The Mudfighter faction has seen the data, but doesn't like the answers. Therefore the program is on hold—and more studies are in progress.

What's Bogging Down the AirLand Fighter?

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THE close air support fighter of the 1990s is still stuck in the bureaucratic bogs of Washington.

The Air Force has spent some $27 million already to evaluate twenty-eight different aircraft for the close air support mission. The findings point to the A-16, a variant of the F-16 multirole fighter, as by far the best choice.

In the opinion of Air Force leaders, further studies would only belabor the obvious.

Despite the hefty accumulation of data, doubters in Congress and in the Office of the Secretary of Defense (OSD) aren't satisfied. In December, the Defense Department set aside money to conduct more studies.

There is also to be a competitive flyoff, ordered by Congress, between the A-16, the A-7F, the AV-8B Harrier, and the "A-10C," a lone airplane reengined for the purposes of the flyoff.

Underlying all of this, of course, is a dispute about the basic characteristics required in a close air support airplane. The faction that disagrees most with the Air Force consists of advocates of the "Mudfighter"—a notional airplane that

Four F-16s in special camouflage green maneuver above central Texas. For this close air support demonstration, they have been outfitted with 30-mm gun pods, Pave Penny laser tracking pods, and Maverick missiles.


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83
129

would be relatively slow and simple, but heavily armored, loitering above clusters of ground troops in contact with the enemy.

The Air Force says that the Mudfighter would not survive on the battlefield of the future. Moreover, it would not provide the kind of air support the Army needs and says it wants.

The AirLand fighter needs to be fast, both to pass quickly through the lethal zones of enemy air defenses and to keep up with a composite strike force consisting of fast US and allied aircraft. Maneuverability will also be important to the AirLand fighter's survivability.

The battle, as foreseen by the Army and the Air Force, will require the attack fighter of the future to operate at increased depth—not only near the FLOT (Forward Line of Own Troops) but also beyond it and behind it. In fact, there will probably be multiple FLOTs. It will be difficult, and perhaps academic, to say exactly when close air support ends and battlefield air interdiction begins.

At an AFA symposium in Orlando, Fla., January 26–27, Gen. Larry D. Welch, USAF Chief of Staff, said that the Air Force has provided the data from all of its studies to the factions that have put the program on hold. What, then, is delaying the decision?

Except for continental air defense, all tactical air missions are to support the Army, whether it's keeping enemy fighters off the soldiers' backs, delaying or disrupting enemy forces before they can join the battle, or performing close air support. Twenty-seven percent of USAF's tactical force is committed to close air support, and half the rest are swing-role multipurpose aircraft.

"Very simple," General Welch said. "The data does not say 'Mudfighter.' No matter how you slice it, the data says 'A-16.'"

Those who want a different answer are demanding more studies.

The AirLand Battle Concept

The story begins in 1982, when the US Army introduced the AirLand Battle doctrine, its new concept of how the Air Force and the Army would meet a major enemy on a modern battlefield. After some initial wariness, the Air Force signed up to the AirLand Battle doctrine a year later, and since then has supported it vigorously.

Previous concepts of war imagined the combatant forces facing each other across a fairly clear dividing line, with most of the actual fighting done in the general vicinity of a Forward Edge of the Battle Area (FEBA).

AirLand Battle doctrine assumes

—USAF photo by MSgt. Patrick Nugent

In the air over Europe, USAF's tactical first team today consists of the A-10 close air support aircraft, the F-16 multirole fighter, and the F-15, still the world's best in the air-superiority mission. The A-10 is a superb aircraft, but too slow for the battlefield of the future. Evaluations point to the A-16 as the best possible successor to the A-10.

that the battlefield of the future will be fluid and nonlinear. It envisions deep operations by mobile forces on both sides. It predicts a high operational tempo, increased lethality, and intense use of electronic measures and countermeasures. Fighting would continue at night and in bad weather. Both the US and its European allies now define the Army corps commander's area of responsibility as extending 150 kilometers into enemy territory.

