'Central Enterprise': defending NATO's most vulnerable flank

by Michael Liebig and Dean Andromidas

The skies of West Germany played host June 1-5 to "Central Enterprise," NATO's largest annual air exercise involving over 1,000 aircraft, conducted amid the most overcrowded airspace and densely populated regions of Western Europe. Participating air forces included those of the United States, the Federal Republic of Germany, the United Kingdom, Canada, the Netherlands, and Belgium. This show of NATO solidarity was reinforced with the participation of the French Air Force, despite France's non-integrated status with respect to NATO's multinational military structure.

Seven participating national air forces conducted over 1,500 sorties daily in fully integrated operations under simulated Warsaw Pact attack. This multinational cooperation at all levels was testimony to the ability of the NATO alliance, if properly armed and politically backed, to face an attack by the Warsaw Pact. It stands in sharp contrast to the political crisis precipitated by the "zero-zero option" for pulling down the West's nuclear arsenal in Europe, and continuing calls by political circles in the United States for withdrawal of American forces from West Germany. The exercises underscored not only the absolute necessity of strong U.S. participation in current force levels, but the indispensable role of American technology to NATO defense.

NATO's strengths and weaknesses

Central Enterprise has as its purpose the testing and exercise of NATO's command and control, as well as the capabilities of its air combat units to meet a simulated Warsaw Pact air attack, sustain it, seize the initiative, and conduct the counterattack. The exercise demonstrated the many strengths and weaknesses of NATO's aviation.

NATO doctrine has always seen air supremacy as key to the defense of Western Europe. NATO-Warsaw Pact force comparisons have traditionally been premised on maintaining the "balance of imbalances." It has been NATO's conviction that technological superiority of its aircraft, avionics, and weapons and air-defense systems work to offset Soviet superiority in numbers of aircraft and other systems. Moreover, Western military doctrine sees the motivation and initiative of its citizen-soldier or airman, trained in a doctrine that stresses initiative and leadership at all levels, as the crucial factor. It is felt that this flexibility is key to countering a Soviet doctrine which, while highly offensive, is characterized by an overly centralized command structure that works to stifle initiative at the lower command and the level of the individual soldier or airman.

Under Soviet Marshal Nikolai Ogarkov's war plans, these basic assumptions are being challenged by the introduction and deployment of new Soviet aircraft including the MiG-29 Fulcrum, MiG-31 Foxhound, SU-27/Flanker with their "look down-shoot down" radars, and more capable air defense systems, in addition to further Soviet deployment of intermediate- and short-range nuclear and non-nuclear missiles. Soviet biological and chemical capabilities, as well as deployment of "spetsnaz" irregular forces, represent threats that are clearly closing whatever gap Marshal Ogarkov might have feared in the past. Added to this challenge is the Soviet effort to develop radio-frequency weapons as part of trying to outflank new Western capabilities in the battlefield spinoffs and other gains of the Strategic Defense Initiative and other technological efforts.

For NATO to hold an effective deterrent value, it must not only be able to meet a Soviet offensive attack, but to maintain the survival of its air resources and its logistical communications, i.e., air bases, population and industrial centers, ports, etc., as a firm base from which a counterattack deep into Warsaw Pact territory can be mounted. The need for NATO to embark on its own Tactical Defense Initiative (TDI) program encompassing the most advanced technologies based on "new physical principles," in this context becomes imperative. This is dramatically revealed in the current force comparisons between NATO and the Warsaw Pact. Such comparisons are further testimony to the absolutely critical role of U.S. contributions to the NATO force structure.

As the accompanying graph demonstrates, NATO maintains parity in certain categories of aircraft, particularly fighter-bomber and ground attack. In others, such as the crucial

category of fighter/interceptors, electronic warfare, and bombers and deep strike aircraft, the superiority, at least in numbers, lies with the Warsaw Pact. Although these figures do not include the French capabilities which one could expect to take part in a defense of Europe, it should be noted that all additional reinforcement during "times of tension" or an actual war would be from the continental United States. This would include 1,350 U.S. fighter bombers and ground attack aircraft, 230 reconnaissance aircraft, and 75 bombers; the United States is the only NATO nation possessing a real bomber capability. Furthermore, but for France and the United States, no NATO nation has a modern strike aircraft.

