

A top airpower analyst looks back at the greatest air war that never was.



How the West Would Have Won

Driving through Germany these days, one frequently encounters abandoned runways surrounded by huge, camouflaged, and “hardened” aircraft shelters. Their concrete walls and heavy sliding doors typically are painted a dark green, matching the colors of the surrounding countryside.

Future generations may well wonder how and why these relics came to be

scattered across Europe. What was their purpose? The answer is that, in the 1980s, those massive shelters housed and protected thousands of sleek fighters that lay at the core of United States Air Force strategy in Europe.

Nuclear forces formed the backbone of US deterrent power, but the tensest Cold War flashpoint was Europe—in particular the Central European region.

Exactly what would cause the Soviet Union to attack Western Europe was never clear. What was only too clear, however, was that the Soviet-led Warsaw Pact had deployed powerful offensive forces along the inner German border, held a huge numerical advantage, and kept improving its capabilities.

The airpower community spent a lot of time in the 1980s planning for a war

June 1, 1982: Inside a hardened shelter in Europe, airmen prepare an F-15 fighter for an exercise.



DOD photo

By Christopher J. Bowie

in Central Europe, because airpower would play the key role in the outcome of an East-West conflict. In 1988-89, I produced a classified study for RAND Corp. titled, "Basing Uncertainties in the NATO Theater." It was recently declassified, and some of the material presented here comes from it.

NATO sought to deter an attack by maintaining powerful military forces that could, if deterrence failed, blunt

the thrust close to the border (a German priority) while keeping the conflict at a conventional level. NATO reserved the option to "go nuclear" to further complicate Warsaw Pact decision-making and bolster deterrence.

The greatest concern was the inner German border.

Defending the border region was a daunting prospect. Land forces usually prefer to fall back and trade territory for time, but West Germany could not accept any strategy that accepted a Soviet thrust—however brief—into its national territory.

Many of the contemporary computer combat simulations were based on a metric that used as its primary objective the amount of friendly area lost or friendly area regained. Strategists rated positively those strategies and forces that minimized the area lost.

Vulnerable to Sheer Mass

NATO forces arrayed along the border possessed very little operational depth, particularly after France withdrew from the Allied military command in 1966. The distance from the inner German border to Belgium, Holland, and the English Channel was, at its shortest points, only about 350 miles.

NATO ground forces, though they were rated as superior to pact units in quality and capability, nonetheless were vulnerable to the sheer mass of the land armies the East could generate. Soviet doctrine held that, in a conflict, waves of armored echelons would advance across Eastern Europe, enter the main battle area, and exploit weak spots to break through and shatter the NATO defenses.

To help redress this imbalance of land forces, the United States prepositioned huge masses of equipment and war materiel on the continent. Commercial airlifters would fly in troops to link up with this equipment. Commanders planned to bolster the forward forces with three divisions in the first week, followed by a division a week after that.

Air forces, the most strategically agile forces, were to form the primary tool for providing additional firepower during these first critical weeks as the ground forces built up strength. The first goal of the allied air forces was to gain control of the air, which would enable military and civil airliners to bring reinforcements to the theater.

Control of the air would also enable airmen to re-role their flexible fighter

forces to conduct ground attack operations aimed at blunting the Soviet armored spearheads and reducing the flow of enemy forces to the front. In addition, some elements of the airpower fleet could be held in reserve to execute nuclear strikes should NATO choose to escalate.

In contrast, the Soviet and Warsaw Pact air armies' primary objective was to deny NATO control of the air by striking airfields, radar sites, and missile sites while also shooting down air defense fighters and AWACS aircraft.

By denying NATO control of the air, Warsaw Pact ground forces could utilize their larger mass of armor to smash through the outnumbered NATO ground forces and drive to the English Channel.

Allied air forces in the Central Region fielded a force of approximately 115 fighter squadrons, for a total of about 2,000 operational aircraft in the 1980s. USAF added approximately 20 squadrons, comprising 700 combat aircraft. Most were based in the Central Region and Britain. In comparison, US Air Forces in Europe today maintains a fleet with fewer than 200 fighter and attack aircraft.

