

The Air Force thinks a variant of the F-16 can handle close air support. OSD, however, isn't so sure and wants to look at other options.

More Flak in the AirLand Battle

BY JAMES W. CANAN
SENIOR EDITOR

IN 1985, the civilian leadership of the Air Force directed the blue-suit community to get ready to develop a new aircraft that would be dedicated to the close air support mission in the 1990s as the successor to the similarly dedicated A-10.

There was more than a suggestion in that directive that the Air Force would have to slow down its Advanced Tactical Fighter program in order to make way, as a matter of fiscal and operational priorities, for the new CAS aircraft.

The reaction in the upper reaches of the uniformed Air Force was sour to say the least. The generals were not about to slight the ATF or any other blue-ribbon program in favor of pouring resources into a new CAS aircraft that might be nice to have but could be done without.

The generals were already looking to an existing fighter for conversion to the CAS mission and were bent on leaving it at that.

Supported by then-Secretary of Defense Caspar W. Weinberger, who ruled flatly against any new

program starts, the generals had their way. USAF now has a different set of civilian leaders who agree with their uniformed counterparts.

But the CAS controversy persists. It came to the surface at the Air Force Association's symposium on "The US Air Force: Today and Tomorrow" late last year in Los Angeles.

Addressing it at length were Air Force Chief of Staff Gen. Larry D. Welch, Deputy Under Secretary of Defense for Tactical Warfare Programs Donald N. Fredericksen, and Vice Commander of Tactical Air Command Lt. Gen. James R. Brown.

A-16 for Close Support?

General Welch reaffirmed USAF's view that a variant of the F-16—the A-16—will do quite nicely in the CAS mission, just as the fighter can do in the battlefield air interdiction (BAI) penetrating mission, because of its agility, speed, and weapons-delivery accuracy. The key to a CAS aircraft surviving over tomorrow's battlefields will be

In this artist's rendering, an A-16 careens low over the battlefield on an armor-assaulting mission in support of US ground troops. The Air Force plans to dedicate such ground-attack variants of the F-16 fighter to the close air support (CAS) mission and to the deeper-ranging battlefield air interdiction (BAI) mission. While the Army is said to favor this for CAS, the Office of the Secretary of Defense has doubts.



"not getting hit" rather than absorbing hits as the A-10 was designed to do, General Welch said.

Mr. Fredericksen said he fears that the F-16, even so, will be too vulnerable—"too soft"—to survive the fire from increasingly accurate and abundant guns and missiles that CAS aircraft will encounter over battlefields of the coming decade.

From TAC's point of view, General Brown said that assigning the A-16 to CAS is consistent with the command's goal of getting the most out of all tactical aircraft in the inventory by exploiting their built-in versatility. Like General Welch, General Brown also was at pains to point out that the Army, whose troops are the beneficiaries of CAS, has no quarrel with the A-16 and that USAF is committed to dedicating ten wings of CAS aircraft to the Army's call.

The AFA symposium also featured the views of other high-ranking officials on a variety of subjects. Among those officials were Commander of Air Training Command Lt. Gen. John A. Shaud, Vice Commander in Chief of Military Airlift Command Lt. Gen. Robert D. Springer, and A. Denis Clift, the Defense Intelligence Agency's Deputy Director for External Relations.

As to trainer aircraft—a topic that has also engendered controversy in recent years amid the ups and downs and, finally, the cancellation of the T-46 program—General Shaud made it clear that new trainers for would-be fighter pilots are not in the cards until the mid to late 1990s in the case of the T-37 primary jet trainer and until the year 2000 and beyond in the case of the advanced T-38 trainer.

General Springer tipped his hat to the C-5B for its having greatly increased MAC's airlift capacity. But MAC is most certainly not in the market for any more of them, he said in response to a question from the audience of aerospace industry and Air Force officials.

The C-17 "will give us capabilities unheard of before," General Springer declared, but he also cautioned that it "will require good people" to make up each C-17 crew of only three—pilot, copilot, and loadmaster—and that attracting such people and retaining them is MAC's top priority across the board.



—Photo by William A. Ford

A thick-skinned A-10 is readied for a CAS practice run. USAF believes that the going will be too tough for A-10s on CAS missions amid the heavy fire they would receive over battlefields of the 1990s.

Mr. Clift recounted Soviet advances in the strategic, space, and tactical air, ground, and naval realms. He made the point that the Kremlin's incessant buildup of all such forces seems to belie any softening of its military posture as indicated in nuclear arms talks and in the utterances of General Secretary Mikhail Gorbachev.

