



# Commandant's NOTE

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## TOMORROW'S WEAPONS—TODAY'S CHALLENGE

In the March–April 1993 issue of *INFANTRY*, I discussed the history and current initiatives of the Infantry in its role as the centerpiece of a force projection Army, and the doctrinal and materiel issues we will need to address as we move into the 21st Century. In this issue, I want to talk about the importance of maintaining the technological edge and describe how the Small Arms Master Plan will help us sustain our dominance of the modern battlefield.

Meeting the challenge of providing the force with the best possible weapons and equipment has never been easy, and changing doctrine and tactics to keep pace with weapons technology can be even more difficult. Throughout history, in those instances where weapons development has out-stripped tactical evolution, the results have been catastrophic. The staggering number of men killed and wounded in the American Civil War demonstrated, in many cases, the weakness of Napoleonic-era formations and maneuver against advanced weapons.

At Gettysburg, the comparatively long-range, massed fire of the Springfield rifled musket and the Parrott rifled gun destroyed assaulting Confederate formations before they could reach Union positions. Similar tactics proved equally costly two months later at Chickamauga, where Benning's Georgia Brigade was mauled by the double-shotted canister of Lilly's Battery and the rapid fire of Wilder's Brigade at Viniard Farm. On a far worse scale, during World War I British forces sustained more than 19,000 killed on the first day of the Battle of the Somme, when commanders ordered a frontal assault by massed Infantry against German barbed wire, machineguns, and artillery. In four months, British and French forces sustained over 600,000 killed and wounded. Similarly, Germany lost over 330,000 killed and wounded in ten months' fighting at Verdun. By the time the U.S. entered the war, tactics had changed in favor of fire and maneuver by smaller units, and the carnage of the Somme and Verdun were not repeated.

Although mass assaults against U.S. positions were common in the Pacific in World War II, in the Korean War, and

later to a lesser degree in Vietnam, our own doctrine and tactics favored fire and maneuver to seize objectives. The futility and waste of mass attacks were again illustrated in the war between Iran and Iraq, but the value of dispersion and combined arms operations as postulated in Army operations doctrine proved themselves in the Gulf War, in which we saw the full potential of training and doctrine commensurate with state-of-the-art weapon systems.

During the past two decades, technological advances in target acquisition, night observation, communications, munitions, ground positioning systems, and laser target designation have given us the ability to locate the enemy and deliver effective fire on him faster than ever before. But Infantry small arms have changed little since the Vietnam War, and today a state of approximate parity exists between our family of small arms and those of potential adversaries. Unless we are able to achieve a quantum leap forward, the U.S. soldier of the future may well find himself outgunned. We cannot afford to let that happen.

In the past, small arms development has been largely reactive in nature, with opponents responding to the innovations and improvements of other nations by introducing their own design changes. In the late 1950s, U.S. planners began looking at the military applications of a lighter, faster bullet to replace the service round then in use. By 1967, the United States had fielded the M-16 rifle, and within seven years the Soviet Union had produced and fielded their own AK-74 assault rifle, which fired a 5.45mm bullet comparable to that of the M-16, but at a somewhat lower velocity. The speed with which the AK-74 was designed, tested, and issued to field units illustrates the capability of today's industry to respond to an opponent's momentary advantage. In order to ensure that U.S. Infantry would continue to enjoy its technological edge, the Chief of Staff, Army approved the concept of the Small Arms Master Plan in May of 1988 as a blueprint for the research, development, and procurement of small arms into and beyond the 1990's.

The plan is not a fixed schedule, but is instead intended to be a living document which can incorporate the latest changes to threat capabilities, input from the field, and ideas from the developers to design an Objective Family of Small Arms. The development and fielding plan will take place in two phases: Phase I will focus on improvements to existing weapons while identifying and refining the technology which, in Phase II, will yield a family of three small arms which will finally replace the existing small arms systems.

The Objective Family of Small Arms will include: the Objective Crew-Served Weapon; the Objective Individual Combat Weapon; and the Objective Personal Defense Weapon. These weapons will eventually replace, respectively, the MK19 MOD3 grenade machinegun/M249 machinegun; the M16 series rifle, the M4 carbine and the M203 grenade launcher; and the M9 pistol.

The Small Arms Master Plan represents a developmental approach to the challenge of putting the best weapons possible into the hands of the Infantryman. It is a joint effort of the Training and Doctrine Command (TRADOC) and Army Materiel Command (AMC) that will provide direction and focus for Department of the Army planners, TRADOC combat developers, AMC research and development agencies, and training developers. The end result will be the best possible mix of weapons and munitions, procured in the most cost efficient manner, and capable of effectively dealing with the latest technological advances of any adversary. That is an ambitious goal; now let me tell you how we're going to get there.

The starting point will be a thorough analysis of the threat, not just the current world-level threats, but an array of localized and emerging threats as well. The analysis will include potential adversaries' munitions, acquisition and fire control systems, and personal protection systems, as well as

our vulnerabilities in light of his capabilities. This will be reviewed through various scenarios to develop as many contingencies as possible. We will then examine the threat in the context of Army operations doctrine to determine what type of small arms can best respond to each scenario, while remaining consistent with current and future force structure constraints.

Once the optimal type and mix of weapons have been determined, the data gained will be reviewed to design an acquisition strategy for all of the weapon systems and munitions, which will then be communicated to the agencies responsible for procurement. The Small Arms Master Plan blueprint will include a number of technology-based activities intended to provide input for the ultimate decision as to which weapons and systems will comprise the ultimate family of small arms. These base activities include the Advanced Combat Rifle Program, Leap Ahead Technology, Bursting Munitions, Modular Fire Control, and the Advanced Crew-Served Weapon. The decision point for selection of the best technology for the family of small arms has been set for September, 1993.

This is an overview of the Small Arms Master Plan. For the first time in the history of the U.S. Army, it represents an effort to combine a detailed threat assessment, Army operations doctrine, user input from the field, the perspective of the developers, battlefield dynamics, and a concept-based requirements system to ensure that the U.S. Infantryman is the best trained and best equipped fighter on the future battlefield. As we move toward a leaner Army and the prospect of increasingly austere resources, it is imperative that our fighting force be able to move fast, strike hard, and win decisively the first time out. Our training base is producing soldiers and leaders with the will and the skill to do just that, and the Small Arms Master Plan will give them the tools to do the job.

