,300,000 for the Test and Evaluation Support Program element, providing a decrease of $3,076,000 compared to the budget request and the House allocation. All of the reductions are made to the request for the developmental manufacturing and modification facility [DMMF]. These funds support modernization and operation of the DMMF. The primary DMMF customer, the 4950th Test Wing has moved to Edwards Air Force Base. The Air Force intends to transition this facility to reliance on reimbursable customer funding, and the Committee's recommendation initiates this transition.

SAC, p. 294

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TITLE: DEVELOPMENT PLANNING APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$9,959	9,959	9,959	7,500	7,500	0	7,500

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HAC:

PROGRAM GROWTH/BUDGET EXECUTION ADJUSTMENTS

The budget request included amounts for some programs which exceed by unjustifiably large margins the amounts provided for fiscal year 1993 or 1994. Other programs had significant prior year unobligated balances, and budget adjustments are necessary due to poor budget execution. The Committee therefore recommends the following reductions:

[In thousands of dollars]

	Request	HASC	HAC	Change
Aerospace Flight Dynamics Exploratory Development	$64,046	$65,046	$60,000	-$4,046
Human Systems Technology Exploratory Development	52,518	52,518	49,000	-3,518
Aerospace Avionics Exploratory Development	74,673	74,673	67,000	-7,673
Civil Engineering and Environmental Quality Exploratory Development	7,045	7,045	6,500	-545
Logistics Systems Technology Advanced Development	18,200	18,200	15,000	-3,200
Aerospace Propulsion Subsystems Integration	29,941	21,941	21,941	-8,000
Aerospace Vehicle Technology Advanced Development	14,339	14,339	13,500	-839
Personnel Training and Simulation Advanced Development	9,241	9,241	9,000	-241
Electronic Warfare Technology Advanced Development	27,700	27,700	24,000	-3,700
Rand Project Air Force	28,039	28,039	27,000	-1,039
Development Planning	9,959	9,959	7,500	-2,459
Wargaming/Simulation	19,110	19,110	14,110	-5,000
Mission Planning Systems	14,483	14,483	9,483	-5,000

HAC, p. 233

SAC:

Development planning.-This program element funds paper studies and analyses and acquisition milestone documentation. The Committee denies the budget request of $9,959,000 since the Air Force has failed to provide sufficient timely justification for these activities. The House allowance denied $2,459,000 of the request.

SAC, p. 290

APPN CONF:

DEVELOPMENT PLANNING

The conferees direct that none of the funds provided may be used for the proposed Counterair, Future Electronic Warfare, and Space Control studies. The conferees note that a study on Cheyenne Mountain architecture is a more urgent requirement than any of these. The conferees further agree that the Air Force should not-without prior consultation with, and notification to, the Committees on Appropriations-reprogram any funds into this program element, reallocate funds between studies, or begin any new study.

Appn Conf, p. 126

TITLE: MINUTEMAN SQUADRONS APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$151,675	151,675	151,675	151,675	151,675	0	0

HASC:
Minuteman squadrons

The budget request included $151.675 million in PE 101213F for programs designed to extend the operational life of the Minuteman III intercontinental ballistic missile (ICBM) beyond 2020. The committee recommends the amount requested, but directs that none of the funds authorized for project 4210 (Propulsion Replacement Program) may be expended until the Secretary of the Air Force submits a report to the congressional defense committees stating that the Air Force System Acquisition Review Committee has approved a program: to remanufacture solid fuel stages to correct identified age-related degradations; to maintain existing weapon system reliability; to support Minuteman III life extension; and to describe the cost, schedule and performance aspects of that program.

The committee also directs the Secretary of Defense to submit a report to the congressional defense committees on the cost, safety, arms control and operational effectiveness issues associated with equipping some or all of the Minuteman III force with Mark 21 reentry vehicles. The report shall be submitted no later than February 15, 1995.

HASC, p. 117

SAC:
Strategic submarine and weapons system support.-This program element funds enhancements to the Trident I and II missiles and weapons systems aboard U.S. strategic nuclear ballistic missile submarines. Several adjustments are recommended.

First, the Committee approves the use of $2,100,000 of fiscal year 1994 funds in the fleet ballistic missile systems project to permit the Navy and the Air Force to accomplish a state-of-the-art technology survey, an industrial base assessment, and a technical program plan to support a reentry vehicle [RV] industrial base sustainment program for both submarine-launched and land-based intercontinental ballistic missiles. These funds are sufficient to support efforts during fiscal years 1994 and 1995. No other use of the funds is approved.

The Committee has recommended approval of $2,500,000 in an Air Force program element only to permit the Navy and the Air Force to identify andassess critical attributes to maintain ICBM-unique and SLBM-unique reentry vehicle industrial base capability.

Second, the Committee recommends a total of $29,223,000, a reduction of $23,138,000 to the budget request and an amount which is $8,138,000 below the House allowance, for this Navy program. The recommendation denies three new starts: $15,000,000 to begin the RV Industrial Base Sustainment Program, $6,038,000 to begin a Trident ownership reduction initiative, and $2,100,000 for a propellant program.

The RV activity is premature until the basic planning is accomplished with the fiscal year 1994 funds approved above and the fiscal year 1995 funds approved in the Air Force program element. The ownership cost reduction initiative and the propellant project are unjustified until the Congress has had the opportunity to assess the results of the nuclear posture review and the fiscal year 1996 budget request with respect to Navy strategic programs. The future of the C-4 Trident I missile and the size of the D-5 Trident II missile force are sufficiently uncertain to suggest caution in beginning initiatives which may not be required under future policy and budget plans.

SAC, p. 262 (Navy)

Strategic missile modernization; Minuteman squadrons; intercontinental ballistic missile [ICBM] modernization (demonstration/validation); ICBM modernization (engineering/manufacturing development).-The Committee has become concerned that Air Force programs to maintain and improve the capabilities of the Minuteman ICBM force are not sufficiently coordinated. There also are indications that the service's acquisition and operations communities, which share management and oversight responsibility for these programs, may disagree on the most effective approach to execute this multibillion-dollar activity.

The Committee further understands that there may have been instances in which operations and maintenance and procurement funds were used for research and development purposes, and in which projects were begun without necessary requirements documentation, acquisition decisions, and adequate provision for test and evaluation of the proposed product.

The Committee recommends a restructuring of the management and program elements arrangements for these programs to enable the Air Force to better manage, coordinate, and make tradeoffs among these activities, and to permit Congress to obtain maximum oversight and awareness of them.

The Committee recommends eliminating all funds in the Minuteman squadrons and strategic missile modernization program elements and reallocating them into two new program elements for ICBM modernization demonstration/validation and engineering and manufacturing development. The Committee directs that all future funding for these activities must be requested in these new program elements, which are to be managed by the Air Force as an integrated major acquisition program under the authority of the Assistant Secretary of the Air Force for Acquisition.

The Assistant Secretary also is directed to review promptly and thoroughly all ongoing Minuteman programs at the Silo Based ICBM System Program Office and determine whether any funds have been used inappropriately and contrary to established acquisition guidelines. The Assistant Secretary is directed to report to the congressional defense committees on these matters no later than March 1, 1995.

The Committee recommends $43,206,000 and the following allocations and adjustments in the new ICBM modernization (demonstration and validation) program element: (1) ICBM guidance applications, $12,650,000, the budget request; (2) ICBM propulsion applications, $301,000, the budget request; (3) ICBM reentry vehicle [RV] applications, $2,500,000, a decrease of $8,439,000 to the budget request; (4) Reentry System Launch Program [RSLP] $23,827,000, an increase of $12,000,000 to the budget request; (5) ICBM command and control applications $301,000, the budget request; and (6) long-range planning, $3,627,000, the budget request.

As addressed and governed by the discussion in the Navy RDT&E section of this report, the Committee directs that the $2,500,000 provided in the ICBM RV applications project shall be used only to permit the Air Force and the Navy to identify and assess critical attributes to maintain ICBM-unique and submarine-launched ballistic missile-unique RV industrial base capability. The Committee further directs that the services include in their assessments a thorough examination of the prospects and utility of establishing a cost-sharing program with private industry to finance any RV industrial base sustainment program.

The funds added to the RSLP project will support acceleration of the efforts to develop a relatively low cost space booster alternative primarily for small scientific payloads.

The Committee recommends $148,048,000 and the following allocations in the new ICBM modernization (engineering and manufacturing development) program element: (1) Minuteman rapid execution and combat targeting [REACT], $21,792,000, the budget request; (2) Minuteman III Guidance Replacement Program phase 1, $100,383,000, the budget request; (3) Minuteman III Propulsion Replacement Program, $25,873,000, the budget request.

The Committee directs that no funds may be reallocated between projects within either program element without prior consultation with, and notification to, the congressional defense committees.

The House allowance approved the budget requests for the strategic missile modernization and Minuteman squadrons program elements.

SAC, p. 283-284

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TITLE: F-111 SQUADRONS APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$11,019	1,504	11,019	2,819	11,019	1,504	4,671

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HASC:

F-111 squadrons

The budget request included $10.015 million in PE 207129F, project 1930, for program termination actions associated with the stores management system because the Air Force plans to eliminate the F-111F from its force structure. An additional $5.073 million is projected for termination actions in fiscal year 1996. The committee recommends a total of $500,000 for program termination.

HASC, p. 135

AUTH CONF:

F-111 squadrons

The budget request contained $11.019 million for F-111 squadrons research and development (PE 27129F).

The Senate bill would authorize the requested amount.

The House amendment would approve only $1.504 million because of unanticipated savings in the termination of the stores management system project.

The conferees agree to authorize $2.819 million, including $2.5 million to correct deficiencies found during initial flight testing of the digital flight control system modification.

Auth Conf, p. 597-8

HAC:

OPERATIONAL SYSTEMS DEVELOPMENT

F-111 SQUADRONS

The Air Force requested $11,019,000 for development of improvements to the F-111 aircraft. The House Armed Services Committee proposed a reduction of $9,515,000 to the request based on revised pricing from the Air Force on the termination costs for the stores management system which was terminated when the Air Force decided to retire all F-111 aircraft by 1999. Rather than reducing the budget to eliminate these excess funds, the Committee recommends $9,515,000 to be used only for development of safety modifications which are needed for F-111 aircraft before they are retired in 1999 or for the EF-111 fleet. The Committee directs that none of these funds be obligated until 30 days after the Secretary of the Air Force submits a report to the Armed Services and Appropriations Committees of Congress stating whether such safety modifications are needed and how the additional funds recommended by the Committee for this purpose would be used. The recommendation by the Committee to provide funds for F-111 safety modifications should not be construed to interfere with the Air Force's decisions to retire F-111F aircraft or to terminate the stores management system.

HAC, p. 239

SAC:

F-111 squadrons.-The Committee provides $1,504,000, a reduction of $9,515,000 to the budget request and the same amount below the House allowance. The Air Force reported that these funds are no longer needed to pay termination costs for the F-111 stores management system project.

SAC, p. 290

APPN CONF:

Amendment No. 98: Deletes language proposed by the Senate providing funds for the F-111 program.

Appn Conf, p. 128

TITLE: F-16 SQUADRONS APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$93,157	93,157	93,157	93,157	56,057	138,657	138,657

HAC:

F-16 SQUADRONS

The Air Force requested $93,157,000 to develop upgrades to the F-16 aircraft. The Committee recommends $56,057,000, a reduction of $37,100,000 to defer engineering and manufacturing development of the close air support upgrade to the aircraft, since over eighty percent of the fiscal year 1994 funds in this program element remain unobligated and will not be on contract until late in fiscal year 1994.

HAC, p. 239

SAC:

F-16 squadrons.-The Committee endorses $138,657,000, an increase of $45,500,000 to the budget request, for this program element, which funds development of enhancements to the Air Force's primary multirole fighter aircraft. The funds are transferred to this program element from the "Aircraft procurement, Air Force" appropriations account, where they were incorrectly budgeted. The funds support developmental flight test and evaluation of operational flight program software modifications.

The Committee also directs the Office of the Secretary of Defense to make available to the F-16 Program not less than $14,300,000 in fiscal year 1994 funds contained in the Follow-on Tactical Reconnaissance System Program element. Last year, the Congress directed that these and other funds, which were allocated originally for the terminated advanced tactical airborne reconnaissance system, be used to support F-16 development requirements. The Committee rejects the proposed reprogramming of these funds for other purposes and directs that the transfer to the F-16 Program be accomplished without further delay.

The House allowance provided $56,057,000 for this program element.

SAC, p. 290

TITLE: F-15E SQUADRONS APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$116,562	116,562	116,562	116,562	116,562	108,562	108,652

SAC:

F-15E squadrons.-The Committee recommends $108,562,000, a decrease of $8,000,000 to the budget request and the same amount below the House allowance, for this program element to fund development of upgrades for all variants of the F-15 air superiority fighter. Of the recommended reduction, the Air Force reported that $4,000,000 no longer is required in fiscal year 1995 to obtain long-lead development items for the APG-63 radar upgrade project.

An additional $2,000,000 was identified as excess to other known program financial requirements, and $2,000,000 was budgeted to absorb expected congressional reductions. The Committee is happy to fulfill the Air Force's expectations.

The Committee also directs that no funds may be obligated for any activities promoted by the Eagle Vision F-15 improvement studies without prior consultation with, and notification to, the congressional Defense committees.