The DIA official took note of a number of Soviet developments that could make the US CAS mission, for example, a whole lot tougher in the years immediately ahead. Among these are new reactive armor on battle tanks that detonates incoming shells and missiles and prevents their penetration, battlefield lasers that "could soon be with Soviet forces in the field" as range-finders, "not as weapons per se," but that "could be used to damage eyes," and new Su-27 and MiG-29 fighters and a new air-to-air helicopter that pose grave threats to US and NATO aircraft in the CAS, BAI, and air-superiority missions.

In the context of all such mis-

sions, General Welch claimed that the Air Force and the Army are "in solid agreement" about the forces and weapons that USAF "needs to provide to the AirLand Battle."

For starters, he said, "we fully agree that a robust air-superiority capability is a very high priority," because "it's needed to give us the freedom of action required to provide all those other kinds of support that the Army must have—and to provide the maritime support that the sea services must have."

Lingering Controversy

General Welch acknowledged "some controversy in the close air support arena, but not," he emphasized, "between the US Army and the US Air Force," which, he noted, is "pursuing the [enhanced] A-7 as an approach to providing close air support and pursuing variants of the F-16 for close air support and battlefield air interdiction."

Elaborating on this under audience questioning, General Welch was emphatic in his opinion that "it

makes no sense to go out and build a new airplane" just for the CAS mission. In the battlefield of the 1990s, he said, a CAS aircraft will have to have the same hot-performance capabilities as those of a BAI aircraft in order to be able to elude formidable fire from ground-launched and air-launched radar and heat-seeking missiles as well as from guns of ever-higher power and ever-greater accuracy on the ground.

A CAS aircraft would not survive amid all this if it were built as "a 23-mm sponge," the Chief of Staff asserted. Rather, it will be capable of surviving only by virtue of its speed and maneuverability, which means, he said, "staying close to the target at a reasonable speed—in the vicinity of 350 knots or so"—and "handling itself at 500 knots or so."

He added: "All those characteristics that I've just described also happen to be the characteristics needed to perform the BAI mission. For one mission, you need persistence; for the other, range. Persistence is always translatable into range and vice versa.

"Having looked at all the requirements, the Air Force preference was to proceed with a variant of the F-16 for both. The Air Force role is to propose a solution. The OSD [Office of the Secretary of Defense] role is to evaluate it. There are those in OSD who thought it to be an inadequate solution, so we have gone out to contractors and have asked if there is a better solution, and we are waiting to see if it comes in. If it says you can buy an airplane at an affordable price that is substantially better than the [A-16] for CAS, then we'd be happy to look at it. . . .

"If we can get an airplane that's ten percent better, then what are we willing to pay for that extra ten percent? Let me tell you what we're *not* willing to pay for it—the ATF program or the ATB [Advanced Technology Bomber] program or the C-17 program or the AMRAAM [Advanced Medium-Range Air-to-Air Missile] program. I would much rather do the mission with a ninety-percentile airplane. I have the distinct impression that I do all my missions with no-better-than-ninety-percentile airplanes."

Answering questions, General Welch also rejected the idea of upgrading the F-4 for close air support

and of taking on the AV-8B VTOL fighter that the Marines use for that purpose. The F-4, while a "great airplane" in its time, is simply too old, and the AV-8B, even though "I like it," would be logistically cumbersome to incorporate in the Air Force and would be less suitable to USAF demands than it is to Marine Corps requirements, he said.

Tough CAS Environment

Mr. Fredericksen, who had preceded General Welch in addressing the symposium, was clearly one of those in OSD who have reservations about the A-16, even though he emphasized that "I am not among those who are pushing the simple end of the spectrum"—a cheap, low-tech CAS aircraft.

He also noted that it is "very important" for OSD and the Air Force to promote "the growth of the F-16" as an evolutionary operational fighter and as a continuing big seller in foreign markets, with emphasis on Europe.

"I love the F-16 as a fighter," Mr. Fredericksen said. "It's relatively inexpensive to buy and own. It's great on air-to-air and air-to-ground. So what's wrong with it? I just think it's too soft an airplane for CAS."

The area of the F-16 airframe that is vulnerable to 23-mm ammunition is "nine times that of the A-10," and the vulnerable area of the A-7 is "thirteen times that of the A-10," he said. Those numbers actually go up, not down, in terms of vulnerability to "smaller stuff," he said, also noting that "Soviet machine gunners are trained to shoot up in the air." "Man-portable missiles are a really tough threat, too, and are getting tougher. For example, the Stinger missile that's killing Soviet aircraft in Afghanistan is *nothing* compared to the latest version of the Stinger, in terms of resistance to countermeasures. . . .