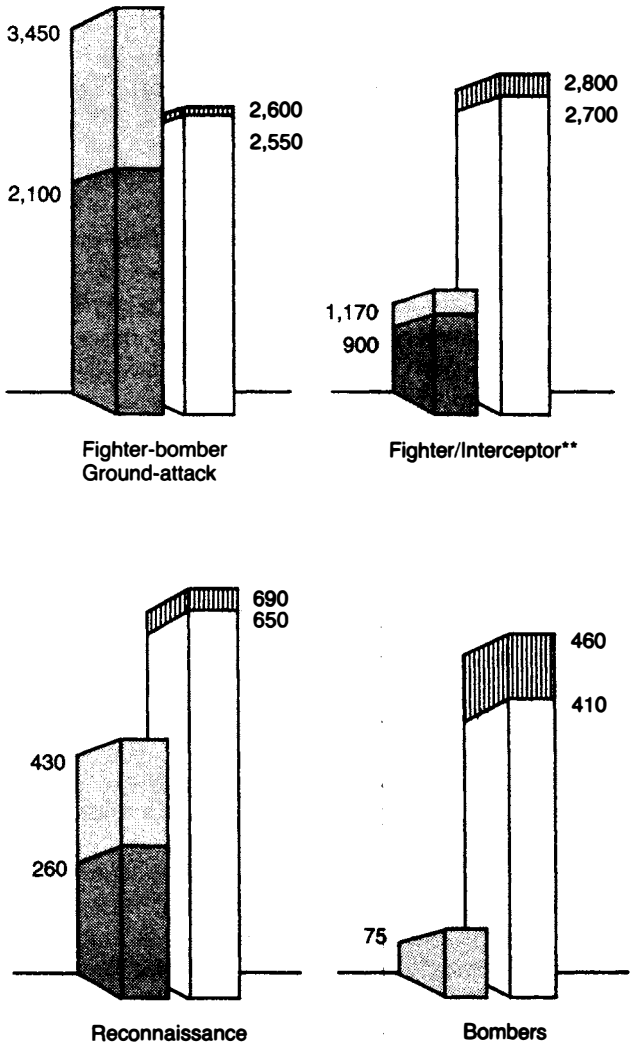
Soviet superiority in the critical area of fighter/interceptors, bombers, and reconnaissance corresponds to Soviet offensive doctrine of deep strikes into the full depth of NATO's central front and rear areas, while gaining complete air superiority at the outset of hostilities. This ability of the Soviets to concentrate their air resources, including ground-launched ballistic and short-range missiles, as well as a new generation of cruise missiles, in the initiating attack, is aimed at forcing NATO to commit more of its air resources away from the battle on the ground to the air battle, and lies at the heart of the problem facing NATO's air commanders.

The defense mission

To meet this challenge, NATO has built a layered air defense system throughout the central front facing East Germany and Czechoslovakia, extending north to the West German state of Schleswig-Holstein, and south to the Swiss and Austrian borders. This central front comprises the Federal Republic of Germany, the Netherlands, Belgium, and Great Britain, and in time of war, northern France. The air component of this command is designated "Allied Air Forces Central Europe" based in Ramstein, West Germany, comprising the air forces of the F.R.G., the United States, U.K., Belgium, and the Netherlands; it maintains subordinate commands dividing the central front into a northern and southern half.

Running north-south along the central front is an air defense belt comprising a system of high and low altitude radars as well as tactical radar systems and the now-functional NATO AWACs system capable of "seeing" deep into Warsaw Pact territory. These AWACS, introduced into NATO for the first time in 1986, are manned by mixed crews from among all the NATO countries and are the only radar or other operational system managed by the NATO military command at Supreme Headquarters. These radars in turn feed information for target acquisition to the weapon systems which include a variety of surface-to-air missiles and manned aircraft, heavily armed with air-to-air missiles and other munitions. Crucial to the working of the system is "flexibility," for its mission is not only to sustain an initial attack but point defense from spetsnaz and other threats, intelligence and reconnaissance, ground support, and most—important—the ability to shift from defense to offense and counterattack deep into

FIGURE 1
NATO-Warsaw Pact combat aircraft*



Excludes France and Spain
* U.S. estimate of 1986 NATO data
** Excludes Soviet strategic interceptors
*** An additional 4,000 trainers are available
Source: U.S. Department of Defense

Warsaw Pact territory.