SAC, p. 290

TITLE: MANNED DESTRUCTIVE SUPPRESSION APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$38,422	38,422	38,422	38,422	38,422	37,422	37,422

SAC:
Manned destructive suppression.-This program element supports development of the systems needed to permit the F-15C aircraft to succeed the F-4G Wild Weasel as the Air Force's primary weapon to attack air defense radars and surface-to-air missiles. A 3-month delay in awarding the demonstration/validation contract in fiscal year 1994 permits the Committee to recommend a short postponement in initiation of the engineering/manufacturing development [EMD] contract. This postponement, from late fiscal year 1995 to early fiscal year 1996, will enable Congress to review the conclusions of an updated cost and operational effectiveness analysis and to assess any revised program plans based on the demonstration/validation phase results.

Thus, the Committee recommends $37,422,000, a deletion of the $1,000,000 in the budget request sought to begin EMD next fiscal year. The House did not reduce this program element.

SAC, p. 290-1

APPN CONF:

F-15 MANNED DESTRUCTIVE SUPPRESSION OF ENEMY AIR DEFENSES (MDSEAD)

The Conferees recommend $37,422,000 only to continue the development of systems for follow-on MDSEAD. The Air Force's SEAD Cost and Operational Effectiveness Analysis and the F-15 SEAD Demonstration/Validation and HARM Integration programs all provide substantial objective data for the Congress and the Defense Department to consider in planning and budgeting for future SEAD programs. The Conferees direct the Air Force to execute the MDSEAD Demonstration/Validation program that was planned in the fiscal year 1995 budget request.

Appn Conf, p. 126

TITLE: TRI-SERVICE STANDOFF ATTACK MISSILE APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$81,063	81,063	81,063	218,600	0	218,600	135,600

HASC:

Brilliant anti-armor submunition

The budget request contained $109 million for the brilliant anti-armor (BAT) submunition for fiscal year 1995.

The committee has recommended the termination of the tri-service stand-off attack missile (TSSAM) program. The committee believes that the multiple launch rocket system (MLRS) should be evaluated as an alternative vehicle for the BAT.

Accordingly, the committee recommends authorization of $119 million for BAT for fiscal year 1995, including an additional $10 million in PE 604768A for the incorporation and evaluation of BAT on MLRS.

HASC, p. 89 (Army RDT&E)

Tri-service stand-off attack missile

The budget request contained $82.5 million for research and development for the Tri-Service Stand-off Attack Missile (TSSAM) for fiscal year 1995.

The statement of managers accompanying the conference report on the National Defense Authorization Act for Fiscal Year 1994 (Public Law 103-160) (H. Rept. 103-357), terminated the Army's participation in this program for cost reasons. Since that time, the program has become even more unaffordable due to continuing cost and developmental problems. Given the existence of the acceptable and less costly extended range ATACMS alternative, the committee recommends authorization of no funds for the TSSAM with the intent to terminate it with prior year funds.

HASC, p. 93 (Army RDT&E)

Tri-service stand-off attack missile

The budget request contained $66.662 million in PE 604312N for research and development of the Tri-Service Stand-off Attack Missiles (TSSAM) for fiscal year 1995.

The committee notes that this program has become unaffordable due to continuing cost and developmental problems. The standoff land attack missile expanded response (SLAM ER) is an acceptable and less costly alternative to the TSSAM. Therefore, the committee recommends no authorization of funds for TSSAM with the intent to terminate the program with prior year funds.

HASC, p. 108 (Navy RDT&E)

AUTH CONF:

Tri-service standoff attack missile

The budget request contained $66.7 million for the Navy, and $81.1 million for the Air Force, to continue development of the tri-service standoff attack missile (TSSAM). The budget request also contained $373.9 million in procurement to begin low-rate initial production of the Air Force's combined effects bomblet (CEB) version of the missile. Finally, the budget request included $82.5 million to pay for termination charges to cancel the Army portion of the program.

The House amendment would cancel the TSSAM program. The House amendment would eliminate the Air Force production funds, and all research and development funds except those requested for the Air Force. The House report (H. Rept. 103-499) directed the Department to use prior-year funds and the requested Air Force research and development funds for any termination costs. The House report based this decision on continuing cost and developmental problems in the TSSAM program, and the availability of less costly alternatives.

The Senate bill would approve the amounts requested for Air Force and Navy research and development, but would reduce Air Force procurement by $65.8 million. The Senate report (S. Rept. 103-282) directed that none of the fiscal year 1995 production funds be obligated until the testing program has: (1) achieved all contractual exit criteria for proceeding to the next phase of the program, and (2) passed the standards set forth in the classified annex to the statement of the managers accompanying the conference report on the Department of Defense Appropriations Act for Fiscal Year 1994 (H. Rept. 103-339). The Senate report noted that $50.0 million of the funds requested for the Army would be excess to termination requirements, and recommended a similar reduction.

The conferees believe that the capability promised by TSSAM is important for use in future conflicts. However, the conferees, adhering to a "fly-before-buy" philosophy, believe that the Air Force budget should reflect the current testing delays. The conferees recommend no missile procurement funds in fiscal year 1995, which will delay production until testing can demonstrate the expected performance and reliability.

The conferees agree to provide $20.0 million to fund the latest estimate of Army program termination costs, $66.7 million in Navy research and development funds to continue Navy participation in the program, and $218.6 million in Air Force research and development funds to support a restructured TSSAM development program.

The conferees are well aware of the technical problems that continue to plague the TSSAM program. Moreover, the conferees are disappointed with the overall management of the program.

Therefore, the conferees recommend a budget for TSSAM that would implement a plan proposed by the Air Force to restructure the development program in several ways:

(1) cancel production of the CEB variant missile;

(2) complete the engineering and manufacturing development of the CEB and unitary warhead variants of the missile;

(3) convert existing operational test assets to conduct additional developmental testing; and

(4) purchase 15 additional unitary warhead missiles to conduct operational testing with more "production representative" missiles.

Although this restructuring will delay production, additional testing will also provide more confidence in the Air Force's assessment that the improvements in various program management indicators are yielding results in improved flight reliability. The conferees believe that any restructuring should:

(1) protect the government's rights to hold the contractor team accountable for performance;

(2) provide additional work to hold the contractor team together until procurement of the unitary warhead variant of the missile can begin; and

(3) allow the contractor team to demonstrate that the team has been able to solve the process control problems that have plagued the program.

The Secretary of the Air Force is directed to implement the restructured development program described above in a manner that: (1) contractually provides for any increased scope of work independent of the current scope of work, and (2) preserves all rights the government may have under current contracts for the TSSAM program.

The conferees are interested in delaying production only so long as is required to demonstrate performance. The conferees direct the Air Force to implement this restructured program and provide the funds necessary to carry out the plan in the Future Years Defense Program.

Auth Conf, p. 598-599

HAC:

TRI SERVICE STANDOFF ATTACK MISSILE

The Air Force requested a total of $604,058,000 for the Tri Service Standoff Attack Missile, of which $230,183,000 is for research and development and $373,875,000 is for missile procurement. "Tri-service" is a misnomer since only the Navy and Air Force remain in the program. Last year, the Committee described TSSAM as an acquisition horror story and recommended, as it has done in each of the last four years, that this troubled program be terminated. During the last year, the program has gotten worse. More flight test failures have occurred, other flight tests have been delayed, and none of the $160,000,000 appropriated for procurement in fiscal year 1994 can be used to purchase missiles before the fiscal year ends. The Committee notes that the ever optimistic Air Force has requested production funds since 1988 for TSSAM and has yet to produce a single operational missile. The House Armed Services Committee in its 1995 report recommends that TSSAM be terminated. The Committee concurs with the Armed Services Committee's funding recommendations and also denies all fiscal year 1995 funds requested for Air Force RDT&E. In denying the request to appropriate RDT&E funds for termination costs of the TSSAM, the Committee directs the Secretary of Defense to transfer excess fiscal year 1994 procurement funds to the RDT&E appropriations to cover all termination costs.

HAC, p. 201

STREAMLINING THE ACQUISITION PROCESS

The Committee understands that the Army has adopted an innovative new approach to acquisition. The Army stated at its Research, Development, Test and Evaluation hearing this year that "acquisition programs take too long and the cost of inefficiencies in the acquisition system is a price we can no longer afford to pay". The Army has decided to streamline the acquisition process by emphasizing concurrent development and production, early integration of test and evaluation, and extensive early simulation. The Army also plans to obtain commercial products where possible, use commercial specifications and standards, and eliminate paperwork and reports. The Army provides two examples of programs on which the streamlined acquisition process is being implemented: the Comanche helicopter and the Advanced Field Artillery System (AFAS) and the companion Future Armored Resupply Vehicle (FARV).

The Committee agrees with the Army about the need to shorten and improve the acquisition process. However, the Army's effort to streamline the acquisition process may be premature. OSD is supportive of the acquisition reform legislation which Congress is currently considering, but has not yet passed. Until such legislation is passed, the Committee believes the Army should adhere to existing acquisition practices.

Furthermore, other services have attempted to incorporate elements of the Army's acquisition improvement in their acquisitions, frequently with great detriment to the program. For example, the B-2 Bomber, the C-17 aircraft, and the Tri-Service Standoff Attack Missile are all examples of acquisitions that used concurrent development and production. All three programs have experienced significant cost growth, schedule slips, or both. A more recent example is the Clementine program, a joint NASA/DOD effort that launched a sensor-laden satellite after only 2 years and at a cost of only $80 million. The satellite initially worked well and was touted as an example of the benefits of streamlined acquisition. Recently, however, the satellite has experienced technical problems and has spun off course. Clearly, streamlined acquisition can lead to some of the problems it attempts to prevent.

The Committee is also concerned that the Army is applying its new acquisition approach to some of its most significant research and development efforts, instead of first testing it out on less critical programs. The Army has selected the Comanche and the AFAS/FARV, two of the Army's most important programs, to streamline first. The Committee is sympathetic to the Army's need to control costs now in order to fully fund acquisitions in the future, but is concerned about the possible detrimental effects of streamlining these important programs.

Finally, the Committee expresses these concerns for all the services and any attempts they are making on streamlining the acquisition process before acquisition reform legislation has been enacted.

Therefore, the Committee requests that the services notify the Committee of each exception to DOD Directives 5000.1, 5000.2, and 5000.2-M for any of their research and development programs, along with a justification comparing the acquisition as it would have been under the above DOD Directives to the proposed acquisition process, including: schedule, acquisition milestones, number of test articles and tests, and anticipated cost savings. The services should continue such notification until the acquisition reform initiative is complete and all implementing legislation is enacted.

HAC, p. 202-203

SAC:

Tri-Service standoff attack missile.-The Army's fiscal year 1995 budget request includes $82,458,000 for Tri-Service standoff attack missile [TSSAM] termination liabilities. The Committee recommends providing $19,671,000 for these activities in fiscal year 1995, a reduction of $62,787,000 from the budget request.

The General Accounting Office has reported to the Committee that in November 1993, the Army estimated TSSAM termination costs to be approximately $126,000,000, which the Army planned to fund in fiscal years 1994 through 1996. However, in May 1994, the project manager revised the termination cost estimate to $62,200,000. Since the Army has already released approximately $43,000,000 of the funds appropriated in fiscal year 1994, the General Accounting Office estimates that only $19,671,000 will be needed in fiscal year 1995.

SAC, p. 241 (Army)

Tri-service standoff attack missile [TSSAM].-This program element funds the Navy role in development of a family of highly survivable, conventional, stealthy cruise missiles which can be launched by aircraft well away from adversary air defenses. In the past, the program has enjoyed strong support from the operational commanders-in-chief.

The Committee recommends $116,662,000, an addition of $50,000,000 to the budget request. These funds are necessary for any Navy efforts to support the Air Force's proposal to restructure the program to reduce technical risks and production transition uncertainties. The House allowance denied all funds for continued TSSAM development.

SAC, p. 260 (Navy)

Tri-service standoff attack missile [TSSAM].-This program element supports development of a family of highly survivable, conventional, stealthy cruise missiles which can be launched by aircraft well away from adversary air defenses. In the past, the program has enjoyed strong support from the operational commanders-in-chief.

The Committee recommends $218,600,000, an addition of $137,537,000 to the budget request. These funds are necessary to support the Air Force's proposal to restructure the program to reduce technical risks and production transition uncertainties. The funds will be used to obtain more missiles to support extended development flight testing.

The House allowance denied all funds for continued TSSAM development.

SAC, p. 291

APPN CONF:

TRI-SERVICE STANDOFF ATTACK MISSILE (TSSAM)

The conferees recognize the unique, potential war-fighting capabilities of TSSAM as the Defense Department's most sophisticated stealthy, conventional standoff weapon. Accordingly, the conferees approve the budget request for the Navy's continued participation in the program. Funds also are provided for Army costs to terminate its efforts in the program.

The conferees also agree to provide $135,600,000 for the Air Force's TSSAM activities. That amount does not include $43,000,000 sought for a possible request for equitable adjustment (REA) from the contractor which the Air Force does not think is owed and does not know when or whether such a request will be submitted. Another $40,000,000 proposed by the Air Force for a cost reduction initiative is not provided since the results of a new, special TSSAM affordability review now underway are not available and need to first be communicated to the Congressional defense committees. The affordability review is intended to identify major costs savings for the program.

The conferees strongly support the objective of achieving significant cost reductions in the TSSAM program, and understand the requirement for the payment of any valid, fully adjudicated request for equitable adjustment. Therefore, the conferees direct that the $86,184,000 in excess, fiscal year 1994 TSSAM procurement funds be retained only as possible reprogramming sources for these TSSAM program purposes. The Defense Department is encouraged to submit any such reprogramming requests expeditiously after the Air Force receives the results of the affordability review and after agreement is reached on any validated, adjudicated REA.

