the Union line as one unit shifted positions before it was relieved. At the same moment, the lead brigade of General James Longstreet's corps charged. Acting on the brigade's success, Longstreet seized the moment and squeezed his entire corps through this half-mile gap, routing General William Rosecrans and half of his army. This defeat forced the Union troops to retreat to Chattanooga. By taking advantage of an enemy weakness that developed at a critical time, Longstreet was able to bring the Confederate Army one of its few victories in the western theater.

The estimate of the situation, the IPB, mission orders, and commander's intent are practiced every day in our army. But we need to reinforce the process of tying them in with achieving the decisive point. We must train our leaders so they can use these concepts to develop their ability to recognize the decisive point and reinforce it in tactical training.

Once leaders have learned the importance of concentrating combat power against enemy weaknesses, and particularly when they recognize the importance of directing the main effort at a decisive point, they will naturally want to be able to perceive these decisive points at a glance. We can train them to concentrate combat power at the decisive point by using such training events as map and sand table exercises, including wargaming, and by discussing the decisive point during after-action reviews (AARs) following tactical exercises.

Map exercises enable leaders to plan potential decisive points and to discuss their reasons for selecting those points. Wargaming shows whether a planned point will be decisive and whether the plan provides the flexibility needed to take advantage of a decisive point that occurs elsewhere. These low-cost exercises are effective for officer professional development sessions.

After-action reviews also provide an excellent opportunity to discuss the decisive point. The following questions can be useful during an AAR to help teach the importance of recognizing and acting upon the decisive point:

- Was a potential decisive point identified during the planning process?
- Was the main effort focused to attain decisive action at the decisive point? Did supporting efforts tie in with the actions of the main effort?
- Where did the commander concentrate his combat power? Was this a potential decisive point?
- What was the outcome? Did the point turn out to be decisive or not?
- At what actual time and place did the battle shift in favor of one force?
- Did the plan have the flexibility needed to shift the focus of effort if the decisive point was somewhere other than planned?

Only with training can leaders learn to identify potential decisive points during the planning process. Then they must develop the ability to recognize the decisive point when it occurs during combat. If the decisive point is not where it has been planned, leaders must have the flexibility to shift the focus of effort to achieve a decisive victory there.

The proper exercise of the formal planning process during training will help our leaders identify possible decisive points. It is only with training that today's leaders will develop the skills of the great captains of the past in recognizing decisive points and seizing the opportunity for victory.

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The Army's Family of Boots

CAPTAIN TROY W. GARRETT

Protecting soldiers' feet has always been a major challenge to an army. Whether it was the earliest Roman legion traversing the rugged Alps or a battalion of U.S. infantrymen slogging through the muddy rice paddies of Vietnam, their commanders understood that despite technology, the objective must ultimately be taken by the foot soldier. If soldiers are not trained and equipped to care for their feet, victory in battle is difficult, if not impossible. Foot injuries accounted for a high percentage of casualties in the Buna and Aleutians campaigns of World War II, on the Russian front, and later during the Korean War.

Our modern Army still faces the challenge of protecting its soldiers' feet, a challenge that is more complex than ever. Today, with the U.S. Army's

worldwide contingency mission, we must be prepared to fight and win in all climates. Luckily, advances in technology, improvements in textiles, and the development of synthetic materials have removed some of the burden. Even with the advances in technology, however, no one type of boot can protect soldiers in all climatic environments.

For military purposes, the world is divided into seven climatic categories, based on such criteria as solar radiation, relative humidity, moisture, and temperature ranges. *(See also "Environmental Influences on Desert Operations," by Colonel Robert H. Clegg, May-June 1992, pages 28-34; "Cold Regions: Environmental Influences on Military Operations," by Brigadier General Peter W. Clegg and Colonel Robert H. Clegg, July-August 1992, pages 27-32, and September-October 1992, pages 26-32; and "Tropical Regions: Environmental Influences on Military Operations, Part 1," by Colonel Clegg, in this issue.)*

The climatic category and the predominant type of terrain in a region are the variables that influence the development of a boot for that particular environment. A boot designed for hot-wet environments will not adequately protect a soldier's feet in a desert environment with high solar radiation and fine sand that can enter the boot through the side drain holes. Conversely, the same hot-weather boot, because of its lack of insulation, cannot be expected to protect feet in a wet environment at temperatures of -20 degrees Fahrenheit and below. If insulation were added to the boot, then it would be too hot for use in a tropical environment, so we must design boots for use in specific environments and for particular operational requirements.