This year's "Central Enterprise" is one of the first exercises to demonstrate the operation of the new Patriot low-to-high altitude surface-to-air missile, replacing the aging but nuclear-capable Nike. A visit to one Patriot site at the West German Wunstorf Air Base demonstrated some of NATO's strongest capabilities. Here was an American-made state-of-the-art weapon system, manned by the Royal Netherlands Air Force, protecting a West German Air Base and its surrounding territory. A very enthusiastic Dutch officer, one of the missile battery's fire control officers, described the tremendous capabilities of this system with its state-of-the-art phased array radar, impervious to known Soviet electronic warfare capabilities, and computerized tracking system capable of automatically tracking and killing as many as 100 targets simultaneously. As one officer commented, "The system doesn't care whether the target is a missile or an airplane." Its deployment is to be completed by 1992.

The Patriot, being the front line of the missile belt, is backed up by the low- to medium-altitude Hawk, and the low-altitude Rapier, Chapparal, and Roland surface-to-air missile systems. These are older, less capable systems deployed primarily for point defense.

It is clear that the capabilities of these systems and future developments, given the possibilities of SDI as well as a future TDI, could have a potent impact on Soviet military planners. Reinforcing the fear of rendering their missiles and aircraft so much flying scrap metal, is the key to deterrence. This fear can only be induced with a broad deployment, well beyond their current deployment status, and a robust R&D effort offered by a TDI.

A visit to the British Royal Air Force at Wildenrath Airbase, near Mönchengladbach, offers a look at the third layer of this defense system—manned aircraft. Wildenrath is one of several British air bases within the 2nd Allied Tactical Air Force responsible for the defense of the north German plain. It is home to the 19th and 92nd Air Defense Squadrons. "Air Defense" means the primary function is the defense and securing of air space, the "air supremacy" mission. They carry no bombs, because their targets are Soviet aircraft. Their aircraft are painted the pale blue-grey camouflage, a color scheme that makes them difficult to be seen as they swoop down on the low-flying enemy strike aircraft. Their aircraft, F-4M Phantoms, testify to the importance of the Alliance, particularly the role of the United States. An American-designed aircraft of the Vietnam War era, the F-4M Phantom has more powerful British Rolls-Royce engines, making it capable of speeds above Mach 2. It is armed with radar-guided and infrared air-to-air missiles and a Gatling 20 mm cannon, guided by an advanced technology Airborne Intercept Radar.

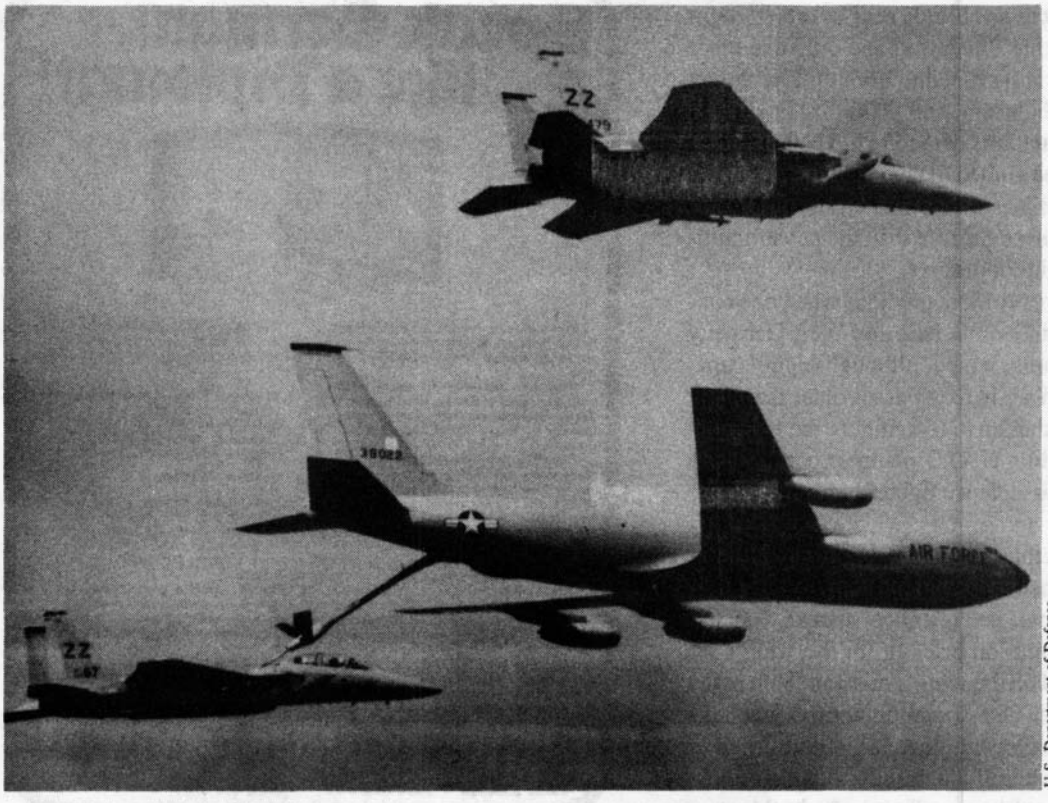
In Wildenrath, the total complexity of ground operations can be seen as aircraft, in individual concrete hangars hardened to protect them from blast effects, are "turned around." Here ground crews wearing special suits to protect them from the effects of nuclear, biological, and chemical attacks, move rapidly but methodically to rearm, refuel, and service aircraft returning from missions, getting them back into the air in less than 90 minutes. As part of NATO's interoperability, this same facility can turn around aircraft of other national air forces including the F-16s and F-15s of the American Air Force, the Belgian and French Mirages, Dutch F-5s, and German Tornados.