The conferees direct that the results of the special affordability review be submitted not later than February 1, 1995, along with any recommendations by the Under Secretary of Defense (Acquisition and Technology) as to which specific cost reduction actions will be implemented.

Appn Conf, p. 126-7

TITLE: TACTICAL AIM MISSILES APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$26,944	26,944	26,944	0	0	0	0

HASC:
AIM-9X missile

The committee assigns a high priority to the development of the AIM-9X as rapidly as is technically feasible and recommends full-funding for the purpose. The committee notes that the assessment of AIM-9X program directed by the Senate Appropriations Committee report on H.R. 3116 (S.Rept. 103-153) has not been submitted. In the absence of that assessment, the committee believes that the on-going British advanced short-range air-to-air (ASRAAM) program should be considered as a candidate for the AIM-9X mission, if it can adequately meet U.S. requirements at a lower cost.

HASC, p. 100 (Navy RDT&E)

SASC:
Short range air-to-air missile development

The Navy and Air Force are seeking to make a major improvement in the capability currently fielded in the AIM-9 Sidewinder missile. The committee understands that very sensitive security requirements are associated with such a program. Nevertheless, the committee believes that the Department should take all reasonable steps to ensure that friendly governments and their missile candidates are given every opportunity to meet the Department's required capabilities.

SASC, p. 84 (Navy RDT&E)

HAC:

AIM-9 SIDEWINDER MISSILE

The Navy requested $22,376,000 and the Air Force requested $26,944,000 for development of upgrades to the AIM-9 Sidewinder missile. As Congress has done for the last five years, the Committee denies funds in the Service appropriation accounts and appropriates instead an equal total amount in the Defensewide account. This is recommended to ensure that both Services develop and use only a single, common missile. The Committee commends the Defense Department for its recently announced acquisition strategy for development of a new Sidewinder missile, called AIM-9X, which allows evaluation of NATO ally systems as part of the demonstration/validation phase of the program.

HAC, p. 201

SAC:
Air systems and weapons advanced technology.-The Committee approves $7,881,000, a reduction of $22,412,000 for this program element. The Committee denies two new start projects: (1) $6,000,000 for strapdown seeker technology for guided projectiles; and (2) $2,691,000 for advanced airframe/structures for advanced short-range missiles.

The first project is premature until the Army and Navy reconcile their ongoing separate activities in this area, eliminate duplication, and establish a joint precision guided munitions program for advanced projectiles. The second project is unnecessary since the Navy and Air Force already have begun a costly development program for a new AIM-9X advanced short range air-to-air missile. The baseline airframes for AIM-9X already are established and developed.

The Committee's other modifications to this program element are related to the Joint Advanced Strike Technology [JAST] Program and are discussed in the "Principal committee observations" section of this report.

The House allowance recommended $33,572,000 for this program element.

SAC, p. 255 (Navy)

Tactical air intercept [AIM] missiles.-This program element funds the Navy's share of the joint program with the Air Force to develop an upgraded short-range, air-to-air missile, known as the AIM-9X. The Committee agrees with the House recommendation to transfer funds requested in separate Navy and Air Force RDT&E program elements to a consolidated program element under the authority of the Office of the Secretary of Defense [OSD]. Accordingly, the Committee transfers $22,376,000 from this program element.

SAC, p. 263 (Navy)

Tactical AIM (air-intercept) missiles.-This program element funds the Air Force's share of the joint program with the Navy to develop an upgraded short-range air-to-air missile, known as the AIM-9X. As it did with the Navy funding, the Committee agrees with the House recommendation to transfer funds requested in the separate service RDT&E Program elements to a consolidated program element under the authority of the Office of the Secretary of Defense. Accordingly, the Committee transfers $26,944,000 from this program element.

SAC, p. 291

AIM-9 Consolidated Program.-In their respective RDT&E budget requests, the Air Force and Navy sought funds to pay their separate shares of the joint program to develop an upgraded short-range air-to-air missile, known as the AIM-9X. As stated in the "RDT&E, Navy" and "RDT&E, Air Force" sections of this report, the Committee agrees with the House recommendation to transfer these funds to this consolidated program element under the authority of the Office of the Secretary of Defense. The total provided in this program element is $49,320,000.

The Committee commends the efforts of the principal Deputy Under Secretary of Defense (acquisition and technology) and the Assistant Secretary of the Navy (research, development, and acquisition), and their respective staffs for their responsiveness in addressing the Committee's position about potential international participation in the AIM-9X Program. The Committee appreciates the support by the other congressional defense committees of its position, now adopted in the Pentagon's AIM-9X acquisition strategy, that AIM-9X alternatives from allied nations be considered for meeting U.S. Navy and Air Force requirements.

SAC, p. 322

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TITLE: ADV MED RANGE A/A MSL (AMRAAM) APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$70,715	70,715	70,715	70,715	70,715	59,015	70,715

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SAC:

Advanced medium range air-to-air missile [AMRAAM].-The Committee allocates $59,015,000, a reduction of $11,700,000 to the budget request and the same amount below the House allowance, for this program element. The Air Force identified these funds as no longer needed to support fiscal year 1995 activities due to emerging results of the cost and operational effectiveness analysis of technology development options.

SAC, p. 291

TITLE: AF TENCAP APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$21,183	21,183	21,183	21,183	13,402	21,183	21,183

SASC:

Mission planning imagery

The Department of Defense, with the Air Force in the lead role, has been developing capabilities to process medium-resolution imagery to create a digital data base for mission planning. The Air Force has used imagery primarily from the French SPOT satellite, and had planned to utilize the high-resolution multi-spectral imaging (HRMSI) sensor being developed for the Landsat satellite. The HRMSI sensor has been terminated, and the ability of the future version of Landsat to satisfy mission planning and other mapping requirements of the Department of Defense is doubtful. However, U.S. industry now plans to develop commercial imaging satellites, and Russia is offering a range of imagery products commercially. In the future, a joint U.S.-Russian venture plans to market high-quality multi-spectral imagery from the Almaz 1B satellite.

The Committee directs the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence to coordinate the definition of requirements for medium-resolution imagery for mission planning, mapping, charting, and geodesy, and develop a phased acquisition plan. This plan shall be submitted to the congressional defense and intelligence committees by April 1, 1995.

SASC, p. 90

HAC:

AIR FORCE TENCAP PROGRAMS

The Air Force has requested $21,183,000 for Air Force TENCAP programs. The Committee recommends $13,402,000, a decrease of $7,781,000. The Committee notes that the Air Force TENCAP program has and continues to increase substantially since fiscal year 1994. The Committee directs the Department of the Air Force to submit a detailed plan for the fiscal year 1995 request by August 1, 1994.

HAC, p. 52

TITLE: AIRBORNE WARNING & CNTL SYS (AWACS) APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$85,643	85,643	85,643	85,643	85,643	85,643	85,643

APPN CONF:

AIRBORNE WARNING AND CONTROL SYSTEM (AWACS)

The conferees agree with the Senate's recommendations with respect to upgrades for the U.S. and NATO AWACS aircraft. However, the conferees agree that these restrictions do not apply to non-major, low cost activities, such as reliability and maintainability efforts and man-machine interface (MMI) improvements. The restrictions do apply to the initiation of any major development project, including the beginning of contractor risk reduction studies for such purposes.

The conferees also do not agree to the restriction on obligations proposed by the House for cooperative engagement. The conferees direct the Chief of the Joint Chiefs and Staff to submit a report to the Congressional Defense Committees by February 1, 1995 on the Defense Department's plan to incorporate cooperative engagement capability on the AWACS fleet.

Appn Conf, p. 127

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TITLE: THEATER BATTLE MANAGEMENT (TBM) C4I APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$33,957	33,957	33,957	33,957	33,957	25,957	29,957

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SAC:

Theater battle management [TBM] C^4I.-The Committee recommends $25,957,000, a decrease to the budget request of $8,000,000 and an equal amount below the House allocation.

The Committee denies $6,000,000 to begin version 7 of the contingency theater automated planning system [CTAPS]. The Air Force should complete and test version 6 before initiating a concurrent software upgrade. The Committee is also concerned that developmental and operational test and evaluation [DT&E and OT&E] occur after virtually all CTAPS systems are procured. The Air Force must resolve this disconnect. Either the tests are perfunctory and a poor use of limited funds or the procurement funds are premature until the system demonstrations have provided adequate confidence to proceed with purchases.

The annual software releases of the supporting development effort, the wing command and control system, do not match the CTAPS software version release schedule. This program also now includes the command and control information processing system [C^2IPS] project. The Air Force needs to review the plans to avoid haphazard software releases which could pose interoperability problems.

Like CTAPS, the C^2IPS Program also includes concurrent software development efforts. Therefore, the Committee deletes $2,000,000 to defer C^2IPS increment 4 until the increment 3 effort has been completed and validated.

SAC, p. 282-3

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TITLE: USAF WARGAMING AND SIMULATION APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$19,110	19,110	19,110	19,110	14,110	19,110	14,110

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HAC:

PROGRAM GROWTH/BUDGET EXECUTION ADJUSTMENTS

The budget request included amounts for some programs which exceed by unjustifiably large margins the amounts provided for fiscal year 1993 or 1994. Other programs had significant prior year unobligated balances, and budget adjustments are necessary due to poor budget execution. The Committee therefore recommends the following reductions:

[In thousands of dollars]

	Request	HASC	HAC	Change
Aerospace Flight Dynamics Exploratory Development	$64,046	$65,046	$60,000	-$4,046
Human Systems Technology Exploratory Development	52,518	52,518	49,000	-3,518
Aerospace Avionics Exploratory Development	74,673	74,673	67,000	-7,673
Civil Engineering and Environmental Quality Exploratory Development	7,045	7,045	6,500	-545
Logistics Systems Technology Advanced Development	18,200	18,200	15,000	-3,200
Aerospace Propulsion Subsystems Integration	29,941	21,941	21,941	-8,000
Aerospace Vehicle Technology Advanced Development	14,339	14,339	13,500	-839
Personnel Training and Simulation Advanced Development	9,241	9,241	9,000	-241
Electronic Warfare Technology Advanced Development	27,700	27,700	24,000	-3,700
Rand Project Air Force	28,039	28,039	27,000	-1,039
Development Planning	9,959	9,959	7,500	-2,459
Wargaming/Simulation	19,110	19,110	14,110	-5,000
Mission Planning Systems	14,483	14,483	9,483	-5,000

HAC, p. 233

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TITLE: MISSION PLANNING SYSTEMS APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$14,483	14,483	14,483	14,483	9,483	14,483	14,483

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HAC:

PROGRAM GROWTH/BUDGET EXECUTION ADJUSTMENTS

The budget request included amounts for some programs which exceed by unjustifiably large margins the amounts provided for fiscal year 1993 or 1994. Other programs had significant prior year unobligated balances, and budget adjustments are necessary due to poor budget execution. The Committee therefore recommends the following reductions:

[In thousands of dollars]

	Request	HASC	HAC	Change
Aerospace Flight Dynamics Exploratory Development	$64,046	$65,046	$60,000	-$4,046
Human Systems Technology Exploratory Development	52,518	52,518	49,000	-3,518
Aerospace Avionics Exploratory Development	74,673	74,673	67,000	-7,673
Civil Engineering and Environmental Quality Exploratory Development	7,045	7,045	6,500	-545
Logistics Systems Technology Advanced Development	18,200	18,200	15,000	-3,200
Aerospace Propulsion Subsystems Integration	29,941	21,941	21,941	-8,000
Aerospace Vehicle Technology Advanced Development	14,339	14,339	13,500	-839
Personnel Training and Simulation Advanced Development	9,241	9,241	9,000	-241
Electronic Warfare Technology Advanced Development	27,700	27,700	24,000	-3,700
Rand Project Air Force	28,039	28,039	27,000	-1,039
Development Planning	9,959	9,959	7,500	-2,459
Wargaming/Simulation	19,110	19,110	14,110	-5,000
Mission Planning Systems	14,483	14,483	9,483	-5,000

HAC, p. 233

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TITLE: THEATER MISSILE DEFENSES APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$79,302	79,302	79,302	27,302	27,302	17,002	27,302

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HAC:

THEATER MISSILE DEFENSES

The Air Force requested $79,302,000 for theater missile defenses. The Committee recommends $27,302,000, a reduction of $52,000,000 for boost phase intercept. The Committee believes that if this program is pursued by the Defense Department, it should be structured to meet joint service requirements and be subject to the priorities and disciplines inherent in the Ballistic Missile Defense program for which this bill provides about $2,750,000,000.