The Central Region air forces were divided into two Allied Tactical Air Forces or ATAFs, established in 1952: 2 ATAF in the northern half of West Germany and 4 ATAF in the southern half.

The RAF dominated 2 ATAF, which was always commanded by a British air marshal. It featured the Royal Netherlands Air Force, the Belgian Air Force, elements of the German Air Force, and those USAF aircraft based in the 2 ATAF area. Meanwhile, 4 ATAF featured USAF, Canadian, and German forces and was commanded by an American and, later, a German general.

The division of the airspace into two zones might have made sense for slow-moving ground operations, but for air operations, it was a serious weakness. A seam ran down the middle between the two ATAFs, which one senior commander characterized as "a brick wall."

Many commanders expressed the fear that the Warsaw Pact air armies would penetrate along this seam to sow confusion. Planners also believed the 2 ATAF region would suffer the most violent thrusts by Warsaw Pact forces because of the nature of its terrain—flat plains ideally suited for armor operations. But trying to vector 4 ATAF assets into



Soviet armor crews on parade in 1985 show off the 41-ton T-72 main battle tank, huge numbers of which faced NATO forces.

the 2 ATAF region was rendered more difficult by the invisible line separating the two commands.

There were force imbalances as well. USAF F-15s scheduled to reinforce central Europe were dedicated to 2 ATAF, and, within 2 ATAF, they were concentrated in the Netherlands.

The better solution would have been a single ATAF with a single area under a single commander, but this ran afoul of interservice and Alliance politics. American concern over the divided command of airpower led to creation of a coordinating body, but the real power remained with the ATAFs. As a result, the dangerous seam endured and would no doubt have been exploited by the adversary.

Doctrinal differences were also present on both sides of the “brick wall.” British airmen believed communications channels would be disrupted very quickly in the opening phase of the war, and the individual air bases would have to operate independently. Aircraft would have to rely on low-level flying to evade defenses and reduce losses. As a result, 2 ATAF believed in a more decentralized approach and an operational style that required minimal coordination.

The assumptions in 4 ATAF differed due to USAF experience in Vietnam. Vietnamese anti-aircraft guns had taken a terrible toll on fighters operating at low level, which led to an emphasis on medium-level penetration and unpleasant encounters with surface-to-air missiles.

The Air Force accordingly embraced operations with integrated defense suppression, and so 4 ATAF placed a greater emphasis on centralization and coordination.

The search for the right approach—low level, or medium altitude with defense suppression—sparked endless debates among Allied airmen around the theater.

Passive and Active

To stymie Warsaw Pact efforts to cripple Allied airpower, NATO embraced a two-pronged strategy—use of passive defense and use of active

defense. Passive defense comprised measures to reduce airbase vulnerability. Following the 1967 Arab-Israeli War, when the Israeli Air Force caught the Arab air forces on the ground in a well-coordinated attack, NATO air forces made the decision to “harden” their airfields. Concrete was deemed much cheaper than aircraft.

The pace of this effort always lagged behind objectives, but, over time, NATO air forces devised a vast array of aircraft shelters at dozens of airfields across Europe. The Alliance added additional taxiways and runways, “toned down” buildings with camouflage paint, installed air and ground crew shelters, and purchased rapid runway repair equipment.

Planners feared Soviet use of tactical ballistic missiles to pin down air defense aircraft, followed by a wave of attack aircraft to wreak further havoc on the airfields. Additional threats included chemical attacks and Soviet Special Forces. NATO believed the latter would be inserted before the Warsaw Pact offensive to sow confusion and attack key facilities on airfields.

Loss of Allied airpower was viewed as a recipe for disaster, and so, to reduce the risk, NATO attempted to increase the number of sites that could be turned into airfields in an emergency. Each nation provided spaces for deploying USAF aircraft at what were called co-located operating bases, or COBs. Over time, shelters and other passive defenses were added to some of these fields.