Today's modern aircraft are among the most powerful weapons. Their air bases, their vital source of fuel, ammunition and repair, are among the most vulnerable targets in the military structure. With NATO's primary bases less than 200 kilometers from the East German border, their defense is key. Although air defense is maintained by a network of Rapier low-altitude missiles, for the protection of these sites a TDI is absolutely essential.

Although "Central Enterprise" did not include the exercise of defense from ground assault, the same regiments manning these missiles are responsible for perimeter defense. More immediate is the rising concern among European military circles regarding the vulnerability of these bases to Soviet irregular warfare and spetsnaz operations, under the cover of anarchist and terrorist activities and East bloc TIR trucks traversing the highways of Europe. It is these air defense regiments in cooperation with the West German authorities that are responsible for securing the bases from Soviet spetsnaz operations. Both regiments had extensive histories of experience in irregular warfare techniques including the capture of enemy air bases during World War II. Having had assignments in Malaya, Aden, Cyprus, etc., they represent an important potential for countering spetsnaz assault if given a chance.

The offensive mission

Following the "defense" phase, the air forces move onto the offensive. Here, besides air superiority, the mission of support to ground operations and counterattack deep into Warsaw Pact territory is simulated. In accordance with current NATO "FOFA" doctrine introduced under Allied Supreme Commander Gen. Bernard Rogers, NATO's airpower will have the mission of knocking out the Soviets' second echelon of forces. Air defense aircraft like the British F-4M Phantoms take on the additional mission of "escorting" attacking air formations. These formations could comprise British and West German Tornados and American F-16s' radar and navigation systems enabling them to fly very low, at high speeds. Practice in flying at altitudes of as low as 30 meters is extremely important, but impossible, for safety and noise considerations, over the densely populated German countryside. Despite the restrictions, it would be hard for most Americans to imagine a military exercise like Central Enterprise to be flown in a comparable American region such as the skies over the Boston-New York-Washington corridor.



U.S. Department of Defense

The F-15 jet fighter (lower left) is refueled in flight. The plane is the most capable all-weather fighter in the U.S. Air Force.

In addition to hitting "deep" targets, the air force has a ground support mission, although most NATO ground forces operate their own air platforms including helicopters and fixed-wing aircraft. The United States Air Force operates its "tank killer" A-10, a slow but highly maneuverable jet aircraft designed to carry immense amounts of powerful anti-armor munitions. The British have their Harriers, capable of vertical takeoff, as well as the British and West German Alpha jet.