HAC, p. 239

TITLE: DEF SAT COMM SYS APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$30,876	30,876	21,476	21,476	0	30,876	14,876

HAC:

TRANSFER OF MAJOR SPACE PROGRAMS

As discussed elsewhere in the report under Space and Related Programs, a total of $1,096,150,000 has been transferred from RDT&E, Air Force to RDT&E, Defense-Wide. Details of the transfers are as follows:

Program	P.E.	Amount of Transfer
Advanced Spacecraft Technology	0603401F	$24,200,000
Space System Environment Interactions Tech.	0603410F	4,200,000
Space Test Program	0603402F	62,064,000
Advanced MILSATCOM	0603402F	22,095,000
DMSP Block 6	0603434F	7,601,000
Satellite Systems Survivability	0603438F	8,531,000
Advanced Space Based TW/AA	0603441F	150,000,000
MILSTAR LDR/MDR SatCom	0604479F	607,248,000
UHF Satellite Communications	0303606F	20,879,000
DSCS	0303110F	30,876,000
Medium Launch Vehicles	0305119F	21,042,000
Upper Stage Space Vehicles	0305138F	3,663,000
Titan Space Launch Vehicles	0305144F	4,000,000
DMSP	0305160F	21,135,000
NAVSTAR GPS (Space & Control Sys)	0305165F	51,125,000
Defense Support Program	0305911F	47,351,000
NUDET Detection System	0305913F	10,140,000

HAC, p. 233-234

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TITLE: MIN ESS EMERG COMM NETWORK (MEECN) APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$40,795	35,795	40,795	35,795	35,795	34,195	34,195

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HAC:

COMMITTEE RECOMMENDATIONS

AUTHORIZATION CHANGES

The Committee recommends the following changes in accordance with authorization action:

[In thousands of dollars]

	Request	HASC	HAC	Change
Command, Control and Communications Exploratory Development	$95,444	$85,444	$85,444	-$10,000
Nuclear Weapons Support	5,637	3,637	3,637	-2,000
C-17	221,454	105,154	105,154	-116,300
Systems Survivability (Nuclear Effects)	2,786	0	0	-2,786
Submunitions	26,680	12,680	12,680	-14,000
MEECN	40,795	35,795	35,795	-5,000
Information Systems Security Program	10,293	11,793	11,793	+1,500

HAC, p. 233

SAC:

Minimum essential emergency communications network [MEECN].-This program element finances enhancements to systems used to communicate with U.S. strategic nuclear forces. The Committee recommends $34,195,000, a reduction of $6,600,000 to the budget request. The funds are available due to termination of the dual frequency MEECN receiver [DFMR] project in favor of a less costly and complex modification of existing miniature receive terminals [MRT].

The MRT's will be installed in Air Force E-4B national command post aircraft and Navy E-6A take charge and move out [TACAMO] communications/command post platforms. The recommendation fully funds the $8,800,000 needed to develop modifications for the MRT's and the $14,100,000 needed in the high data rate project to adapt that capability to the MRT substitute.

The House allowance reduced this program element by $5,000,000.

SAC, p. 291

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TITLE: INFORMATION SYSTEMS SECURITY PROGRAM APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$10,293	11,793	10,293	11,793	11,793	10,293	11,793

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HASC:

Trusted RUBIX

The committee recommends an additional $1.5 million in PE 303140F for continued development of the trusted RUBIX project.

HASC, p. 119

HAC:

COMMITTEE RECOMMENDATIONS
AUTHORIZATION CHANGES

The Committee recommends the following changes in accordance with authorization action:

[In thousands of dollars]

	Request	HASC	HAC	Change
Command, Control and Communications Exploratory Development	$95,444	$85,444	$85,444	-$10,000
Nuclear Weapons Support	5,637	3,637	3,637	-2,000
C-17	221,454	105,154	105,154	-116,300
Systems Survivability (Nuclear Effects)	2,786	0	0	-2,786
Submunitions	26,680	12,680	12,680	-14,000
MEECN	40,795	35,795	35,795	-5,000
Information Systems Security Program	10,293	11,793	11,793	+1,500

HAC, p. 233

TITLE: MILSTAR SAT COMM SYS (AF TERMINALS) APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$18,249	18,249	18,249	18,249	18,249	18,249	18,249

SASC:

Satellite communications

The National Defense Authorization Act for Fiscal Year 1991 directed the Secretary of Defense to terminate the Milstar communications satellite program or restructure it to reflect changing military requirements and reduced defense budgets. The committee concluded that the requirements for Milstar at that time placed excessive emphasis on survivability in a prolonged strategic nuclear war and insufficient emphasis on the needs of tactical, conventional military forces. In addition, the committee believed that the program was too expensive. The committee's position prevailed and forced the Department of Defense to fundamentally restructure the Milstar program.

This restructuring eliminated nuclear warfighting capabilities and other outdated capabilities, dramatically improved capabilities to support the tactical, conventional forces of the Army and Navy, reduced the constellation size from eight to six satellites, and reduced life-cycle costs by 25 percent. As a result, the Army and the Navy, and the combatant commands charged with responding to regional security threats, became strong supporters of the Milstar program.

Subsequently, former Secretary of Defense Cheney further reduced costs substantially by reducing the constellation size from six satellites to four. Secretary Cheney also approved requests to Congress for funds to begin to develop a smaller and cheaper satellite to perform the Milstar mission early in the next century. This satellite concept would have used miniature electronics and other advances not available when Milstar was first developed, and would have led to the development of a "common bus" for a variety of communications payloads. In the appropriations process, however, Congress denied these requests for several years, on the grounds that such efforts were premature given that the first Milstar satellite had not been launched.

The Bottom-Up Review (BUR) conducted by Secretary Aspin specifically reaffirmed the need for Milstar despite its cost. The BUR addressed the following specific issues: whether Milstar was affordable; whether an advanced satellite concept could be developed in time to eliminate the requirement for all or some of the planned Milstar satellites; and whether DOD could do without the capabilities Milstar would provide until the advanced system could be fielded. The BUR concluded that the technologies for replacing Milstar with a cheaper satellite were not mature enough to accelerate appreciably and that DOD tactical forces could not wait another 10 years for jam-resistant satellite communications. The BUR also concluded that the advanced satellite concept initiated by the previous Administration should be vigorously pursued and should replace Milstar by the middle of the next decade. This action resulted in additional cost savings in the Milstar program, so that Milstar now will cost less than half of its projected cost in fiscal year 1991. The committee believes that the BUR examined the right issues and the committee accepts the BUR findings.

However, the General Accounting Office (GAO) has asserted that the advanced extremely high frequency (EHF) satellite planned to replace the Milstar series can in fact be accelerated by at least several years at acceptable risk; therefore, DOD could forgo procurement of the last two Milstar II satellites. The committee directs the Secretary of Defense to assess the GAO findings and report to the congressional defense committees at the earliest possible date, but no later than December 15, 1994.

The committee is convinced that the jam-resistant digital communications provided by Milstar are very important to tactical, conventional forces and that no near-term alternative to Milstar could provide this capability. The committee is also convinced that Milstar would have been canceled abruptly if it had not been strongly supported by the Chairman of the Joint Chiefs of Staff, the Army, the Navy, and the combatant commands for the tactical capabilities it now provides.

The committee does believe, however, that the Milstar program management should be changed from the Air Force to the Navy. When Milstar ceased to be primarily a strategic nuclear system, and the strategic threat receded dramatically, the Air Force lost interest in the program because it provides little additional

capability to deployed tactical air wings. The Air Force faces a very minimal jamming threat to its air bases located in the rear. In contrast, the Navy and the Army must operate in close proximity to enemy forces, and must have protected communications.

The Air Force has proposed termination of the Milstar program many times in recent years, over the objections of the other Services, the Office of the Secretary of Defense, and the combatant commands. When the Air Force wasn't trying to undermine the program, it was complaining about having to pay for the system by itself, without contributions from the other Services. The Air Force has taken this position even though it always argues that it should be the lead Service for all space programs. Indeed, most recently, the Air Force has proposed that it become the sole acquisition authority for space programs. The committee doubts that Air Force actions on the Milstar program will inspire confidence within the Department that the Air Force can be trusted with a monopoly on funding and managing space programs of common concern.

The committee recommends a provision that would require the Secretary of Defense to shift management of the Milstar program to the Navy over the next year. The provision also would require the Secretary to transfer all programmed outyear resources along with the program management responsibility.

The committee notes that replacements for the defense satellite communications system (DSCS) and the ultra-high frequency follow-on (UFO) satellite will have to be deployed around the same time as the advanced extremely high frequency (EHF) Milstar follow-on. The committee believes that DOD must seriously address the issue of consolidating these separate satellite systems and frequency bands on a common satellite, or at least a common bus, and manage them in an integrated fashion. The committee believes furthermore that DOD must seriously examine the military requirements that must be met by a dedicated military satellite and those that could be met by buying or leasing commercial satellites. DOD also must determine the long-haul communications for regional conflicts that must be carried by satellite and those that could be shifted to the emerging global fiber-optic cable network. Finally, DOD must determine the extent to which future military satellites will be dedicated to serving mobile, battlefield users within a theater.

DOD currently plans to develop an operational requirements document and an architecture for the advanced EHF system over the next several years. The committee believes that DOD should instead expand this effort to address the issues raised above. The committee directs the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence to submit a report on this expanded study by March 1, 1996.

The fiscal year 1995 budget request included $9.4 million to begin development of an improvement to the existing DSCS satellites. This improvement would at best be available for deployment on only the last few satellites in the DSCS III constellation, and would cost several hundred million dollars to acquire. The committee believes that the benefits of this initiative do not justify the cost and that there are other higher priority problems facing the Department of Defense. The committee therefore recommends no authorization for this program.

SASC, p. 122 (Defense-wide RDT&E)

TITLE: SATELLITE CONTROL NETWORK APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$101,146	101,146	101,146	101,146	15,000	101,146	83,000

HAC:

AIR FORCE SATELLITE CONTROL NETWORK

The January 1994 roles and missions study of the U.S. Space Command identified the potential for consolidating the Air Force and Navy satellite control networks. However, while the U.S. Space Command is performing a more detailed study to determine the most efficient and cost effective solution, the Air Force is planning a costly incremental upgrade to its network.

The Air Force Satellite Control Network (AFSCN) performs tracking, telemetry, and command functions for 84 satellites. Operations are manually intensive, requiring a large number of highly skilled personnel, and are therefore costly. The GAO has reported to the Committee that the AFSCN centralized computer system is limited in data processing capacity, resulting in an inability to handle planning and real-time operations data simultaneously. The computer system also lacks standardization and interoperability across several satellite systems.

Despite estimates that a new system could be developed for $1 billion, the Air Force plans to spend $1.5 billion over the next five years to upgrade and modify the current system. In addition, U.S. Space Command does not plan to develop an architecture for satellite control as the Joint Chiefs of Staff tasked it to do. According to the GAO, the reason is because of its present inability to implement an architecture for Cheyenne Mountain Upgrades.

In comparison, the Navy Satellite Control Network (NSCN) is a more modern design-a full generation ahead according to one Air Force expert-than AFSCN, but its use will substantially decline by 1997 because the TRANSIT navigational satellite is scheduled to be phased out, and only the GFO satellite is scheduled to be added.

For fiscal year 1995, the Air Force requested a total of $283,857,000 in P.E. 35110F for improvement and modernization of the AFSCN. The request consisted of $101,146,000 for RDT&E, $25,810,000 for Other Procurement, $144,719,000 for O&M, and $12,182,000 for Military Personnel. Of this request, the Committee recommends deleting $256,675,000 until (1) the U.S. Space Command completes its study and provides an architecture, implementation plan, and milestones for achieving consolidation and (2) the Air Force performs a cost and operational effectiveness analysis of alternatives to the existing network that includes a new acquisition using advanced technologies, the Navy's architecture, and a long-term incremental upgrade approach. The Committee also directs the Secretary of Defense to consolidate Air Force and Navy satellite control capabilities and strive toward satellite control convergence with national and civil agencies.

The GAO reports that there is also a potential for performing more cost-effectively the space surveillance mission to detect, track, identify, and catalog all man-made objects in earth orbit. The U.S. Space Command is analyzing requirements and capabilities of existing Air Force, Navy, and Army sensors to perform the mission. The overall goal of the study is unclear. The Committee directs the Secretary of Defense to ensure that the study assesses the most cost effective ways of performing the mission.

HAC, p. 43

AIR FORCE SATELLITE CONTROL NETWORK

As discussed elsewhere in this report under Space and Related Programs, $144,719,000 has been deleted from modernization of the Air Force Satellite Control Network.

HAC, p. 93 (O&M)

SATELLITE CONTROL NETWORK

The Air Force requested $101,146,000 for the Satellite Control Network. As discussed elsewhere in this report under Space and Related Programs, the Committee recommends $15,000,000, a reduction of $86,146,000.

HAC, p. 239

APPN CONF:

SPACE PROGRAMS

The conferees agree: (a) to fully fund the STEP-3 satellite attack warning and assessment flight experiment in the Space Test Program; (b) to delete $16,000,000 from the Defense Satellite Communications System due to termination by DOD of the beam forming network modifications; (c) that the prior approval of the Committees on Appropriations must be obtained before obligating any funds for enhancements or modernization of the Air Force Satellite Control Network, that $60,000,000 be withheld from obligation pending receipt of that approval, and that none of the reduction to the AFSCN shall be assessed against any activities or upgrades associated with SCN installations in the state of Hawaii; (d) not to close one Titan IV launch pad on the east coast in fiscal year 1995 as proposed by the House; (e) that $100,000,000 provided for the space-based infra-red Heritage Sensor satellite program not be obligated until the Space Acquisition Executive presents a detailed plan addressing requirements, cost, schedule, and technical risks, and consults with and notifies the Committees on Appropriations; (f) that the $30,000,000 provided for reusable space launch vehicle technology should be included in program element 0603401F; and (g) that the funds provided for the Have Gaze project may only be used for continuing the basic technology efforts and may not be used for initiating or conducting any flight test program.