Every year, USAF conducted so-called “Rapid Reactor” exercises to familiarize US-based squadrons with

DOD photos



An F-15C (foreground) and F-15D prepare to take off in 1987 from Bitburg Air Base, in what was then West Germany, for Exercise Red Star '87.

wartime beddown locations. For example, F-15Cs from Eglin AFB, Fla., would proceed to Soesterberg Air Base in the Netherlands, while the new F-15E Strike Eagles out of Seymour Johnson AFB, N.C., would use Lahr AB, Germany, as their combat base.

The RAF added an additional facet with its Harrier force, which during a mobilization would deploy to rapidly developed air bases to complicate enemy targeting efforts.

In terms of active defenses, NATO forces fielded thousands of short-range surface-to-air missile batteries and guns in the forward area with longer-ranged Patriot, Hawk, and other SAMs farther in the rear.

Interspersed within the longer-range missile engagement zones were fighter engagement zones manned by both dedicated air superiority aircraft and multirole fighters.

The general concept allowed the forward missiles and guns to shoot at anything that flew, in a huge concentration of firepower. Any incoming Warsaw Pact fighter would first have to penetrate the dense forward defenses, evade Patriot shots, and then push past combat air patrols. It no doubt would have been an eventful sortie for any Warsaw Pact aircrew.

After a time, the air defense forces would be told to go “weapons tight” to avoid shooting down any NATO aircraft that may have been streaming across the border. A complex network of corridors, altitudes, aircraft speeds, and identification, friend or foe (IFF), electronic systems would be used to prevent so-called “friendly fire” incidents. How well the forward forces’ firing discipline would hold, however, was a major concern.

A similar problem would occur in trying to deconflict Patriot missile and fighter engagement zones. Patriot batteries had extremely lethal missiles with a very high kill probability, and most fighter crews did not believe their operators would hold back a missile shot in case of a question regarding the true identify of an aircraft. Most airmen, in fact, thought that fratricide levels would be very high.

USAF planned to augment its forward-based forces with Stateside aircraft. In the plan, USAF’s total fighter force—approximately 3,700 operational aircraft, or more than 50 wings—would be allocated to various regions in the event of a general European conflict.

DOD photo



The Soviet Su-24 Fencer, such as this one shown on a 1989 training mission, was equipped for heavy attacks on NATO airfields.

Seven hundred combat aircraft were in the European Theater, and USAF would reinforce this with an additional 1,800 fighter aircraft. The Air Force planned to move 1,600 of these fighters in just 10 days—more than two wings per day. This would have been an aerial movement of unprecedented proportions. These aircraft would be added to the 2,000 or so combat aircraft that NATO Allies kept in the Central Region to fight the thousands of Warsaw Pact aircraft.

The encounter would no doubt have been the most epic air battle in history.

Looking back two decades later, what conclusions can we draw from what might have happened if “the balloon” had gone up?

The key unknowable was the opening move. Post-Cold War disclosures of the details of Soviet war plans reveal Soviet intent to launch an early nuclear strike against Western Europe. Typically, however, the plans show the Warsaw Pact assuming a NATO “first use” of nuclear weapons, meaning that the pact strike would be classified as retaliatory—and thus less controversial to include in a war plan.

Would the Soviets have actually gone first—that is, have launched a surprise strike with nuclear weapons as the opening move? If so, all the vast array of planning, force buildup, and so on for conventional conflict could have been largely immaterial as nuclear weapons detonated across the European continent.

If Moscow had gone nuclear, would NATO have responded with its own

nuclear riposte? NATO fighters were armed with so-called “dual key” nuclear weapons provided by the United States, while Britain, France, and the US maintained their own independent nuclear forces.

Would a responding nuclear strike have hit Eastern Europe or extended to Soviet territory? Strategists and planners spent countless hours weighing the imponderables. But let’s assume that nuclear deterrence held and the Soviets elected to conduct a conventional-force-only campaign. What then?

Whacking the Pact

The Warsaw Pact air forces would have suffered grievous losses. Western air forces have consistently excelled at air-to-air combat, and NATO believed its equipment and training were superior to the Soviets’ rigid procedures.

NATO’s ground-based missile systems were extremely effective—some aircraft would have gotten through the missile defenses, but the toll on Soviet aircraft from Western guns, missiles, and air defense fighters would have been brutal.