"If you can do CAS without getting in close, that's one thing. But I don't think you can. The good guys won't call you in unless they're getting overrun, and you've got to know exactly where they are. You've got to worry about fratricide. So you've got to get down in there, and you're going to take an awful lot of fire."

Even if a CAS aircraft is fast and maneuverable, "it will get its lunch

eaten on the second or third pass," Mr. Fredericksen said, if it keeps trying to get in close and is not sufficiently thick-skinned.

The Israelis, he said, "have given up on" fixed-wing aircraft for CAS and "are doing it with helicopters. I'm not ready to do that. But we have a problem."

He also raised the point that CAS pilots would not have the luxury of always flying at night—courtesy of night navigation and targeting gear—when it is difficult to detect them, but would "have to do CAS when it's needed," often in daytime.

Despite differences with the Air Force over CAS aircraft, Mr. Fredericksen left no doubt that he champions USAF's major modernization programs and believes that they are well-managed. He described the ATF, AMRAAM, F-15, F-16, and LANTIRN (Low-Altitude Navigation and Targeting Infrared for Night) programs as indispensable to US plans for countering the Soviet tactical threat and for carrying out NATO's follow-on forces attack (FOFA) doctrine of interdicting enemy second-echelon forces.

As the OSD official who rides herd on all the services' tactical R&D and procurement programs, Mr. Fredericksen noted that unmanned vehicles "are coming in for a lot more roles" across the services as decoys and for surveillance and to determine enemy radar frequencies and to attack such radars.

"In war games over the last two years, remotely piloted aerial vehicles have played very effectively," he declared.

Among OSD's foremost tactical priorities, Mr. Fredericksen enumerated, as well, standoff missiles, survivability of air bases, cover and deception, damage repair of combat systems, more joint programs, and much greater emphasis on affordability of all systems.

Dedicated to the Army

TAC's General Brown approached the CAS affair from the standpoint that USAF's ten active and Reserve wings of A-10s and A-7s are unquestionably ill-suited "to deal with the dynamics of what we perceive the 1990s battlefield will be."

The upgraded A-7 that TAC wants—with its afterburning, tur-



An A-7D ground-attack aircraft is being stripped down at LTV's Texas plant while taking shape as the first prototype YA-7F. USAF hopes to build such enlarged and "enhanced" A-7s for interim duty as CAS aircraft in support of the Army well into the 1990s.

bofan, higher-thrust engines, forward-looking infrared system, wide-angle head-up display (HUD), ring-laser gyro, and stretched, aerodynamically enhanced fuselage—"will give us a new airplane by 1990 at half the cost of the F-16, or \$6.5 million, and will give us three and a half of the ten wings" to be devoted to close air support, General Brown declared.

Among aerospace executives at the AFA symposium, there was some hallway speculation that the Air Force, despite its best intentions, would not be able to resist the temptation to divert A-16s from CAS and employ them as fighters should the odds worsen for it in the air battle.

General Brown was not asked about this, but addressed it anyway. "We want the A-16s to be dedicated to the Army commanders, and we are going to do that," the TAC Vice Commander declared. The A-16 "will be their airplane," and "we will even give it an Army paint scheme," he said, adding:

"We are going to provide accurate and survivable attack platforms and timely and accurate airpower whenever needed to support AirLand Battle. We thoroughly understand that close air support is very important from the Army commander's point of view, and we intend to provide it."

With both the A-16 and the upgraded A-7, "we will be able to do this day and night and in adverse weather," General Brown said.

In exercises of the AirLand Battle doctrine, the General said, "the Army is asking us to put A-10s far deeper beyond the FLOT [Forward Line of Troops] than they're capable of going and surviving."

The reason, he said, is that "AirLand Battle places increasing emphasis on attacking time-sensitive targets over the full spectrum of the battlefield—so the separation between CAS and BAI has become more indistinct."

"Friendly ground forces," he continued, "have higher mobility and greater lethality of weapons"

and are in need of CAS "well beyond the FLOT."

And this requires CAS aircraft capable of getting there, doing the job, and getting back, he said.

As part of his argument against developing a new aircraft for the CAS mission, General Brown said: "Experience shows that it takes between nine and eleven years to develop and field a new weapon system."

As the A-10s are phased out of the CAS role, they will be converted to the forward air control (FAC) mission, General Brown said.

He underscored TAC's dedication to getting the ATF through development and into production as quickly and as prudently as possible. And he called AMRAAM "our number-one tactical priority" in the near term.