Appn Conf, p. 127-128

TITLE: AIR TRAFFIC CONTROL, APPROACH, AND LAND SYSTEM (ATCALS) APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$7,566	7,566	0	7,566	7,566	0	7,566

SASC:
Air traffic control and landing system

The budget request included $7.6 million for microwave landing system (MLS) avionics development. The Federal Aviation Administration recently announced that the MLS program would be terminated and that a GPS-based precision landing system would be developed instead. In light of this decision, the committee recommends termination of the DOD MLS program.

SASC, p. 90

SAC:
Air traffic control, approach, and landing system [ATCALS].-The Committee agrees with the Senate version of the National Defense Authorization Act for Fiscal Year 1995, which denied the $7,566,000 sought in this program element for the military microwave landing system avionics project. The Federal Aviation Administration recently decided that the Microwave Landing System Program, with which the military avionics were supposed to interface, would be terminated, and that a global positioning system-based precision landing system would be developed.

The House allowance approved the budget request.

SAC, p. 291-292

TITLE: MEDIUM LAUNCH VEHICLES APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$21,042	121,042	21,042	21,042	0	21,042	21,042

HASC:
Space launch modernization

The committee notes the Department's continued delay in formulating a space launch modernization plan. The Department appears resigned to accepting increasingly expansive access to space to meet its launch requirements, while the U.S. commercial space launch industry continues to struggle to retain a declining share of the global launch market.

The committee believes that, with the right leadership and management approach, many of the factors contributing to high costs, unresponsiveness in meeting launch requirements, and less than desired system reliability and operability could be ameliorated. The committee believes that the Ballistic Missile Defense Organization's success with both the DC-X technology demonstrator and the Clementine satellite provides evidence of the kind of leadership and management that can again make the United States a leader in space launch vehicle development.

Several factors contribute to the current situation:

(1) No one in charge. At present, no single organization or individual has the responsibility and authority to reconcile the requirements and costs of satellite and space launch. Consequently, payload developers are frequently allowed to establish satellite requirements without sufficient regard to payload size and cost. In addition, responsibility for launch system development and operation is shared among many departments and agencies.

(2) Launch costs. Launch system users often are not required to pay all direct and indirect costs to launch their payloads. Consequently, users do not have the incentive to reduce payload size and complexity. As a result, launch costs are driven by low use-rate, extremely high cost systems such as Titan IV.

(3) The acquisition system. As with most Department programs, proposed launch system programs take a decade or more to develop, having had large program offices, and often fail to achieve inflated claims of program goals.

As the Department marks time, the traditional expendable launch vehicle manufacturers and the space industry entrepreneurs have presented a variety of options for new, upgraded, and "leap-frog" approaches to reducing the costs and improving the reliability and responsiveness of military, civilian, and commercial access to space.

In summary, the space launch acquisition system has numerous shortcomings, but there appears to be readily available options to make significant, affordable improvements in space launch capability. Accordingly, section 211 of the bill would direct the Secretary of Defense to take several actions. First, the Secretary would be required to centralize oversight of DOD launch requirements and other users to preclude inflated requirements from escalating current and future launch costs.

Second, the Secretary would be required to begin and complete a program to replace or consolidate the current fleet of medium and heavy expendable launch vehicles with new or upgraded expendable and reusable launch vehicles. The committee believes the Secretary should begin a program that will evaluate and select

for development industry proposals to either upgrade the Atlas or Delta expendable launch vehicles, or to use other innovative approaches such as the use of upgraded solid rocket motors to provide medium and heavy lift capability.

The committee recommends an additional $100 million in PE 305119F for this purpose. The committee believes that the Department should also pursue an aggressive technology demonstration program to demonstrate the high return "leap-frog" potential of reusable launch vehicle technologies. The committee recommends an additional $100 million in PE 603401F for this purpose and recommends the Secretary take advantage of the innovative management team and approach demonstrated in the DC-X program.

Third, the Secretary would be required to encourage and evaluate innovative acquisition, technical, and financing solutions for providing affordable, operable, reliable, and responsive access to space.

The committee notes that it has not received the Space Launch Modernization Plan required by section 213 of the National Defense Authorization Act of 1994 (Public Law 103-160) or the Administration's space launch vehicle policy directive. The committee understands that the draft Space Launch Modernization Plan fails to meet legislative requirements as it does not provide a "plan," milestones, or a "roadmap," for space launch modernization, but is simply a series of options for space launch modernization.

Finally, the committee understands that the Administration is likely to recommend that another executive agency be assigned responsibility for reusable launch vehicles. The committee recognizes the prerogative for such action. The committee, however, intends to authorize funding for a reusable launch vehicle program only if it is executed by the Department of Defense. The committee notes that jointly managed, cost-shared space launch programs have not been models of success.

HASC, p. 117-119

SASC:

Space launch

The National Defense Authorization Act for Fiscal Year 1994 required the Secretary of Defense to provide to Congress a space launch modernization road map. The Secretary has provided a report to Congress on options, but plans to wait until fiscal year 1996 to submit a detailed modernization plan since the report was completed after submission of the fiscal year 1995 budget request. The committee believes that the report, as submitted, provides a sufficient basis for initiating action in fiscal year 1995.

The Secretary's report recommends that a division of labor should be established between DOD and the National Aeronautics and Space Administration (NASA). DOD should be assigned lead responsibility for expendable launch systems while NASA should take the lead in developing technology for reusable launch vehicles. Given the dismal history of joint DOD-NASA space programs, the committee firmly believes that funding and management responsibilities must be clearly demarcated. Accordingly, the committee recommends a provision that would transfer to NASA funds appropriated for fiscal year 1994 for single-stage rocket technology that remain unobligated or unexpended.

DOD believes that, given current budget limitations, the only realistic near-term modernization option is to improve and evolve existing launch systems. DOD believes that it would take at least $5.0 billion to develop a new expendable launch system. The committee agrees that alternative approaches could result in lower costs, but understands that they would be riskier and would require unconventional acquisition strategies. The committee therefore endorses the product-improvement option, with the stipulation that novel alternatives continue to be explored in the technology base.

The Secretary's report also makes clear that DOD must reduce the variety of launch vehicles it operates in order to eliminate excess industrial capacity, achieve economies of scale, and improve reliability. The logical path to this goal is through the upcoming competition for additional medium launch vehicles. Selecting a single launch vehicle for both medium- and heavy-lift requirements also will make improvements more affordable. The committee supports this strategy, but only on the condition that the competition not be restricted to current producers of medium- and heavy-lift vehicles and that innovative financing schemes are explored as part of the acquisition strategy.

With regard to heavy lift, DOD now plans to downsize the two remaining satellites that must be launched on the Titan IV within the next 10 years. By transferring these satellites to medium launch vehicles, the Air Force stands to save significant resources. After that, the National Reconnaissance Office (NRO) will be the sole user of the Titan IV. Currently, the Air Force manages and funds most of the costs of the Titan IV. The NRO asserts that it cannot reduce the size of the satellites that are launched by the Titan IV. If the Titan IV cannot be eliminated or replaced in a timely manner, the committee believes that the NRO, as the sole user, should assume responsibility for funding and managing the Titan IV. This action also would be consistent with the NRO's "cradle-to-grave" satellite management philosophy. The committee directs the Assistant Secretary of the Air Force for Space to prepare a transition plan for the Titan IV for submission to the congressional defense committees with the submission of the Fiscal Years 1996-2001 Future Years Defense Program.

The budget request included $40.9 million to begin acquisition of additional Titan IV heavy-lift launch vehicles in fiscal year 1995. The DOD Inspector General and the Air Force now agree that this action is at least several years premature. The committee, therefore, recommends a reduction to the Titan IV procurement request of $40.9 million.

The Secretary's report notes that technology base resources for expendable rocket systems are extremely limited and should be increased. The committee therefore recommends an additional $10.0 million in PE 603302F for technology development and demonstration for fiscal year 1995, and expects DOD to increase that amount in the fiscal year 1996 budget request. The committee believes that this technology base program should not be managed by the same organization that will be charged with improving existing systems and components. The committee also believes that this program should be directed toward novel systems approaches and designs and directs that this initiative be applied to concepts for liquid and solid rocket systems that do not require complex, high-performance turbomachinery. The committee makes an exception for evaluation of Russian engine technology.

SASC, p. 124

HAC:

TRANSFER OF MAJOR SPACE PROGRAMS

As discussed elsewhere in the report under Space and Related Programs, a total of $1,096,150,000 has been transferred from RDT&E, Air Force to RDT&E, Defense-Wide. Details of the transfers are as follows:

Program	P.E.	Amount of Transfer
Advanced Spacecraft Technology	0603401F	$24,200,000
Space System Environment Interactions Tech.	0603410F	4,200,000
Space Test Program	0603402F	62,064,000
Advanced MILSATCOM	0603402F	22,095,000
DMSP Block 6	0603434F	7,601,000

Satellite Systems Survivability	0603438F	8,531,000
Advanced Space Based TW/AA	0603441F	150,000,000
MILSTAR LDR/MDR SatCom	0604479F	607,248,000
UHF Satellite Communications	0303606F	20,879,000
DSCS	0303110F	30,876,000
Medium Launch Vehicles	0305119F	21,042,000
Upper Stage Space Vehicles	0305138F	3,663,000
Titan Space Launch Vehicles	0305144F	4,000,000
DMSP	0305160F	21,135,000
NAVSTAR GPS (Space & Control Sys)	0305165F	51,125,000
Defense Support Program	0305911F	47,351,000
NUDET Detection System	0305913F	10,140,000

HAC, p. 233-234

APPN CONF:

Amendment No. 167: Restores and amends House language prohibiting the acquisition of more than 47 Titan IV heavy-lift expendable launch vehicles; transferring a total of $60,000,000 to NASA, including $25,000,000 to be used only for LANDSAT 7 and $35,000,000 to be used only at Phillips Laboratory, Albuquerque, New Mexico for an Advanced Technology Demonstrator X-vehicle and to finish the original flight test program of the DC-X1 test vehicle; providing a total of $40,000,000 to begin development of a new family of medium-lift and heavy-left launch vehicles; and inserts and amends Senate language that places restrictions on military and civilian personnel who separate under an incentive program.

SPACE PROGRAMS

The conferees agree: (a) not to centralize space acquisition funding into two appropriations or to transfer to the National Reconnaissance Office funding for the fixed costs of the Titan IV program as proposed by the House; (b) that no later than March 31, 1995, the Secretary of Defense and Director of Central Intelligence shall combine all DOD and intelligence space acquisition responsibilities into one joint office under a single Space Acquisition Executive; (c) that only $10,000,000 in fiscal year 1994 Research, Development, Text and Evaluation, Defense-wide is available to be obligated for the new family of expendable launch vehicles until the new Space Acquisition Executive presents a detailed acquisition plan for the new family of launch vehicles, including annual and total costs, schedule, and technical risks; and (d) not to require the launch of Defense Support Program satellites on the space shuttle as proposed by the House.

Appn Conf, p. 162-163 (Gen Prov)

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TITLE: NATIONAL AIR SPACE SYS (NAS) PLAN APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$30,980	30,980	30,980	30,980	20,980	30,980	30,980

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HAC:

NATIONAL AIRSPACE SYSTEM

The Air Force requested $30,980,000 for its share of development of the national airspace system. The Committee recommends $20,980,000, a reduction of $10,000,000 to reflect a six month slip in the engineering manufacturing development program which occurred in fiscal year 1994 after the President's fiscal year 1995 budget was submitted to Congress.

HAC, p. 239

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TITLE: UPPER STAGE SPACE VEHICLES APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$3,663	3,663	3,663	3,663	0	3,663	3,663

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HAC:

TRANSFER OF MAJOR SPACE PROGRAMS

As discussed elsewhere in the report under Space and Related Programs, a total of $1,096,150,000 has been transferred from RDT&E, Air Force to RDT&E, Defense-Wide. Details of the transfers are as follows:

Program	P.E.	Amount of Transfer
Advanced Spacecraft Technology	0603401F	$24,200,000
Space System Environment Interactions Tech.	0603410F	4,200,000
Space Test Program	0603402F	62,064,000
Advanced MILSATCOM	0603402F	22,095,000
DMSP Block 6	0603434F	7,601,000
Satellite Systems Survivability	0603438F	8,531,000
Advanced Space Based TW/AA	0603441F	150,000,000
MILSTAR LDR/MDR SatCom	0604479F	607,248,000
UHF Satellite Communications	0303606F	20,879,000
DSCS	0303110F	30,876,000
Medium Launch Vehicles	0305119F	21,042,000
Upper Stage Space Vehicles	0305138F	3,663,000
Titan Space Launch Vehicles	0305144F	4,000,000
DMSP	0305160F	21,135,000
NAVSTAR GPS (Space & Control Sys)	0305165F	51,125,000
Defense Support Program	0305911F	47,351,000
NUDET Detection System	0305913F	10,140,000

HAC, p. 233-234

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TITLE: TITAN SPACE LAUNCH VEHICLES APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$161,096	161,096	161,096	161,096	0	153,396	153,396

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HAC:

TITAN IV TRANSFER

As discussed elsewhere in this report under Space and Related Programs, $32,000,000 is being transferred from O&M, Air Force for Titan IV launch activities.