Within this offensive mission, Central Enterprise exercised air reconnaissance for the collection of vital tactical intelligence including enemy ground formations, air bases, and logistical communication. In war "real time" is the crucial question. While satellite intelligence can be jammed, its major drawback is the "real-time" one, how long it takes to get from the "sensor," be it an infrared camera or a behind-the-lines reconnaissance team, to the responsible commander. A visit to the German 51st Reconnaissance Squadron based at Bremgarten Airbase, gave a glimpse of the complexity and efficiency of modern air reconnaissance. Flying specially fitted F-4 Phantoms, the 51st is Germany's oldest "air recon" squadron, celebrating its 30th anniversary. Here the real-time factor can be as low as 30 minutes, depending on the distance of the mission, when photographic intelligence of enemy airfields, battle formations, and other potential targets can be processed and gotten into the hands of relevant commanders. Utilizing American technology, the aircraft are fitted with three types of sensors: 1) the most advanced optical cameras, which give views in several directions as well as panoramic; 2) a state-of-the-art infrared camera capable of "seeing" in the night, or through fog or smoke; and 3) a new type of radar sensor.

A weak link in these other missions, according to NATO commanders, is that of electronic warfare, a field where the Soviets place high emphasis. Although the Americans have the EF-111 "Raven" and EF-4 "Weasel," the West Germans are hard pressed. Although a squadron of Tornados is to be configured for electronic warfare, the West German Air Force currently employs a specially configured commercial executive jet—a very inadequate solution, the Germans are quick to admit.

Preparedness

A visit to the U.S. Air Force's 36th Tactical Fighter Wing based at Bitburg, in West Germany's Eifel Mountains, gave us a glimpse at "preparedness." Bitburg is the key American air defense base in West Germany, flying the F-15, the most capable all-weather air defense superiority fighter in the U.S. Air Force. Designed around the most advanced radar system in the world with the ability to locate and track low- and high-flying aircraft at great distances, the F-15 has a look-down shoot-down capability. Capable of speeds in excess of Mach 2.5, it can climb to 98,000 feet in three minutes. This has given the F-15 the mission of carrying the American experi-

mental anti-satellite rocket to an altitude near its orbital flight plan. The Bitburger wing has 70 aircraft and only one other wing, in the Netherlands, is stationed in Europe. The Soviet top-of-the-line MiG-29 Fulcrum and MiG-31 Foxhound fighter/interceptors are imitations of the F-15. The F-15, also stationed in Japan and in the United States, was first deployed in Europe in 1977, but remains the newest air defense superiority fighter in Europe, more capable than the newer multipurpose F-16 and F-18 fighter/bombers.

These aircraft become ever more precious when one considers that the air forces of Great Britain and West Germany are employing F-4 Phantoms, which, although highly capable, have air frames which are in many cases older than their pilots. Although the British plan to reconfigure the new Tornado for air defense, leading NATO planners consider it a poor option; yet no new air-defense fighter has come off the drawing boards.

At Bitburg one passes through airtight doors to enter the operations center, a hardened concrete bunker protected from blast and nuclear, biological, and chemical attacks. In a departure from the normal mission briefing for the wing's pilots, journalists are briefed on the wing's mission, both in the exercise and in peacetime. One squadron commander tells how, over the first day of operations, his squadron, in a "mixed fighter force" including the French Air Force, engaged five different types of "enemy" aircraft, in this case Belgian Mirages, German Tornados, American F-16s, and other aircraft in the role of "enemy."

Our group of journalists is then taken to the "Zulu Alert Station." Here, as at all NATO air bases, four aircraft are fully armed with live munitions, with their crews sleeping and eating within a few yards of their aircraft, prepared to "scramble" at the first report of an intrusion by unidentified or Warsaw Pact aircraft attempting to enter central front airspace. These aircraft can be airborne in five minutes. It could be shortened to two minutes if it weren't for the navigational systems's needing three minutes to warm up. We are told that such scrambles occur for real at least twice a month, although practice runs are made more often. The siren lets out its shrill wail, the pilots cease their briefing of journalists and are in their cockpits, engines are switched on, mission instructions are radioed to the pilot, and within three minutes the aircraft are taxiing out to the runway and are airborne a few moments later.

Beyond the exercise, these aircraft represent an important part of a deterrent effort that must be in place and demonstrable every day. The erosion of that deterrent, and the failure not only to maintain current levels of preparedness but their expansion and development, can decide whether there is war or peace in Europe on a daily basis. One hopes that the high degree of motivation, determination, and *ésprit de corps* demonstrated in these exercises, and the vital role of the United States air forces can be appreciated by our politicians and policy-makers.