Phased Trainer Replacement

ATC's General Shaud claimed that his command is "producing the highest-quality pilots ever in the free world, and maybe in the whole world." He also declared that "we have turned around" the high rates of attrition of pilot trainees that have been plaguing the command. A major reason for this, he said, was the recent extension of pilot training from forty-nine weeks to fifty-two weeks, a move that helps trainees with border-line aptitudes and skills get over the hump.

At this writing, the first new aircraft planned for ATC will be an off-the-shelf business jet to serve as a TTB—tanker, transport, bomber—trainer. All such jets that General Shaud has flown can meet his basic operational requirements of "300 to 350 knots at 500 feet" and capacity for a crew of three, he said.

"So what I'm mainly interested in in those airplanes is their reliability and maintainability and their ruggedness," General Shaud declared. "You've got to remember that what I'm going to be doing with them is smoothing out the runways of central Texas—a lot more takeoffs and landings than many of the business jet manufacturers had in mind."

Acquiring the TTBs in a program that the Air Force has approved "will free up at least half of our T-38s" to join the rest of the command's T-38s as advanced trainers for fighter pilots, said General

Shaud. After that, the next order of business will be to replace the T-37s.

"We don't need to replace the T-37s and the T-38s all at once," he said.

The life-extension upgrading of the T-37s now in process "will give them another 18,000 hours," he said, thus matching the hours they have already amassed, and "will enable us to make an easy transition from them to their replacements between 1995 and 2000."

Meanwhile, he said, he is convinced that "the T-37 is a very safe airplane—the only cracks I've seen are oxidation cracks aft of the canopy—and we intend to keep it that way through the Service Life Extension Program."

General Shaud also predicted that the trainer that eventually replaces the T-37 "will look suspiciously like the T-37" and, in his opinion, will have "the side-by-side seating" that the Air Force believes is best for primary training. Such seating is "particularly useful for communicating with brand-new students or foreign students" and for such moves on the part of instructors as "reaching over and grabbing the oxygen mask."

Current plans call for replacing the T-38s "past the year 2000," he said, adding: "I love the T-38. If you can handle a T-38, you can handle any airplane in the Air Force inventory, and that's not bad." Even so, he said, "there are a couple of things I do not like about it," and one of them is that "you can't see from the back seat in a no-flaps landing, which can get very exciting at night."

General Shaud was asked for his opinion on the McDonnell Douglas/British Aerospace Hawk trainer now being bought by the US Navy.

"If I got issued a Hawk and if we did away with the T-38s, that would be great," he said. "But I don't think the Hawk would be such a good idea," he added, in getting student pilots ready to fly "the iron that we have on the ramps right now."

Doing Something About Retention

MAC's General Springer devoted much of his discussion at the AFA symposium to the many and varied peacetime missions that MAC car-



US airborne troops head for a USAF C-141 airlifter. Military Airlift Command C-141s showed off MAC's prowess last year in maintaining radio silence while ferrying a US Ranger battalion from McChord AFB, Wash., to a drop zone at the foot of the Alps in southern Germany.

ries out without fanfare, such as those for aeromedical evacuation and other humanitarian purposes, throughout the world.

He also emphasized that MAC quite often shows in exercises what it will be capable of doing in wartime. For example, he recounted a recent strategic airdrop mission in which six C-141s ferried 415 paratroopers, from McChord AFB, Wash., to the Benedickt drop zone just north of Garmisch near the Bavarian Alps. After the formation refueled over the Canadian east coast, it maintained radio silence the rest of the way.

"Think of that," General Springer said. "We moved a fighting force to Europe without any outside communication—and that clearly reflects the discipline and ability of our aircrews to go anywhere and do their job well."

"Operating without radio contact made it difficult for others to monitor, and the significance of that was not lost on our adversaries."

In the context of all such accomplishments and of increasingly sophisticated aircraft, led by the C-17, MAC must attract and hang on to excellent personnel, the General said. He noted that MAC's "pilot-retention figures are dropping again" and that the command is "feeling the pressure" of the wide-open commercial airlines job market—one in which 24,000 pilots have been hired since 1984 and that is expected to soak up an average of 5,000 pilots a year for the next five years.

"Some people refer to us as the league-leading farm team for the airlines," General Springer said wryly.

"My bottom line," asserted General Springer, "is this: The time has come to stop talking about 'people programs' in the Air Force and to start doing something about them. It may be time to get a little tougher with the people in Congress—who have the power to change things—and to tell them exactly how things are and what it will really take to fix them." ■