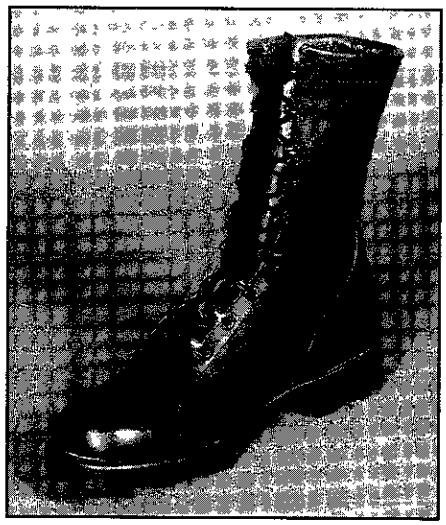
In any problem solving project there is always a set of criteria that set parameters and focus the effort. Developing boots for the Army is no different, and the type of sock or sock system (two or more socks worn together) must also be factored into the equation. The following set of basic tenets—derived from such factors as mission, technology, and common sense—focus the development process:

The system must adequately protect the soldier's feet from the particular environment in which he must operate. This is the overall goal of any boot-sock system.

The system must be simple and easy to support. Boots and socks must be durable and must require little maintenance or logistic support.

The system should keep feet dry and as warm (or cool) as possible. Combat and materiel developers strive to use all available technology to accomplish this while staying within the constraints of supportability.

Hot Weather Boot (left), Improved HWB (right)



Standard Black Leather Combat Boot

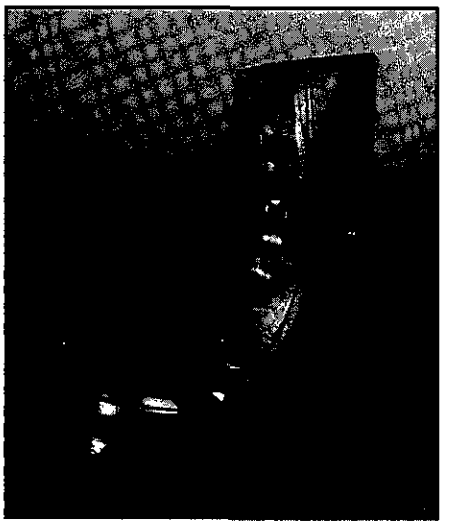
The system should keep boot-foot friction to a minimum. This is absolutely critical to the fighting effectiveness and health of the soldiers.

When a sock system is to be used, the size of the socks should not require that a soldier wear one size of boot in the summer and another larger size in winter to accommodate heavier socks. To do otherwise would place an additional burden on the soldier and the logistic system.

The Army's current family of boots includes the following:

The Standard Black Leather Combat Boot. In 1983, in response to problems discovered at the training centers, the Army initiated a program designed to improve the durability and comfort of the combat boot. The old combat boot, although reasonably well built, did not last through the rigorous demands of basic training. As a result, the U.S. Army Infantry School, the proponent developer for combat boots, initiated a program to replace the existing boot with a new standard combat boot.

Candidate boots from around the world were solicited, and nearly 40 original entries were ultimately considered during the selection process. All of the candidates were evaluated against such screening criteria as weight, material composition, and design. Candidates that were deemed inappropriate were eliminated, and eight candidates were chosen for further testing.



Black Vapor Barrier Boot

A combat boot walk-off test was conducted at Fort Benning that included about 2,400 pairs of the eight candidate boots. The test used basic training soldiers and cadre from the Army and the U.S. Marine Corps over a complete training cycle of 13 weeks. Throughout the test, the boots were evaluated for durability, fit, traction, water resistance, and numerous other factors. In the final selection, the leather upper design from one candidate and the sole from another were combined to form what is now the standard Army combat boot.

The standard black leather combat boot is made of leather that has been treated for mildew and water resistance. It weighs 4.1 pounds and incorporates a speed-lace system, a padded collar, and a one-piece sole and heel molded directly to the upper. The boot is the mainstay of today's force and is issued to all initial-entry soldiers.