A corollary to the AirLand Battle doctrine, called the Follow-on Forces Attack (FOFA), would seek to destroy or disrupt enemy forces in rear echelons before they can be brought to bear in the conflict. Tactical airpower is the prime instrument of FOFA. It must also respond to a breakthrough by operational maneuver groups and be prepared to fight in rear-area battles.

These changes have had a significant impact on Air Force tactical requirements. Old distinctions between close air support and battlefield air interdiction have become blurred. The A-10, currently USAF's primary close air support aircraft, will be too slow and otherwise inadequate for the AirLand Battle era.

The Air Force began looking for a replacement in 1985, Lt. Gen. Michael J. Dugan—DCS/Plans & Operations, and soon to be Commander in Chief of US Air Forces in Europe—recalled for the symposium audience. In 1986, the Air Force identified the A-16 and the A-7F as alternatives. That finding, however, ran afoul of opinion in OSD, which formed a special body, the Close Air Support Mission Area Review Group, which has kept the project in the study phase since then.

Senior leaders in the Army and the Air Force are in accord about doctrine, objectives, and division of battle duties. There are some dissidents in the lower ranks of the services, but most of the sour notes are from what General Dugan called "those CAS experts on the Potomac."

Their vision of close air support, he said, is to have it "piecemealed in time and space across the front, responding to but not shaping the battlefield. Ones and twos, here and there, responsive but not necessarily effective or decisive. A [reactive] rather than a pro-active force."

General Dugan acknowledged that this view is shared by many in the junior and middle ranks of the Army, but observed that such opinions tend to change as soldiers move up in the ranks and take responsibility for broader pieces of territory.

One Army officer who definitely does not believe in using aircraft in scattered ones and twos is Army Lt. Gen. Edwin S. Leland, Jr., Chief of Staff of US European Command. He formed his opinion from experience with close air support in Vietnam and from seeing its applications elsewhere, notably as commander of the National Training Center at Fort Irwin, Calif.

It is not a good use of tactical aircraft to send them after one tank at a time, he told the symposium audience. Other weapons are better choices against "eaches." When

A Soldier's View

If mobile enemy forces break through on a fluid battlefield, AirLand fighters can be on the scene in a hurry. Airpower is best used against big targets and at critical points. Lt. Gen. Edwin S. Leland, Jr., Chief of Staff of US European Command, agrees with Air Force leaders on how tactical airpower could best support the Army in the AirLand Battle.

His views are based on the experience of several tours in Vietnam, his subsequent command of armor units up to division level, and two years as head of the National Training Center at Fort Irwin, Calif. In his present assignment, he is concerned with joint forces employment by the largest of the US unified commands.

Tactical airpower, he says, is at its best against "exposed and moving targets, [but] less effective if somebody's hunkered down in an assembly area or in a prepared defensive position." Employing attack aircraft in ones and twos with battalion task forces does not use them to best advantage.

"AirLand Battle doctrine is a maneuver doctrine," he says. "It's important that whoever attacks us not enjoy initial success. The key word is agility. We need to maneuver ourselves around the battlefield faster than [the enemy] can. The avenues of approach run both ways. If they can attack us, we can attack them."

General Leland believes that in wartime, Soviet forces would stick to their doctrine and fight the way they've trained, stacking one echelon in after another at the point of attack. Tanks and other ground weapons will dominate the engagement there. The density of air defense makes the center a risky place to employ helicopters or attack fighters.

"In that particular environment, there are lots of things that can kill [enemy] tanks," he said. "The additional little bit of good I get from aircraft may not be worth the risk. I'd rather use the aircraft a bit farther out, working a different target than the one that's being worked here [in the center] by the ground forces."

Effective uses of tactical airpower, he believes, include assailing the enemy's flanks and weighting a main attack with sheer firepower. It is unique, however, in its capacity to attack certain critical targets "such as a rocket that outranges anything we have." The Army needs ground weapons that can assault the enemy deep, he says, but "right now, the Air Force *is* FOFA [Follow-On Forces Attack]."

Also critical is USAF's ability to be on the scene in a hurry when enemy elements break through and move on the Army's flanks or back. It will not be possible to completely contain mobile forces on the fluid battlefield. "We're going to get had somewhere," General Leland says. "Tacair is very precious in responding to that."

