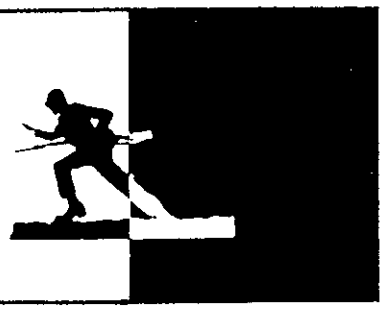
INFANTRY NEWS



FIELD MANUAL 23-30, Grenades and Pyrotechnics, and Field Manual 23-23, Antipersonnel Mine M18A1 and M18 (Claymore), are now being rewritten. Units are asked to make suggestions, comments, or recommendations for changes to these manuals by writing to the Director, Weapons, Gunnery, and Maintenance Department, ATTN: Weapons Division, USAIS, Fort Benning, GA 31905.

THE NATIONAL INFANTRY MUSEUM observed the 40th anniversary of the D-Day landings in Normandy by exhibiting a collection of military art done by the late Sergeant Rudy Wedow, and by showing video tapes of the D-Day operations in the Museum's theater. It also produced a series of "Moments in History" television tapes and made them available to the local television and cable stations. A special exhibit on the D-Day operations was also prepared for display at Infantry Hall.

A ceremony held in May to honor three-time Combat Infantry Badge holders was an impressive and memorable occasion, with several hundred people in attendance. More than half of the known triple badge holders attended.

A bust of General George S. Patton, Jr., was placed on an extended loan for display at the headquarters of the U.S. Army Infantry Training Center. The life-sized sculpture was done by a French artist, F.V. Cogne. The present USAITC headquarters building was General Patton's headquarters when he was at Fort Benning in the early 1940s with the 2d Armored Division.

Many Rangers have responded to the Museum's need for artifacts for its Ranger display. The exhibit is now open, and it has captured the attention this distinguished group of Infantrymen deserves. Many visitors to the Museum have expressed their interest in and appreciation of the Ranger display.

The National Infantry Museum Society, formed at Fort Benning a number of years ago to assist the Museum with financial and volunteer support, is open to anyone who is interested in joining. The cost is $2.00 for a one-year membership, or $10.00 for a lifetime membership.

Additional information about the Museum and the Society is available from the Director, National Infantry Museum, Fort Benning, Georgia 31905, AUTOVON 835-2958, or commercial 404/545-2958.

THE FOLLOWING NEWS ITEMS were submitted by the Director, Combat Developments, USAIS:

• **Light forces.** The Directorate is actively applying Army of Excellence design criteria to all Active Army light forces. This effort has given birth to the infantry division (light), and the 7th Infantry Division will be the first to convert to this new organization.

More recently, design initiatives have focused on restructuring the 82d Airborne and 101st Airborne (Air Assault) Divisions. The goal is to reduce the strengths of these divisions without impairing their combat effectiveness.

The 82d Airborne Division is expected to be restructured with a reduced strength of about 13,000 soldiers, while the 101st Airborne (Air Assault) Division is expected to have about 15,000.

• **The Ranger Regiment.** It has been a long time since the Army and the Infantry have had a TOE Infantry Ranger Regiment. Now, proponency for Ranger organizations has been returned to the Infantry along with the task of activating a third Ranger battalion and a Ranger regimental headquarters.

The Infantry School is now researching organizational concepts and operational designs for the regimental headquarters, which will become a reality later this year. As a tactical headquarters, it will be capable of deploying with and controlling its three Ranger Infantry battalions.

• **ACABUG.** Although computer simulations and wargames have supported the analytic process in the combat developments community for a number of years, these simulations and wargames have not portrayed military operations on urban terrain (MOUT) to any appreciable degree. Only recently has the American-Canadian-Australian-British Urban Game (ACABUG) become operational.

Housed at the TRADOC Systems Analysis Activity at White Sands Missile Range, New Mexico, ACABUG is a computer-assisted model with the game players fighting their battle on a three-dimensional game board. The game allows a modeling of the approach march to an urban area as well as the urban fight itself.

Although the model is functional, refinements are still being made to it to improve its usefulness. The Directorate expects ACABUG to be of great value in its future analytic efforts.

• **AN/PVS-7 Night Vision Goggles.** Much has been said in defense periodicals, newspapers, and other news media about the single-tube night vision goggle, AN/PVS-7. The time has come to set the record

straight on it.