The Hot-weather Boot. The hot-weather boot, known to most as "the jungle boot," was a direct result of the United States' involvement in Vietnam. The standard boots of that time did not adequately protect soldiers from the constant moisture of the tropics, nor did they protect against the *pungi* sticks and related booby traps employed by the enemy. In the early 1960s, the Army met this need by developing the initial hot-weather boot.

Over the years, that initial boot has undergone several refinements, but it is still the Army's primary boot for high humidity and wet environments. It is made of moisture-resistant nylon and leather, with two drainage outlets. The sole is a "Panama" design that makes it easier to clear mud from the cleats. A metal plate has been incorporated into the sole to provide protection from possible penetration.

Although the original hot-weather boot was issued with a green nylon upper, the color was changed to black in 1990 to standardize it and make it more acceptable for wear in garrison. This boot, weighing about 3.3 pounds, is still a candidate for several improvements.

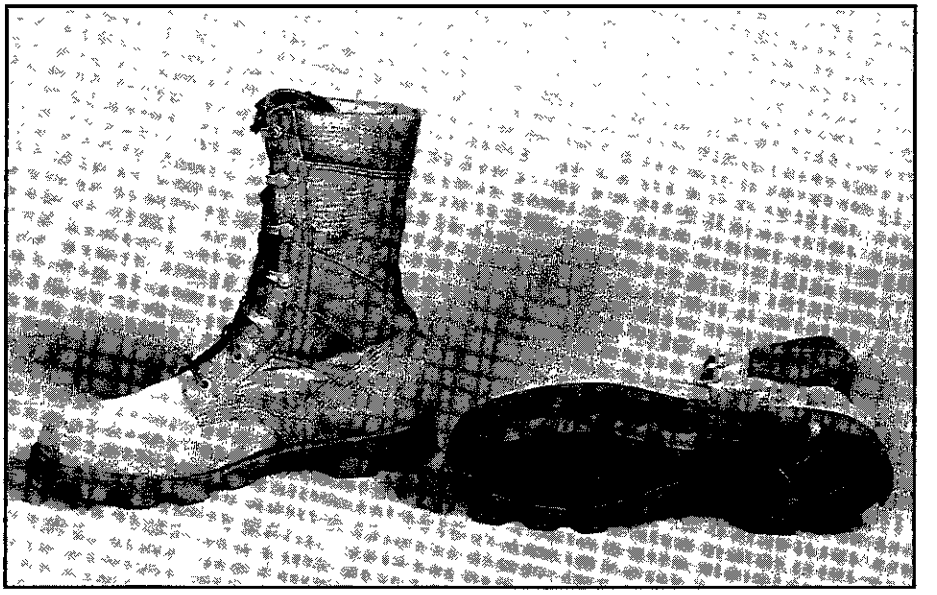
Improved Desert Boot. In early 1983, special operations forces (SOF) identified the need for a boot to support mission requirements in the desert during Operation BRIGHT STAR in Egypt. The desert boot was subsequently pursued by the U.S. Army Infantry School for further development in 1989. The jungle boot, which was used at the time, was found to be ineffective in the hot, arid climate of the desert. The metal plate transferred heat to the bottom of the foot, and the drainage holes allowed sand to enter.

The current desert boot incorporates a moisture-resistant leather and textured nylon upper. It has a softer rubber sole to reduce shock caused by the small rocks and gravel prevalent in the desert. A sealed foam thermal barrier in the sole prevents heat transfer to the feet. Additionally, the drainage holes have been eliminated, and the leather seams are sewn tighter to help keep sand out.

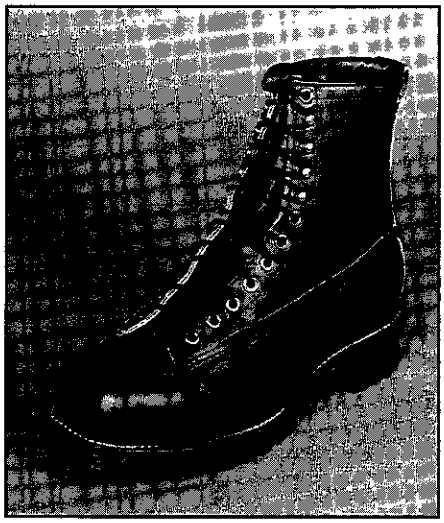
The desert boot was initially procured and sent directly to Southwest Asia during Operations DESERT SHIELD and DESERT STORM. Numerous comments from the field during that period resulted in improvements that include a padded collar, a wider ankle support, and a special moisture-wicking liner to absorb perspiration. This boot, which weighs only 2.7 pounds, was a welcome newcomer to the family of Army footwear.