Army attack helicopters and Air Force attack aircraft can work effectively together on many kinds of targets, he believes—even some in the enemy's rear echelons. This would be possible only if the helicopters could go in at night and over rough terrain where enemy forces are unlikely to be.

"If you overfly the enemy with a helicopter, he's got all the advantages," he said. "Helicopters make a lot of noise, and they're very obvious. It does not take a sophisticated weapon to bring one down." The intention of joint air attack is for the aircraft to achieve the mass destruction, with the helicopters policing up the singles.

Does the rank and file of the Army believe that the Air Force is serious about supporting them in the AirLand Battle? "I guess I think the answer is yes," General Leland says. "I would not have answered that way five years ago. The difference is the National Training Center.

"Out there, we rotate through all of our mechanized and armored forces that are in the United States. Every day, from just after first light until dark, seven days a week, there is close air support working with the Army.

"We have a whole generation going through one of the more impressionable times of their military experience. The Air Force is there as a major participant. That operation has done more for building confidence in the Army concerning the use of tacair than anything else since I've been around."

There may be a role for the A-7, shown here being modified at LTV's Texas plant for an "A-7 Plus" (YA-7F) configuration, in the AirLand Battle force of the future. Equipped with new engines, avionics improvements, and airframe modifications, the enhanced version will take part in the coming flyoff of close air support contenders.

employing attack fighters, he said, "use whole bunches against relatively big targets." *(For more of General Leland's thinking, see "A Soldier's View," p. 43.)*

Surveying the Options

Gen. Robert D. Russ, Commander of Tactical Air Command, told the symposium audience that the Air Force considered three broad options for close air support modernization: development of a completely new airplane, modification of the existing A-10 and A-7 fleets, and adaptation of some aircraft already in production. Criteria included performance and survivability in the AirLand Battle arena, availability in the early 1990s, and affordable cost.

The idea of an all-new airplane foundered quickly. It would take too long and cost too much. General Russ said that "it took nine years to build the F-16 and eleven years to field the A-10. It's not likely that, if we started today, we'd have a new airplane before the year 2000." The R&D costs would probably be $3 billion, he added.

Next, the Air Force explored the reengining of the A-10. The result would be an attack fighter with good effectiveness and a twenty percent gain in speed over the existing model. The attendant penalty, however, is an increase of 200 to 300 percent in fuel consumption and a sixty-four percent decrease in range. The speed would still be lower than desired.

Two A-7s are being converted to the YA-7F, or "A-7 Plus," configuration and will fly sometime this year. They will have new engines, avionics improvements, and various airframe modifications. "If the test demonstrates that it meets the operational requirements, and if the cost stays about half that of the F-16, it could be a partial solution," General Russ said.

Turning to in-production aircraft, General Russ said that the AV-8B Harrier, used by the Royal Air Force and the US Marine Corps, is an "excellent airplane." Counting costs for special support and logistics infrastructure, though, it would be more expensive than the A-7 and A-16 options, he said. Flying the same profile and carrying the same payload as an A-16, the Harrier would have thirty-five percent less range and forty percent less loiter time.

General Dugan also addressed the Harrier option, agreeing in response to a question that it would be able to operate off runways that had been shortened by bomb damage. "The typical problem is to get from where the runway is to wherever the fight is," he said. "If that's a couple of hundred miles away, no matter what size runway the AV-8B gets off, it doesn't quite get there with enough punch. The Marine problem is different. Typically, you have one Marine division and one air wing operating as a close team in a close geographic spread."

The aircraft that measures up best in all respects is the A-16. It fills all the operational requirements, is in production, and is affordable.

"The A-16 may not be the perfect solution—but it's damn close," General Dugan said. ■

—Photo by Hans Halberstadt/IDI

The Army rotates all of its Stateside mechanized and armored forces through the National Training Center at Fort Irwin, Calif. It is here that the new generation of green-suiters see for themselves how tactical airpower operates to their benefit on the modern battlefield, playing an instrumental role in FOFA (Follow-on Forces Attack).