HAC, p. 93 (O&M)

TRANSFER OF MAJOR SPACE PROGRAMS

As discussed elsewhere in the report under Space and Related Programs, a total of $1,096,150,000 has been transferred from RDT&E, Air Force to RDT&E, Defense-Wide. Details of the transfers are as follows:

Program	P.E.	Amount of Transfer
Advanced Spacecraft Technology	0603401F	$24,200,000
Space System Environment Interactions Tech.	0603410F	4,200,000
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Advanced MILSATCOM	0603402F	22,095,000
DMSP Block 6	0603434F	7,601,000
Satellite Systems Survivability	0603438F	8,531,000
Advanced Space Based TW/AA	0603441F	150,000,000
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UHF Satellite Communications	0303606F	20,879,000
DSCS	0303110F	30,876,000
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Titan Space Launch Vehicles	0305144F	4,000,000
DMSP	0305160F	21,135,000
NAVSTAR GPS (Space & Control Sys)	0305165F	51,125,000
Defense Support Program	0305911F	47,351,000
NUDET Detection System	0305913F	10,140,000

HAC, p. 233-234

TITAN SPACE LAUNCH VEHICLES

The Air Force requested $161,096,000 for Titan Space Launch Vehicles. Of that amount, $4,000,000 is for Titan II and the remaining $157,096,000 is for Titan IV. As discussed elsewhere in this report under Space and Related Programs, all funds for Titan II are being transferred to RDT&E, Defense-Wide and all funds for Titan IV are being transferred to the National Reconnaissance Office. Consequently, the entire $161,096,000 has been deleted from this appropriation request.

HAC, p. 240

SAC:

Titan space launch vehicles.-The Committee recommends $153,396,000, a reduction of $7,700,000 to the budget request, for this program element. The House allowance transferred all requested funds to the "RDT&E, defensewide" appropriations account.

The Air Force identified $2,700,000 as excess to known funding requirements and $5,000,000 as savings due to reduced overhead costs from a contractor facilities consolidation.

SAC, p. 292

APPN CONF:

Amendment No. 167: Restores and amends House language prohibiting the acquisition of more than 47 Titan IV heavy-lift expendable launch vehicles; transferring a total of $60,000,000 to NASA, including $25,000,000 to be used only for LANDSAT 7 and $35,000,000 to be used only at Phillips Laboratory, Albuquerque, New

Mexico for an Advanced Technology Demonstrator X-vehicle and to finish the original flight test program of the DC-X1 test vehicle; providing a total of $40,000,000 to begin development of a new family of medium-lift and heavy-left launch vehicles; and inserts and amends Senate language that places restrictions on military and civilian personnel who separate under an incentive program.

SPACE PROGRAMS

The conferees agree: (a) not to centralize space acquisition funding into two appropriations or to transfer to the National Reconnaissance Office funding for the fixed costs of the Titan IV program as proposed by the House; (b) that no later than March 31, 1995, the Secretary of Defense and Director of Central Intelligence shall combine all DOD and intelligence space acquisition responsibilities into one joint office under a single Space Acquisition Executive; (c) that only $10,000,000 in fiscal year 1994 Research, Development, Text and Evaluation, Defense-wide is available to be obligated for the new family of expendable launch vehicles until the new Space Acquisition Executive presents a detailed acquisition plan for the new family of launch vehicles, including annual and total costs, schedule, and technical risks; and (d) not to require the launch of Defense Support Program satellites on the space shuttle as proposed by the House.

Appn Conf, p. 162-163 (Gen Prov)

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TITLE: ARMS CONTROL IMPLEMENTATION APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$6,456	6,456	6,456	6,456	6,456	3,456	3,456

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SAC:

Arms control implementation.-The Committee allocates $3,456,000, a decrease of $3,000,000 to the budget request and the same amount below the House allowance, for this program element. Consistent with the Committee's recommendation about funding counterproliferation in the "RDT&E, defensewide" account, the action deletes funds sought for ill-defined counterproliferation efforts.

SAC, p. 292

TITLE: DEF METEOROLOGICAL SAT PROG (DMSP) APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$21,135	21,135	21,135	21,135	0	21,135	21,135

HAC:

TRANSFER OF MAJOR SPACE PROGRAMS

As discussed elsewhere in the report under Space and Related Programs, a total of $1,096,150,000 has been transferred from RDT&E, Air Force to RDT&E, Defense-Wide. Details of the transfers are as follows:

Program	P.E.	Amount of Transfer
Advanced Spacecraft Technology	0603401F	$24,200,000
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MILSTAR LDR/MDR SatCom	0604479F	607,248,000
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Medium Launch Vehicles	0305119F	21,042,000
Upper Stage Space Vehicles	0305138F	3,663,000
Titan Space Launch Vehicles	0305144F	4,000,000
DMSP	0305160F	21,135,000
NAVSTAR GPS (Space & Control Sys)	0305165F	51,125,000
Defense Support Program	0305911F	47,351,000
NUDET Detection System	0305913F	10,140,000

HAC, p. 233-234

TITLE: NAVSTAR GPS (SPACE/CONTROL SEG) APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$51,125	51,125	51,125	51,125	0	36,425	36,425

SASC:
Global positioning system

The committee is informed that the Air Force intends to issue a request for proposals (RFP) for the follow-on to the Block IIR global positioning system (GPS) satellite in January 1995. The committee is very concerned about this schedule. A number of studies are underway in the Department of Defense, some in response to congressional direction, that are designed to answer important questions on the future design and management of the GPS satellite system. Several of these studies will not even be complete by the time the Air Force now plans to issue the RFP.

The committee fully supports the GPS program. However, the committee also recognizes that DOD, civilian federal agencies, the private sector, and indeed the world will depend on this block of GPS satellites to meet a wide variety of critical and rapidly evolving navigation, guidance, and timing requirements 15 or more years in the future. The committee believes that care must be taken to ensure that mistakes are not made to jeopardize the future utility of GPS simply to meet a particular schedule. Although changes can be made to an RFP and even to a development and procurement contract, they will be more costly and uncertain if made later.

Moreover, it is already clear that DOD will have to procure additional Block IIR satellites to prevent a gap in coverage before the follow-on satellite is deployed. Adding more satellites to that purchase is certainly feasible if the schedule for the follow-on satellite is delayed. If that gap-filler procurement is large enough, in fact, it could be competed to ensure that unit costs are reasonable. The committee also notes that DOD has yet to determine how many satellites are required to fill that gap, even if it is assumed that the follow-on RFP is released as planned.

Accordingly, the committee directs the Office of the Secretary of Defense (OSD) to carefully monitor the ongoing GPS studies and ensure that the results are fully considered before allowing the Air Force to release the RFP. OSD should also scrutinize Air Force plans for gap-filler procurement to ensure that unit costs are controlled and that the size of the procurement is sufficient to eliminate coverage gaps. The committee directs the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence (ASD(C3I)) to consult with the congressional defense committees and to provide a copy of the RFPs for gap-filler satellites or for the Block IIR follow-on prior to release to industry.

The committee remains concerned about the potential for adversaries to jam GPS-aided munitions, such as the Joint Direct Attack Munition (JDAM), which DOD plans to procure by the thousands. The GPS program office believes it will be impractical to substantially alter the performance parameters of GPS spacecraft in the future. The program office believes that increased jam resistance and other improvements in system performance must be achieved through improvements to user equipment. GPS users, however, such as the JDAM program, claim that it would be too expensive to modify weapons delivery platforms to improve weapon jamming resistance. The Defense Science Board is examining such issues now. The committee directs the Under Secretary of Defense for Acquisition and Technology (USD(A&T)) to forward the DSB report to the congressional defense committees when it is completed, and to convey the actions the Department intends to take in response to the study when such decisions are made.

The committee is not persuaded that DOD has adequately defined the countermeasures threat faced by GPS users. Without a threat definition, requirements for protection cannot be justified for development. The committee directs the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence to coordinate the definition of the threat to GPS users.

In general, the committee concludes that the technique for acquiring the GPS encrypted signal is too vulnerable to disruption. In addition, the signal acquisition sequence precludes jamming hostile receivers in the vicinity of friendly forces. It is imperative that DOD find solutions to these problems.

The committee has found that a large number of separate initiatives are underway to develop new applications of GPS and new countermeasures. These initiatives are too often pursued in isolation. In addition, solutions to most problems and limitations with GPS will require a systems approach and coordination among the space, ground, and user segments of the GPS system. The committee believes that the GPS Joint Program Office should be the focal point and center of expertise for GPS initiatives. The committee therefore directs that the GPS program office, and the Office of the ASD(C3I), be made aware of all GPS-related initiatives within the Department of Defense, regardless of classification.

The committee is also concerned about the ability of the intelligence and mapping communities to provide targeting support to a major air campaign in which GPS-aided munitions are used on a large scale. Not only must many targets be located with great accuracy, but also the throughput on a daily basis would have to be enormous. The committee doubts the ability and the commitment of the intelligence and mapping communities to support this critical requirement, particularly in adverse weather conditions. The committee directs that the next Defense Acquisition Board (DAB) review of the JDAM program formally examine this issue and provide a certification to the congressional defense committees that campaign-scale, all-weather targeting support for JDAM is programmed and will be fielded on the same schedule as the JDAM program. If no such certification can be made, the committees shall be informed of the reasons why and of necessary corrective measures.

The committee directs that $10.0 million of unobligated or unexpended funds from the terminated Landsat earth resources satellite program shall be applied to upgrading the Defense Mapping Agency's digital production system to process data collected by classified imaging systems. These imaging systems are discussed in the classified annex to this report.

The committee urges the Air Force to continue its investigations of the potential benefits of developing a differential navigation and guidance capability based on the encrypted GPS P code signal.

SASC, p. 90

HAC:

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HAC, p. 233-234

SAC:
NAVSTAR global positioning system [GPS] (space and control segment).-The Committee recommends $36,425,000, a decrease of $14,700,000 to the budget request, for this program element. Denied are three new start upgrade projects which are unjustified in view of the Air Force's report that there are no major technological issues and problems with the NAVSTAR GPS satellite and ground control system.

The denied projects are: (1) $3,100,000 for space sustaining tasks; (2) $4,300,000 for mission operations support center software; and (3) $7,300,000 for an operational control segment simulator and system integration laboratory.

The House allowance transferred all requested funds to the "RDT&E, defensewide" appropriations account.

SAC, p. 292

TITLE: NCMC - TW/AA SYSTEMS APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$100,520	100,520	100,520	100,520	133,020	100,520	133,020

HAC:

CHEYENNE MOUNTAIN

The Air Force requested $100,520,000 to continue development of upgrades for the computer systems within the Cheyenne Mountain complex. The Air Force has spent billions of dollars since the mid-1970s to upgrade and operate the computers in Cheyenne Mountain with limited success. The General Accounting Office has recently provided information to the Committee which indicates that major program milestones cannot be met. This contradicts testimony from many Air Force witnesses before the Committee during the last several years that this program is finally "on-track." The Committee is particularly disturbed to find that the Air Force is declaring systems to be "operational," only to have them subsequently flunk initial operational testing. The Air Force apparently then uses O&M funds, rather than R&D funds, to correct software deficiencies. This practice hides the true cost of the upgrades from the Congress, Office of the Secretary of Defense, and leadership of the Air Force while making it appear that the Air Force is living within its $1.6 billion program cost cap that involves only investment funds. The Committee recommends $133,020,000, an increase of $32,500,000 to transfer $41,500,000 budgeted in the O&M, Air Force account for software improvements to Cheyenne Mountain computer systems to the R&D account and to eliminate $9,000,000 for SPADOC computer upgrades for the backup air warning center which have been cancelled by the Air Force. The Committee directs the Secretary of the Air Force to provide a report to the Appropriations and Armed Services Committees of Congress by February 1, 1995 on Air Force plans to successfully field computer upgrades in the Cheyenne Mountain complex. The Committee directs that no more than half of the investment funds appropriated for Cheyenne Mountain may be obligated until the Air Force develops an interface control document which defines the interfaces between all computers and sensors in or connected to Cheyenne Mountain.

HAC, p. 240

APPN CONF:

SPACE-BASED INFRARED ARCHITECTURE

The conferees also direct the Department of Defense to conduct an independent assessment of areas evaluated under the Space-Based Infrared Review panel. The review should provide a detailed assessment of the Heritage sensors ability to meet the current and objective tactical warning and attack assessment (TW/AA) operational requirements; the Heritage sensor modifications required and the associated technical risk; the cost of the associated Heritage sensor modification efforts; the estimated cost of an early warning satellite based on the Heritage sensor; and the merits, alternate approaches, and schedule impacts of conducting a demonstration or prototyping effort for the modified Heritage sensor. The conferees believe that this review should be conducted by a party without excessive linkages to the Air Force; the Intelligence community; the Alert, Locate and Report Missiles (ALARM) program; or the Brilliant Eyes program. The conferees direct all elements of the DoD to cooperate fully and provide all information necessary to conduct this review. The conferees further direct that this review be completed by February 15, 1995.

Appn Conf, p. 128

Amendment No. 167: Restores and amends House language prohibiting the acquisition of more than 47 Titan IV heavy-lift expendable launch vehicles; transferring a total of $60,000,000 to NASA, including $25,000,000 to be used only for LANDSAT 7 and $35,000,000 to be used only at Phillips Laboratory, Albuquerque, New Mexico for an Advanced Technology Demonstrator X-vehicle and to finish the original flight test program of the DC-X1 test vehicle; providing a total of

$40,000,000 to begin development of a new family of medium-lift and heavy-left launch vehicles; and inserts and amends Senate language that places restrictions on military and civilian personnel who separate under an incentive program.

