

Military Programs Provide High Frequency Business Opportunities

Military systems have been a major part of the electronics business for more than 50 years. From the first radio, navigation and radar systems of WWII to their complex counterparts of 2005, electronics is now an integral part of military systems, and has become one of the largest sources of technology for commercial applications. Its role as a source of jobs and profits in this industry segment may be lower, percentage-wise, than it was 20 years ago, but it is still exceedingly important to companies serving the high frequency marketplace.

The Pentagon Procurement Budget

A review of the procurement section of the FY2005 budget for the Department of Defense provides insight into the size and scope of military business. The 2005 budget shows a reduction from the past two years: \$74.9 billion, vs. \$81.1 billion in 2004 and \$79.6 billion in 2003 (see Table 1). This is anticipated after those years' increases in support of the wars in Iraq and Afghanistan. Supplemental budget requests could increase these amounts as the Pentagon continues to assess its needs, or if increased spending is required in response to global events.

Most of the reduction is in the Army's share of the budget, which is already the smallest of the three services, being just one-seventh of the total procurement budget. The Navy's portion decreases slightly, while the Air Force has a small increase in budget over the past two years. The dominance of the Air Force in US military procurement (43 percent of the total procurement budget) reflects the current administration's desire to increase the military's ability to respond quickly to threats anywhere in the world—and flying is the fastest way to move personnel and equipment. Nearly one-third of the Navy procurement budget is for aircraft, although a larger amount is designated for shipbuilding and conversion.

In the Army budget, just over 40 percent of the budget is for new hardware—aircraft, missiles and

Fiscal Year:	2003	2004	2005
Army:	\$15.8B	\$14.4B	\$11.7B
Navy:	\$27.5B	\$29.8B	\$27.7B
Air Force:	\$31.7B	\$32.4B	\$32.6B
Total:	\$79.6B	\$81.1B	\$74.9B

Table 1 · Total procurement budgets for each branch of the armed services.

vehicles. About 50 percent is designated for ammunition and "other," which includes all the routine materiel needs. Just over 10 percent of the Army budget covers ongoing programs for the destruction of chemical and other munitions, mainly in the countries of the former Soviet Union.

The Navy budget is quite different. 75 percent of the \$27.7 billion Navy procurement budget is for aircraft, weapons systems and shipbuilding (including conversions).

55 percent of the Air Force procurement budget is for aircraft and missiles. This branch also has the highest "other procurement" category, nearly three times the dollar amount of either the Navy or the Army.

A budget document should not be over-analyzed, but there are a few obvious patterns. The growing importance of the Air Force seems clear. The diminishing role of traditional ground forces is evident in the reduction of the Army budget. Although the Navy budget for procurement of hardware is the largest, the sizeable "other" category in the Air Force budget shows that both branches will be buying goods and services in similar dollar amounts.

Active Programs

The 2005 procurement budget identifies the Pentagon's plans for buying specific aircraft, missiles, vehicles, ships and a wide range of communications and command support equipment. A selected list of

programs of interest to the high frequency industry is included in Table 2. This table includes large systems of note, plus selected smaller systems. There are only a few new or dramatically increased programs.

Future Outlook

There are a number of promising new programs that have not reached the procurement stage. Development costs are included in other portions of the budget, including general categories that do not indicate the nature of the expenditure.

The next major program is the F-35 Joint Strike Fighter (JSF), to be manufactured by Lockheed Martin (Photo 1). This is a 3-service fighter (Air Force, Navy and Marines) that will have both conventional and STOL/VTOL (Short Take Off and Vertical Take Off) models. Although the program has been awarded to Lockheed Martin, it is only now being ramped up toward production.

We will report on additional programs in future reports. There are many such programs, large and small, that will have an impact on the high frequency industry, in large aircraft, missile and ships as well as



Photo 1 · The F-35 Joint Strike Fighter will be the next major program to enter production. This prototype X-35 from Lockheed Martin was the winner of a dramatic design and performance competition with Boeing.

specific communications, navigation, radar, countermeasures and battlefield management systems. The technology and business impact of these programs continues to be an important part of the industry.

Army Programs:	\$ Amount		
UH-60 Helicopter (6 units)	94.3M	NAVSTAR (GPS)	11.7M
UH-60 Helicopter modifications	131.7M	Automatic carrier landing system	12.5M
CH-47 Helicopter modifications	518.8M	ID systems	18.3M
Patriot missile system (108 units)	489.3M	Ship communications automation	159.7M
Patriot missile modifications	87.9M	Satellite communications systems	130.6M
Guided MLRS rocket (1026 units)	112.3M	Cryptologic communications systems	26.1M
HIMARS artillery rocket (37 units)	169.2M	Marine Corps communication eqpt.	388.1M
All communications and electronics	2,282.8M		
Defense satcom	99.8M		
SHF terminals	30.6M		
SMART-T	73.4M		
NAVSTAR (GPS)	40.1M		
JTRS Cluster I	121.5M		
SINCGARS	48.6M		
Long haul terrestrial comm.	23.4M		
Navy Programs:	\$ Amount	Air Force Programs:	\$ Amount
F/A-18 Hornet fighter (42 units)	2,907.5M	F-22 Raptor fighter (24 units)	3,633.8M
V-22 Osprey (8 units)	846.6M	C-17A airlift aircraft (14 units)	2,512.5M
MH-60S/R Helicopters (23 total units)	634.1M	C-130J airlift aircraft (11 units)	732.5M
Modification of aircraft (total)	1,297.2M	V-22 Osprey (3 units)	305.6M
Trident II missiles (5 units)	73.1M	HAE UAV (4 units)	287.8M
Trident II modifications	695.6M	Predator UAV (9 units)	146.6M
Other missiles	937.5M	Modification of in-service aircraft	2,016.8M
All communications and electronics	1,721.1M	JASSM missile (360 units)	148.2M
AN/SLQ-2 EW equipment	18.7M	Sidewinder missile (248 units)	52.6M
		AMRAAM missile (202 units)	107.4M
		Predator Hellfire missile (235 units)	20.0M
		Modification of in-service missiles	666.2M
		Small Diameter Bomb	29.3M
		Global Positioning System (3 satellites)	300.8M
		Defense Space Reconnaissance system	332.4M
		All electronics and telecommunications	1,625.9M
		COMSEC equipment	46.9M
		Strategic Command and Control	49.3M
		Base information infrastructure	424.0M

Table 2 · DoD budget amounts for selected military programs.