Warsaw Pact losses would not permit more than a few days of such operations. No doubt the NATO air forces would have suffered attrition as well, from both enemy and friendly fire, but not to the same degree as that suffered by the pact. NATO would likely have gained control of the air quite quickly.

Some enemy aircraft would have penetrated successfully to hit air bases, as would Soviet ballistic missile strikes, and the result would have been serious indeed. The “Salty Demo” exercises in



DOD photo

USAF F-15 maintainer is “buttoned up” for a 1982 training exercise in his hot and bulky nuclear-biological-chemical protective suit.

the mid-1980s, in which USAF tried to simulate the effect of strikes on its air bases, were scripted and artificial. The true damage was never really calculated. Moreover, the Pentagon never provided resources sufficient for hardening bases to ensure air base operability.

Although enemy strikes would certainly have disrupted NATO operations at several locations for a period, the Warsaw Pact would have been unable to generate the weight of effort required to cripple NATO air operations.

At this point, NATO air commanders would have focused on offensive operations. Planners initially targeted Warsaw Pact airfields and air defense sites in what was termed the offensive counterair mission. The goal was to seize control of the air. Commanders would have had to judge how much effort to put against these targets and how much to enemy ground force targets.

When it came to ground targets, the decision would be further complicated by issues concerning the depth of the strike operation. Should NATO airpower strike deep to interdict enemy forces approaching the battle area, or strike closer to the border against forces engaged with NATO’s ground forces?

The allocation would also depend heavily on how well NATO’s land element was able to weather the initial onslaught.

One has to question the actual effectiveness of NATO air strikes against airfields and armored forces, given

what we have learned from later wars. In the Gulf War, for example, the real difference-makers were the aircraft delivering precision weapons—F-117s and F-111s. Unfortunately, only a small portion of the USAF combat force in Europe could deliver precision guided bombs, and the Allies possessed even fewer.

The Dilemma

Close-in delivery was the only way to reliably hit targets with unguided ordnance—and the loss rates would no doubt have been eye watering. By trying to get close, the NATO forces would lose aircraft, but, by trying to stand off, fighter effectiveness would have decreased. The dilemma was indeed great.

The Western air strikes would still have disrupted significant parts of the Soviet follow-on armored echelons. From the battles of World War II to operations in Iraq, armored forces that have come under air attack were severely degraded. Actual tank losses may not be high, but the disruption caused by fear, road blockages, and running for cover dislocates time tables severely and undermines morale.

In the 1980s, the United States began developing concepts and forces

to improve the conventional balance in the Central Region. Airborne radar carried by the E-8 Joint STARS battle-management aircraft would locate and characterize enemy forces deep within the Warsaw Pact. Commanders could then allocate long-range fires—missile systems and fighter aircraft equipped with precision guided weapons—to strike at key locations.

By interdicting onrushing armor formations, pressure on NATO ground forces could be kept in check, enabling the Allies to defend the border. Elements of these new systems were just being deployed when the Soviet Union collapsed.

And in the end, if the NATO front lines had held—or at least minimized the penetrations—what then? What would Kremlin leaders do next? Our forces were never put to that test.

The analysis of the air campaign produced several lessons.

First, control of the air was the linchpin of any successful strategy in a theater conflict. Without control of the air, NATO would have been defeated because airpower could not have been brought to bear against Warsaw Pact armored forces. The same will hold true for any future contingency.

Second, modern airpower was the most strategically and operationally agile element of US military power and was the only element that could be brought to bear quickly from American territory. The Air Force planned to deploy 25 fighter wings in the same amount of time that its airlift force moved only three United States Army divisions. Once in theater, these aircraft could also be shifted from one battlespace sector to another (providing that the 2 ATAF and 4 ATAF split did not get in the way). USAF’s airlift and Civil Reserve Air Fleet also provided strategic agility to the Army.

Third, airpower offered great flexibility. Significant numbers of NATO fighters could have shifted from air defense to ground attack, to nuclear strike, and back, depending on the situation.

Fortunately for all involved, the Allied military forces were never put to the test, but the odds of success probably were better than even, perhaps much better. ■

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