SPACE PROGRAMS

The conferees agree: (a) not to centralize space acquisition funding into two appropriations or to transfer to the National Reconnaissance Office funding for the fixed costs of the Titan IV program as proposed by the House; (b) that no later than March 31, 1995, the Secretary of Defense and Director of Central Intelligence shall combine all DOD and intelligence space acquisition responsibilities into one joint office under a single Space Acquisition Executive; (c) that only $10,000,000 in fiscal year 1994 Research, Development, Text and Evaluation, Defense-wide is available to be obligated for the new family of expendable launch vehicles until the new Space Acquisition Executive presents a detailed acquisition plan for the new family of launch vehicles, including annual and total costs, schedule, and technical risks; and (d) not to require the launch of Defense Support Program satellites on the space shuttle as proposed by the House.

Appn Conf, p. 162-163 (Gen Prov)

TITLE: SPACETRACK APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$34,396	34,396	34,396	34,396	37,396	53,196	54,896

SAC:

Spacetrack.-The Committee provides $53,196,000, increasing the budget request amount by $18,800,000. The House allowance for this program element is $15,800,000 below the Senate recommendation.

Within the additional funds, the Committee directs that $12,100,000 shall be made available only to continue development of the advanced electro-optical system [AEOS], providing a much needed modernization and enhancement of the capabilities of the Air Force's Maui Space Surveillance Site [MSSS]. Furthermore, $6,500,000 of the increase shall be made available only to acquire the instrumentation necessary to support the observations assigned to the AEOS telescope. Within this amount, the Committee directs that $1,300,000 shall be available only to continue the development of an 81928192 Coude' spectrograph.

Recognizing the need for this telescope and the extreme challenge of developing a large telescope which can support the space object tracking and identification [SOTI] mission, the Committee believes an independent design review could ensure the successful deployment of AEOS. The Committee directs that experts within the National Aeronautics and Space Administration [NASA] Office of Space Science conduct an independent review of the AEOS design. The review should be led by the Director of the Space Geodesy and Altimetry Project Office. The Committee believes this review should concentrate on the ability of AEOS to perform the SOTI mission and should address such key requirements as tracking precision, jitter, alignment, telescope mirror maintenance procedures, and related subjects. The Committee directs that interim and final review results be provided to the Committee. Interim review results must be submitted not later than December 14, 1994, and final review results must be submitted by March 1, 1995. The Committee provides an additional $200,000 which shall only be available for transfer to NASA to provide funds necessary to conduct this review. The Committee directs that this transfer shall occur within 30 days of enactment of this act.

SAC, p. 292-3

APPN CONF:

SPACETRACK

The conferees agree with the Senate direction requiring a review led by the National Aeronautics and Space Administration of the Advanced Electro-Optical System (AEOS) telescope. The conferees have provided an increase of $200,000 in this program element only to fund this review and direct that these funds shall be transferred to NASA within thirty days of enactment of this Act.

Appn Conf, p. 127

Amendment No. 97: Restores language proposed by the House and stricken by the Senate which provides funds for seismic research; restores language proposed by the House and stricken by the Senate which provides funds for the National Center for Manufacturing Sciences; and inserts language proposed by the Senate on the Air Force Maui Space Surveillance Site.

Appn Conf, p. 128

TITLE: DEFENSE SUPPORT PROGRAM APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$76,351	56,351	76,351	76,351	0	67,359	67,359

HASC:
Ballistic missile early warning

The budget request contained $364.0 million for procurement of one Defense Support Program (DSP) satellite for fiscal year 1995; $76.4 million for DSP research and development; $150 million in research and development on the new ALARM (Alert, Locate, and Report Missiles) early warning satellite program; and $120 million for the Brilliant Eyes sensor satellite program.

The committee supports the early warning mission and believes that neither Congress nor the Department should take major risks in this area. The committee notes the Department's current ALARM plan assumes the program will not experience any delays. The committee is uneasy over the Department's confidence in the program timetables because even low-risk programs often experience delays. Furthermore, it does not appear that there are any acceptable backup options that would help work around ALARM delays.

The committee believes that a mission as important as ballistic missile early warning has no place for such risks. The committee cannot support a strategy that would have serious implications for early warning coverage if ALARM were even modestly delayed. The committee is mindful that the Bottom-Up Review's early warning technical support group found that there "is a high probability of a gap in Space Based Infrared coverage during system transition without Block 23 (DSP 23, 24, and 25)." The Department, however, plans to procure DSP 23 only. The committee received testimony that current U.S. abilities to detect theater ballistic missile launches and alert are inadequate. In sum, the committee concludes that the Department's early warning plans need greater assurance of success.

Accordingly, the committee recommends authorization of the full $364.0 million for procurement of DSP; $56.4 million for DSP research and development; and $150 million for research and development for the new ALARM program. In addition, the committee directs the Secretary of Defense to plan to deploy up to three extra theater missile sensors of the type selected for the ALARM quick reaction experiment, for a total of up to four. This will ensure that the United States has a robust theater missile detection capability sooner than currently planned.

Finally, the committee recommends authorization of an additional $300 million for a satellite early warning assurance fund. After the Secretary notifies the congressional defense committees of the selections, the Secretary may obligate these funds for either maintaining the option to procure DSP satellite number 24; or for accelerating development of the ALARM program leading to launch of the first ALARM satellite no later than the first quarter of 2002; or for continuing development of Brilliant Eyes; or for acquiring the three extra theater missile sensors; or for some combination of the four as the Secretary deems advisable.

HASC, p. 59-60 (AF Weapons Proc)

SASC:
Missile warning and tracking

The National Defense Authorization Act for Fiscal Year 1994 combined the requests for several ballistic missile warning and tracking programs together, reduced the requested amount, and directed the Secretary of Defense to decide which programs merited investment. The Secretary responded by limiting additional

defense support program (DSP) satellite procurement to one satellite; canceling the follow-on early warning system (FEWS); initiating a cheaper alternative to FEWS, called the alert, locate, and report missile (ALARM) program; and reduced the scope of the Brilliant Eyes mid-course tracking program.

The committee endorses these measures, but believes that problems remain in DOD missile warning programs.

According to DOD, the FEWS program was terminated because it was too expensive and the requirements for the system were excessive. However, the life-cycle cost for ALARM is estimated to be almost identical to that of the FEWS program. The explanation provided by the Air Force is that the ALARM system initially will be less capable than FEWS, but will be improved in stages to achieve virtually the same set of performance specifications that were established for the FEWS system. The initial design of ALARM will be capable of detecting dim, short-burn missiles over enough area at a given time to support the two major regional contingency strategy. The objective design, in contrast, will be able to provide such capabilities worldwide. The difference in life-cycle costs between the initial and objective systems is estimated to be on the order of three-to-four billion dollars. The missions that the objective system will be able to perform that the initial design would not are technical intelligence collection and missile proliferation monitoring.

Technical intelligence collection has previously been the responsibility of the national foreign intelligence program (NFIP). This mission was transferred to the Air Force when requirements were established for the FEWS system. The Secretary of Defense and the Director of Central Intelligence (DCI) must consider whether this mission is worth billions of dollars, whether cheaper alternatives are available to satisfy the requirement, and whether the DCI or the Secretary of Defense should be responsible for the mission. The committee directs the Secretary and the DCI to resolve this issue and to incorporate the results in the fiscal years 1996-2001 Future Years Defense Program and fiscal year 1996 budget request.

Senior Department of Defense officials have testified that there is an acceptably small risk of a gap in missile warning coverage of a major regional contingency during the transition from DSP to the ALARM system. However, this assessment does not address shortfalls in strategic missile warning and technical intelligence collection, and assumes the availability of classified capabilities for regional contingencies that are not funded. The shortfall could be in excess of $300.0 million.

Meanwhile, DOD intends to spend over $500 million on a Brilliant Eyes (BE) demonstration even though there are no plans to deploy any national missile defense capabilities, and no plans to incorporate BE into theater missile defenses. DOD also intends to spend $150.0 million on a technology demonstration for ALARM that at best could affect the design of the first block change for ALARM, which is not scheduled for launch for another 15 years. The issue is whether these funds would be better spent fixing the serious funding shortfalls outlined above or accelerating the ALARM program.

In addition, the committee notes that Congress transferred the Brilliant Eyes program to the Air Force last year because of concerns that the Ballistic Missile Defense Organization (BMDO) and the Air Force were not taking the necessary steps to ensure that BE and the next-generation missile warning satellites were integrated and complementary. The Department of Defense, however, now proposes transferring BE back to BMDO without addressing the problem identified by Congress.

Accordingly, the committee recommends:

(1) reducing the amount requested for ALARM by $31.0 million, which is the amount requested for the technology demonstration program outlined above;

(2) transferring the BE program to the Air Force, placing the funds in PE 603441F, and giving the Secretary of Defense the latitude to use the funds to correct technical intelligence and warning shortfalls, to accelerate ALARM, to continue a BE program geared to theater defense, or to continue DSP procurement; and

(3) requiring the Secretary of Defense to report to the congressional defense and intelligence committees by April 1, 1995, on his views on all the issues raised in this report.

SASC, p. 87-89

AUTH CONF:

Missile early warning and tracking

The budget request contained:

(1) $150.0 million for development of the alert, locate, and report missiles (ALARM) early warning satellite, the follow-on to the defense support program (DSP) system. Of this amount, $31.0 million was requested for a technology demonstration program;

(2) $120.0 million within the Ballistic Missile Defense Organization for development and demonstration of Brilliant Eyes (BE); and

(3) $76.4 million for further development of DSP, including new ground processing capabilities.

The Senate bill would deny funding for the ALARM technology demonstration. It would also transfer the BE program to the Air Force, and allow the Secretary of Defense to use the funds to correct technical intelligence and warning shortfalls, accelerate ALARM, continue a BE program focused on theater defense, or continue DSP procurement.

The House amendment contained a provision (sec. 141) that would provide $300.0 million for ballistic missile early warning risk mitigation. These funds could be used for continued procurement of defense support program satellite number 24, accelerated development of ALARM leading to launch of the first satellite no later than the first quarter of 2002, development of BE, acquisition of three additional interim theater missile sensors, or a combination of the above. The House amendment also would reduce the requested amount for DSP RDT&E by $20.0 million.

The House recedes.

The Department of Defense has undertaken a comprehensive review of all space-based infrared (SBIR) requirements and programs for ballistic missile detection, tracking, technical intelligence, and other ancillary missions. The conferees applaud this effort, but not that Congress has directed such an assessment every year for at least the last three years. The conferees also not that this new review follows a major assessment conducted just a year ago in the Bottom-Up Review (BUR). The BUR resulted in decisions to terminate one program, develop a DSP follow-on, and initiate another (ALARM); to terminate further procurement of DSP; and to scale back the BE program substantially.

The BUR process completely upended the fiscal year 1994 budget request, but Congress patiently provided wide latitude to the Secretary of Defense to allocate funds once the BUR was completed. Now Congress is once again in the same position. The conferees intend to provide DOD latitude in this critical area in fiscal year 1995, but their patience is wearing thin. Moreover, if the Department makes major changes in the current program, the planned deployment date of a follow-on capability could be jeopardized.

The conferees deny the $31.0 million requested for the ALARM technology demonstration program. The conferees agree to apply these funds, and an additional $19.0 million, to accelerate the advanced tactical warning and attack assessment system by two years. The conferees agree to authorize the requested amount for BE, but shift the program to the defense agencies, RDT&E account. The Secretary of Defense should determine the appropriate management organization for this program based on the ongoing review and notify the congressional defense committees within 45 days after the date of enactment of this act.

In addition, in light of the ongoing review of SBIR programs within the Department, and the potential for changes to existing programs as a result of the study, the conferees direct the Secretary to promptly report to the congressional defense committees on the results of the study, together with any recommended programmatic, budgetary, and schedule changes. Should the Secretary determine that modifications to existing programs are necessary, the conferees would consider a reprogramming request to implement any such changes.

Auth Conf, p. 644-646

HAC:

DEFENSE SUPPORT PROGRAM

At the request of the Air Force $9,000,000 has been added in procurement funds and deleted from research and development funds for the Defense Support Program.

HAC, p. 192 (Def Agencies Proc)

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HAC, p. 233-234

DEFENSE SUPPORT PROGRAM

The Air Force requested $76,351,000 for the Defense Support Program. At the request of the Air Force, $9,000,000 has been deleted from this account and transferred to Procurement, Defense-Wide. In addition, $10,000,000 has been deleted for failure to be authorized. As discussed elsewhere in this report under Space and Related Programs, the remaining $47,351,000 has been transferred to RDT&E, Defense-Wide.

HAC, p. 240-241

SAC:

Defense Support Program [DSP].-This program element supports efforts to maintain and improve the operations of the current system of DSP early warning satellites. The Committee allocates $67,359,000 for RDT&E activities and transfers $8,992,000 to the "Other procurement, Air Force" appropriations account. The Air Force requested this transfer to accelerate the initial operational capability of the Talon Shield/ALERT early warning capability against theater ballistic missile threats.

The House allowance transferred all requested funds to the "RDT&E, defensewide" appropriations account.

SAC, p. 293

TITLE: NUDET DETECTION SYSTEM APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$10,140	10,140	10,140	10,140	0	10,140	10,140

HAC:

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HAC, p. 233-234

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TITLE: KC-135s APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$5,160	5,160	5,160	5,160	5,160	17,160	23,260

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SAC:

KC-135's.-This program element funds activities to develop enhancements to the KC-135 aerial refueling tanker and other tanker systems. The Committee recommends $17,160,000, an increase of $12,000,000 to the budget request and an equal amount above the House allowance.