Vapor Barrier Boots. Vapor barrier boots play an important role in the Army. Both the black and white versions—commonly referred to as "Mickey Mouse" and "VB" boots, respectively—protect soldiers in the extreme cold climates of the world. The black boot is specifically for use in temperature ranges from 0 to -25 degrees Fahrenheit, while the white boot provides increased foot protection and comfort down to -60 degrees.

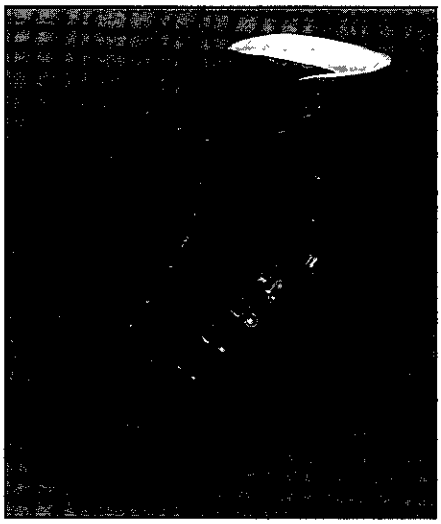
Intermediate Cold-Wet Boot. The intermediate cold-wet boot (ICWB) was developed to fill the gap between the standard combat boot and the vapor barrier boots. This boot was designed as a march boot, specifically for cold and wet environments, and to provide foot protection in temperatures ranging from



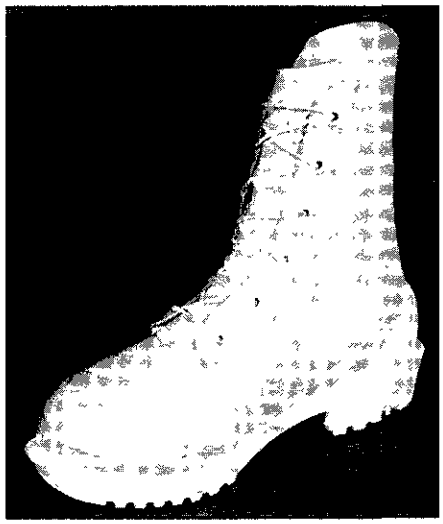
Improved Desert Boot



Mountain Ski Boot



Plastic-shell Mountain Ski Boot



Improved White Vapor Barrier Boot

30 degrees to -10 degrees Fahrenheit.

The ICWB is a fully lined and insulated all-leather boot. It incorporates a "GORE-TEX" liner that keeps out water and moisture while allowing perspiration to escape. The boot uses the popular "Vibram" slip-resistant sole for better traction on snow and ice.

Like the standard combat boot, the ICWB was tested extensively. Eight candidate boots were tested during a series of three field and technical tests in Alaska and in the Ranger Course's mountain phase at Dahlonega, Georgia.

The boot selected weighs 4.5 pounds and has been issued only to certain units operating in cold-wet regions or having contingency missions for those regions. Although the ICWB issue is currently limited to dismounted infantrymen, fielding may soon be expanded to include other combat units.

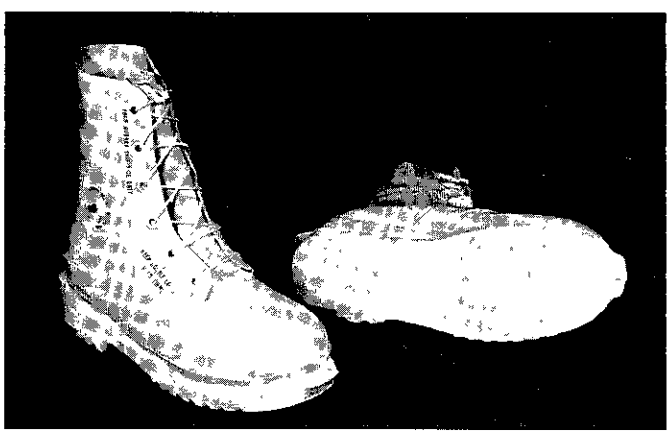
Mountain Ski Boots. The mountain ski boot is seldom seen except in mountain units or those in Alaska. It is the Army's primary climbing boot, but it can also be used for ski and snow-shoe operations. The boot weighs 4.7 pounds and is made of a water-resistant (not waterproof) leather upper with a glove-type leather liner. It has a removable felt insole for insulation and a rubber sole with binding attachments for skis. The mountain ski boot provides adequate protection down to 10 degrees Fahrenheit.