Back in 1977, a desire to reduce the cost of night vision goggles led directly to a requirement for a single-tube goggle. The Infantry Board, in April and June 1978, compared prototypes of one-tube goggles with second generation image intensification tubes to the AN/PVS-5. Based on the favorable results of those tests, a letter of agreement was approved on 24 October 1979.

The initial development and operational tests of two prototypes were completed early in 1980. These tests demonstrated a potential for meeting the Infantry's requirements, and a required operational capability statement was submitted late in 1981 and approved in February 1982.

The AN/PVS-7 goggles are presently undergoing further development and operational testing. If they successfully pass this testing, they should be fielded in mid-1986. These goggles have a third generation image intensification tube with a life expectancy some three times longer than the second generation tubes. This, together with its being a one-tube instead of a two-tube goggle, is expected to provide a lower life cycle cost and to require less maintenance.

The development of these goggles has not been an overnight process. But the new goggles will allow Infantrymen to see at much lower night sky light levels than with either the AN/PVS-5 or any of the second generation goggles. They are designed for use at night by combat, combat support, and combat service support elements during all types of conflict. They can be used for command and control purposes, fire control (not firing), reconnaissance, close-in surveillance, terrain navigation, emergency medical aid, operating and maintaining vehicles, selecting positions, traffic control, rear area and critical area security, patrolling, combat engineer tasks, rearming, refueling, and other resupply activities.

It has been stated quite frequently that the goggles can be used by pilots while flying aircraft. But a single-tube goggle such as the AN/PVS-7 provides no depth perception, which is critical to a pilot. Too, there is now in production a very good aviator's night vision imaging system (ANVIS) designated the AN/AVS-6. This item has two third-generation image intensification tubes with a special visor guard. An excellent article on the ANVIS appeared in the May 1983 issue of AVIATION DIGEST. (That particular issue had a number of other interesting articles on night flying and night vision devices.)

Another common misconception is that the AN/PVS-7 can be used for firing weapons at night. The system can be used for that purpose, but only in conjunction with the AN/PAQ-4 infrared aiming light (IAL). But the IAL was developed solely for use by Ranger battalions.

In 1978 the Infantry Board tested the IAL and concluded that the IAL did provide sufficient accuracy and range for a typical rifleman or gunner wearing night vision goggles to achieve hits with the M16A1 rifle or M60 machinegun on stationary targets out to a range of 50 meters. The IAL did not improve a rifleman's or a machinegunner's hit performance against moving targets.

There are other reasons why we do not believe Infantrymen should be saddled with the IAL. Because it is an active infrared source, for instance, it can be detected from great distances. In addition, it cannot be used during the day, and there are some passive devices, such as a reflex-type sight, that can be used during daylight by themselves or at night with the AN/PVS-7.

The Infantry School is pursuing several other adaptations of the AN/PVS-7 — night vision binoculars, and a magnified snap-on afocal adapter for the front end of the AN/PVS-7. If these devices turn out to be workable, the Infantry community will see more about them in future issues of INFANTRY.

• **Robotic Ranger.** "Robot" is a word that is becoming increasingly popular. But it means different things to different people. To some, it means a "human-like android"; to others it means the intelligent machine of the future dedicated to serving man.

We have had automatic machines for a long time — telephone systems, elevators, washer-dryers, and record players. With the improvements in computers and computer science, man has been able to add a new dimension to the automatic machine, and this he has called "artificial intelligence," or A/I.

Artificial intelligence is a branch of computer science that is devoted to programming machines to carry out tasks that, if they were done by humans, would require intelligence. The degree of autonomy that is achieved depends on the computer programming and the sensory control systems.

The objective of any military application of robotics A/I is to achieve a reduction in manpower and to improve reliability. In general, military applications can be placed in three categories: reconnaissance/surveillance, battlefield weapon systems, and materiel handling systems. The Infantry School and Center is keeping abreast of robotics A/I as it applies to the Infantry soldier.

The "Robotic Ranger," for example, is a full scale functional engineering model of a robotic vehicle. It was designed and developed by the Army's Ballistics Research Laboratory under a research and development contract with a civilian contractor. It is small, lightweight, and capable of operating beyond line of sight up to a range of 10 kilometers. It can carry and operate any weapon an Infantry soldier normally uses.

A great effort has been made to keep the potential production costs as low as possible by using off-the-shelf materials. This goes along with the idea that robotic weapons should be expendable aids to a fighting force.

Any future development of the Ranger should include day and night sensors for target detection and engagment, preprogrammed A/I, and futuristic weaponry, while keeping the cost and weight within acceptable limits.