A total of $9,000,000 is added and shall be made available only to continue development of the multipoint refueling upgrades, pods, and drogues to enable Air Force tankers to better support U.S. Navy and allied aircraft, most of which use the probe-and-drogue fuel on-load system.

Another $3,000,000 has been transferred to the KC-135 refueling receptacles project from the "Aircraft procurement, Air Force" appropriations account, where it was inaccurately budgeted. These funds are to be used as planned for the engineering and manufacturing development effort to procure aircraft and system hardware, undertake trial installation and kit proofing, and obtain a reprocurement technical data package and technical documentation.

The Committee directs the Air Force to obligate without delay the fiscal year 1995 funds and the $5,578,000 approved by Congress for fiscal year 1994 for the multipoint project. The service also is directed to include full funding for development, procurement, and deployment of the capability in the fiscal years 1996-2001 Future Years Defense Program. The Committee directs the Air Force that the funds provided for the multipoint project are available for no other purpose. The service is directed not to reprogram any of these funds away from the multipoint project.

The Committee again finds itself compelled to question the Air Force's budget and military priorities in view of the service's reluctance to accomplish the multipoint program. The total cost of the program is about $192,100,000, which the Committee notes is less than the probable price tag for about two advanced combat aircraft in the future.

The Committee is aware of the strong support expressed for the program by the Commander-in-Chief, U.S. Transportation Command [CINC USTRANSCOM], and by the current Chief of Naval Operations [CNO] when he was Commander-in-Chief of U.S. Naval Forces, Europe.

CINC USTRANSCOM stated that "joint operations and interoperability remain two of USTRANCOM's top priorities." He continued that "multipoint pods give the KC-135 aircraft the capability to refuel Navy/Marine Corps, allied air force, and Air Force fighter aircraft on a single sortie." The CNO, when he was at Naval Forces, Europe said "future Navy operations or contingencies involving normal strike package sizes and normal ingress/egress profiles would greatly benefit from the KC-135 Multipoint Modification Program. The modification effectively reduces the time required for tanking by one-half, allowing more efficient, safer operations."

At a time when the drawdown of the American military to a smaller force structure requires more joint operations among all the services and with our allies, the Committee cannot accept the Air Force position. Air Force leaders claim they recognize these new joint requirements. The Committee directs that they allocate their budget dollars accordingly.

SAC, p. 295-6

APPN CONF:

KC-135'S

The conferees strongly support the Senate's recommendations with respect to the multi-point refueling project and the refueling receptacles project. The conferees have added $6,100,000 more to the multi-point activity to fully fund the revised budget estimate. As with the multi-point project, the conferees direct the Air Force that funds provided for the receptacles project also are available for no other purpose, and the service is directed not to reprogram any of these funds away from the receptacles activity. The conferees further direct that the Defense Department include full funding for development, procurement, and deployment of the receptacles capability in the fiscal years 1996-2001 Future Years Defense Program. Due to the high priority which they place on both the multi-point and receptacles projects, the conferees also relieve the Secretary of the Air Force from the obligation to comply with the certification requirement included in the Joint Explanatory Statement of the Committee of Conference on the Department of Defense Appropriations Act, 1994. The conferees direct the Air Force to execute both programs without any delay.

The conferees also are aware of alternative proposals for meeting the multi-point requirements. The conferees understand that these alternatives, if operationally and technically suitable and able to meet schedule and military requirements, may be considered, should the Air Force hold a full and open competition for the project.

Appn Conf, p. 125-126

TITLE: INDUSTRIAL PREPAREDNESS/MANUFACTURING TECHNOLOGY APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$0	0	50,000	50,000	95,000	48,260	84,317

SASC:

Manufacturing science and technology

The committee has traditionally supported the manufacturing science and technology program (MANTECH). Last year, the committee recommended $301.0 million for the manufacturing science and technology program and attempted to provide a statutory framework for this program that would encourage Department-wide planning, merit-based competitive selection of projects, and cost-sharing in appropriate cases. During the conference with the House of Representatives, this figure was reduced to $112.5 million because of the earmarking of manufacturing technology funds for specific non-competitive, non-cost-shared projects by other committees. The budget request for fiscal year 1995 for MANTECH is $97.0 million, the lowest in many years. This low figure reflects the Administration's loss of confidence in the program.

After much debate, the committee has decided to try one last time to work with the Department of Defense to address the real problems which the manufacturing science and technology program was intended to address, particularly in long-term, high risk research and in defense-unique applications. In doing so, the committee is mindful of the different approaches the military departments have taken to implement manufacturing science and technology programs. The committee is aware that while the Army, Air Force, and Defense Logistics Agency (DLA) rely mostly on contracts, grants to implement MANTECH, the Navy uses a combination of contracts, grants, and direct funding to centers of excellence. Since this different approach seems to work for the Navy, the committee has decided to recognize the Navy approach by funding its centers outside the manufacturing science and technology program in a separate program element. Because these centers already exist and have been set up at the request of the Navy, they will not be covered by the committee's requirement for competitive selection.

The committee welcomes the recent creation of a Defense Manufacturing Council within the Department and also welcomes the increased attention the manufacturing science and technology program is receiving from industrial associations. Ultimately, industry has an important role to play in preventing earmarking in this program and the Department of Defense should consider setting up an industry advisory group to assess this program and help keep it on track.

The committee recommends $125.0 million for the manufacturing science and technology program: $30.0 million in PE 78045A for the Army; $50.00 million in PE 78011F for the Air Force; $35.0 million in PE 65872N for the Navy, in addition to the $20.164 million requested in PE 78011N for the Navy's existing centers of excellence for manufacturing technology; and $10.0 million in PE 63705D for DLA. The committee urges the Department of Defense to require the active participation of subtier firms that produce manufacturing equipment in manufacturing technology programs.

The committee notes that it is strongly supporting manufacturing technology elsewhere in this Act, including full funding of the budget request for agile manufacturing and manufacturing technology partnerships within the technology reinvestment program, where the Administration has shown a willingness to defend a competitive, merit-based selection process.

The committee recommends a provision, which is similar to the provision recommended last year, that would provide a statutory framework for the manufacturing science and technology program. The committee has decided that if this provision is ignored or set aside this year, this will be the last year the committee recommends funds for this program.

SASC, p. 142 (Defense-wide RDT&E)

HAC:

MANUFACTURING TECHNOLOGY

The Department requested $117,221,000 for manufacturing technology, of which $20,164,000 is in the Navy account and $97,057,000 is in the OSD account. The total amount requested is less than half of the fiscal year 1994 appropriated level. The program is intended to save money by making investments in weapon system manufacturing processes that will significantly lower costs during their production. This was one of the key "lessons-learned" from the cancellation of the A-12 aircraft program, but apparently forgotten with the change of Administrations.

The Committee believes the Department's priorities are askew when it makes heavy investments in research and development of technologies, but little investment in the processes to manufacture them. The Committee, therefore, recommends a total of $227,164,000, an increase of $159,943,000 to the budget request. The following table summarizes the Committee's recommendation:

[Dollars in thousands]

	1994	Budget	HAC	Change
Army	$43,200	$0	$45,000	+$45,000
Navy	142,255	20,164	112,164	+92,000
Air Force	73,800	0	95,000	+95,000
DLA	21,850	0	25,000	+25,000
OSD	0	97,057	0	-97,057
Total	281,105	117,221	277,164	+159,943

The amounts recommended by the Committee are based on the requirements determined by the Services' manufacturing technology program managers. The Committee does not agree to the budget proposal to centrally fund those programs in an OSD account, but recommends instead that these funds continue to be managed by the services in order to closely couple the manufacturing technology programs to the needs of weapon system developments.

Within the amounts recommended, additional funds are provided only for the following projects:

	In thousands
Army:	
Center for Optics Manufacturing	4,900
Navy:	

Fiber Optic acoustic sensors	4,800
Cast ductile iron projectile and bomb programs	6,000
Center of Excellence in Ship Hull Design and Electrical Systems	1,000
National Center of Excellence for Composites Manufacturing Technology	15,500
Great Lakes Composites Consortium sonar production dome project	1,000
Joining Center	6,000
Gulf Coast Region Maritime Technology Center	5,400
Electronics Manufacturing Productivity Facility	12,000
Manufacturing Producibility Center at the Louisville, Kentucky, site of the Naval Surface Warfare Center, Crane Division	1,000
Air Force:	
National Center for Manufacturing Sciences	20,000
Cast ductile iron solidification and pattern definition	2,000
Blade tip repair	2,500
Spare parts and procurement system	1,500
DLA:	
Military sewn products	10,000
Combat rations advanced manufacturing technology demo	2,800
National Center for Tooling and Precision Components pilot project for advanced manufacturing technology utilization by small business and medium sized manufacturing companies.	1,250
Generalized Emulation of Microcircuits	5,000

Within the total amount provided to the Air Force, the Committee fully supports Manufacturing 2005 programs that were requested in the budget, and projects for rejuvenation of rotary components and plating bath rejuvenation.

The Committee directs the Navy to use $6,000,000 only for continued R&D and process verification of the cast ductile iron projectile/bomb programs as funded in the 1994 Defense Appropriations Act. This R&D will continue to investigate cost reductions through using ductile castings as well as increases in weapon fragmentation lethality. Also, the Navy will continue the development of an Automatic Finishing Machine, develop a lost foam manufacturing process for projectiles/bombs, and develop a ductile iron casting process for 500 LB and/or 1000 LB bomb bodies. R&D of extended range projectiles, guided projectiles, and ductile iron warhead optimization will be conducted and/or continued. To prevent duplication and insure maximum use of available ductile iron expertise, the current Navy chain of command as well as the program office at Dahlgren will continue to lead the development and management of all these tasks.

HAC, p. 203-205

MANUFACTURING TECHNOLOGY

The Committee denies the Department's request to initiate a centrally managed manufacturing technology development program. Funds have been provided instead in the Service appropriation accounts.

HAC, p. 252 (Defense-wide RDT&E)

SAC:

Manufacturing technology.-The Committee approves $48,260,000, an amount $46,740,000 below the House recommendation. While the Air Force did not request any funds in this account for manufacturing technology projects, $58,260,000 was sought in a defensewide program element for efforts concentrating on Air Force needs. The Committee has transferred $43,260,000 of these funds to this program element and provided an additional $5,000,000 to support projects which were to be deferred under the budgeted level of OSD funding.

The OSD Manufacturing Technology Program element also included $15,000,000 for three projects: Military production for commercial lines, manufacturing technology for multifunctional radomes, and design and manufacture of low cost composites-engine. The funds for these projects have been deleted as explained in the JAST Program discussion in the "Principal committee observations" section of this report.

Within the additional funds, the Committee directs that $2,200,000 shall be made available only to continue the competitively awarded product data exchange using STEP [PDES] application protocols for composites project, referred to as PAS-C. This research effort is designed to develop the technology required to support digital exchange of design, manufacturing, and repair data for advanced composite components and assemblies.

SAC, p. 294-5

APPN CONF:

Amendment No. 97: Restores language proposed by the House and stricken by the Senate which provides funds for seismic research; restores language proposed by the House and stricken by the Senate which provides funds for the National Center for Manufacturing Sciences; and inserts language proposed by the Senate on the Air Force Maui Space Surveillance Site.

Appn Conf, p. 128

TITLE: PROD/REL/AVAIL/MAIN PROG OFC (PRAMP) APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$6,785	7,785	6,785	6,785	6,785	6,785	6,785

HASC:
Advanced boresight equipment

The budget request included $1.4 million, $1.3 million, and $900,000 for the Army, Navy, and Air Force, respectively, for advanced boresight equipment. This new type equipment for boresight weapons systems offers considerable manpower savings for the military services. The committee recommends and additional $1.0 million each, for the Navy and Air Force in PE 205633N and PE 708026F, respectively.

HASC, p. 115

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TITLE: INTERNATIONAL ACTIVITIES APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:	$3,436	3,436	3,436	3,436	3,436	1,910	1,910

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SAC:

International activities.-The Committee approves $1,910,000, a decrease of $1,526,000 to the budget request and the same amount below the House allowance, for this program element. This program element funds Air Force participation in international fellowships, meetings, conferences, and technical exchanges. The recommendation limits funding for these lower priority activities to the current fiscal year level.

SAC, p. 296

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TITLE: ALARM DEM/VAL PROTOTYPE APPROP : 3600

	PBR	HASC	SASC	AUTH CONF	HAC	SAC	APPN CONF
DOLLARS:						222,500	0

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APPN CONF:

SPACE-BASED INFRARED ARCHITECTURE

The conferees also direct the Department of Defense to conduct an independent assessment of areas evaluated under the Space-Based Infrared Review panel. The review should provide a detailed assessment of the Heritage sensors ability to meet the current and objective tactical warning and attack assessment (TW/AA) operational requirements; the Heritage sensor modifications required and the associated technical risk; the cost of the associated Heritage sensor modification efforts; the estimated cost of an early warning satellite based on the Heritage sensor; and the merits, alternate approaches, and schedule impacts of conducting a demonstration or prototyping effort for the modified Heritage sensor. The conferees believe that this review should be conducted by a party without excessive linkages to the Air Force; the Intelligence community; the Alert, Locate and Report Missiles (ALARM) program; or the Brilliant Eyes program. The conferees direct all elements of the DoD to cooperate fully and provide all information necessary to conduct this review. The conferees further direct that this review be completed by February 15, 1995.

Appn Conf, p. 128