Future Improvements

Boot development is a dynamic process that must constantly respond to the needs of the field as technology improves. The Infantry School continues to pursue a number of initiatives that focus on improving some of the boots now in the field:

Hot-Weather Boot. The Infantry School is investigating improvements to the hot-weather boot to make it more comfortable and improve its performance. Specific changes include the addition of a one-and-one-half-inch rolled comfort collar that will increase the height of the boot, a wider leather support band for increased ankle support, a softer sole compound for more comfortable marching, and a special liner to pull away perspiration and moisture. The improved boot will have more spike protection with a Kevlar-resin mesh replacing the steel plate. Additionally, alternative sole designs will be evaluated. A field test of these improvements is scheduled for mid-1993 at Fort Benning.

Plastic-shell Mountain Ski Boots. The JFK Special Warfare Center and School has identified a plastic-shell boot for use with the snow and ice traversing equipment (SITE) system. It



Arctic Vapor Barrier Boot

Intermediate Cold-Wet Boot

is much like a typical ski boot and will be used primarily for skiing and snowshoe operations. The boot is designed with a flexible cuff for limited marching and incorporates a synthetic thermal liner that is inserted into the plastic shell. This boot is intended for use in extreme cold climates.

Improved White Vapor Barrier Boot. Also as part of the SITE program, an improved version of the white vapor barrier boot was developed. The improved boot incorporates new synthetic insulators and has an injection-molded sole for better traction and lighter weight. This boot weighs 20 percent less than the standard VB boot.

Evaluation of Socks and Sock Systems. Significant advances in textiles have produced a wealth of different sock materials and styles. The Infantry School is in the process of evaluating different socks and sock systems for wear with boots currently in the inventory. This project, as well as the hot-weather boot improvement project, is part of the Soldier Enhancement Program, which allows for faster research and development. Testing and evaluation of new sock candidates began in late 1992.

The development and fielding of high-quality combat footwear has always been a top priority for the U.S. Army. Although the current family of boots provides our soldiers with the best foot protection available in the world today, the Army's research and development community is constantly striving to improve that protection. By applying new technology and improvements to its boots, the Army will meet the challenge and keep its soldiers mobile for their diverse missions well into the 21st century.

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Briefing Techniques
Say Well What Needs Saying

LIEUTENANT COLONEL RUSSELL W. GLENN

Effective verbal communication is essential, both in peacetime and in combat. A misunderstood message in training can waste time, money, and training opportunities. In combat it can cost the lives of the soldiers entrusted to our care.

Briefings are some of the means we use to communicate information; an effective briefing not only transmits your intent and guidance but also reinforces soldiers' confidence in the unit's leadership. Whether you are a squad leader who briefs your soldiers in the field or a staff member who represents the commander at an orders briefing, there are some techniques that will help you communicate more effectively.

The basics of preparing and presenting oral briefings are covered in Field Manual 71-2, *The Tank and Mechanized Infantry Battalion Task Force*; FM 101-5, *Staff Organization and Operations*; and other sources. But I would like to add some observations and ideas from my own experience. This information applies equally to leaders who give briefings themselves, head a team of briefers, or train others to present information.

Any briefing has two critical phases: preparation and presentation.

Preparation

The first step in the preparation phase is to determine the purpose of the briefing and to state what you want to achieve. The next step is to prepare an agenda or a format that will guide the briefing. An orders briefing frequently follows the five-paragraph order format or some modification of it. One alternative is to use a METT-T (mission, enemy, terrain, troops, and time) format; publications such as Fort Leavenworth's Student Text (ST)-22-2 (Writing and Speaking Skills for Senior Leaders) provide others. The key is to select a format that will effectively communicate the necessary information.

As you prepare, consider your audience's perspective. A squad or platoon leader briefing his men must consider where they have been for the past several hours. If they have been packed into a squad vehicle during movement, the briefing must include a clear picture of where they are now. They may not know. Where is the enemy in relation to their location? How will vehicle operators know if they missed a turn during movement? Identifying major roads, a river, or other limits ensures that no one wanders outside a well-defined "box."