CHAPTER VII

THE NEED FOR NEW WEAPONS AND TRAINING

The world situation in the mid 1970's, as before, was dominated by economic and political considerations, however, the importance of technology was beginning to become a factor. In 1972, Congress created the office of Technology Assessment. Its purpose was to keep members of Congress advised on the impact that new technologies would have on the United States and its policies.

Within the world of Science and Technology, artificial political boundaries have no meaning. The law of gravity applies to the Communist world as well as the free world. A new scientific principle or a new technological process seldom remains a secret for very long. The commercial applications or the military applications are controlled by political or economic factors but the knowledge moves about the scientific community very rapidly.

By mid 1976, Air Force Intelligence had prepared an unclassified report on the Soviet military. Chapter 5 was titled, "The Technological Challenge." It was significant to note that the U.S. had enjoyed technological supremacy over all nations during the past 25 years, especially in research and development associated with military power. However, Western Europe and Japan were closing the technological gap in certain areas: The United Kingdom in VTOL fighters; Swedish designed-and-produced Mach 2-plus fighters; France, in a series of first-class advanced military aircraft, as well as in nuclear-armed ballistic missiles and submarine-launched ballistic missiles; Western Germany, in several modern military aircraft and ground equipment; and Japan, in certain areas of electronics. In a very real sense, the U.S. was now being challenged in many areas as the technological leader of the free world.

Moreover, an increasing number of nations, including India and Israel, possessed the technology and capacity to develop nuclear weapons and join the U.S., U.S.S.R., United Kingdom, France, and the People's Republic of China in deploying nuclear forces; such nuclear proliferation could have far-reaching consequences.

The United States had held and still held a lead in basic military technology over the Soviet Union in most areas important to national security. The magnitude of that lead had been of crucial importance in maintaining military security and had relieved Western nations of the necessity of matching Soviet and Warsaw Pact forces in purely numerical terms.

However, the qualitative advantage enjoyed by the U.S. was being reduced by a large and determined Soviet technological effort and by substantial improvements in the quality of their weapons. Soviet military production greatly exceeded that of the U.S., and they were

deploying large numbers of substantially improved weapons to their forces.

It was the judgment of the then Director of Defense Research and Engineering, Dr. Malcolm Currie, that "with a continuation and simple extrapolation of current trends in activity, investment, and achievement, the Soviet Union -- on balance and including the combination of quality and quantity -- can achieve dominance in terms of deployed military technology in the late 1980's."

To the Soviet leadership, science and technology was the main arena of competition between socialism and capitalism. According to a 1973 resolution of Party Central Committee, "The development of Soviet science had special significance (today) when the scientific-technological revolution has become the most important area in the competition of the two opposed world systems." Achieving technological superiority was seen not as a principal goal of itself, but also as a basis for success in the overall dialectic struggle. Thus, research and development, particularly programs which support military capability, commanded highest priorities in Soviet planning.

Overall, the Soviet economy can be critized for poor performance, but in reality there are two quite distinct economies. The one concerned with the needs of the Soviet people falls short of expectations; the other concerned with the power base and military capability performs very well. The current performance of the second sector is revealed by the quality and quantity of weapons now being deployed. However, the most important contribution of extensive investment in the military economy lies in the capabilties that will emerge in future Soviet weapons.

TABLE 5

ADVANTAGES IN BASIC TECHNOLOGY

STRONG SOVIET LEAD	STRONG U.S. LEAD
Titanium Fabrication	Air-to-Air Missiles
High Frequency Radio Wave Propagation	Avionics
	Satellite-Borne Sensors
SOVIET LEAD	**U.S. LEAD**
High Pressure Physics	Integrated Circuits
Welding	Computers
Magnetohydrodynamic Power	High-Bypass Turbofans
Anti-Ship Missiles	Numerically-Controlled Machines
Chemical Warfare	Composite Materials
Artillery Technology	Inertial Navigation
	Precision-Guided Munitions

CONTESTED

High-Yield Nuclear Weapons

Aerodynamics

High-Energy Lasers

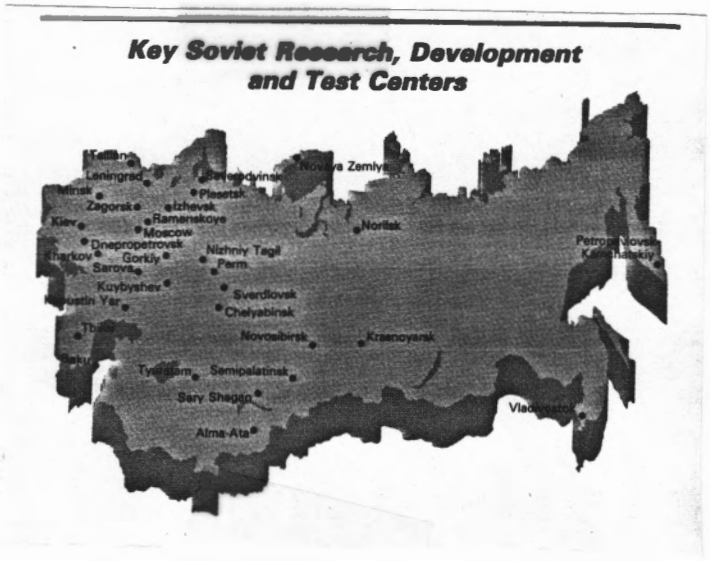
Behind these overt indications of advanced technology in military systems are a variety of scientific efforts and the development of Soviet foundation technologies which support future military capabilities. Table 5 of the report presents a small sample of comparisons between U.S. and Soviet technologies and shows that the Soviet Union now leads the United States in a number of important areas.

The uncertainties about the Soviet military R&D priorities plus lack of sufficient visibility into Soviet laboratory and design efforts increased the possibility of a technological surprise, the most dangerous element of the Soviet challenge. The seeds of technological surprise lie in R&D innovations. The Soviets have learned that a reactive policy in military technology is not enough to give them superiority and they are working hard to gain the initiative in many areas. Soviet R&D innovations are significant and indicative of efforts to exploit basic research advances and develop new military applications. The following table lists some of their innovations.

TABLE 6

SOVIET INNOVATIONS

- Lunokhod Unmanned Lunar Rover
- Fractional Orbital Bombardment System
- Surface Effect Vehicles
- Mobile Ballistic Missile and Free Rocket Systems
- Heavy Lift Helicopters
- Large Phased-Array ABM Radars
- Spaceborne Nuclear Power R&D
- Cold-Launched ICBM Systems
- Large ASW Ships
- Anti-Satellite Space Systems
- Controlled Thermonuclear Reactions R&D
- Large, High-Power Solid Lasers
- Magnetohydrodynamic Power Generation
- Advanced Metal Joining Technology



Soviet secrecy prevents the U.S. from obtaining information on many Soviet R&D efforts and especially on their decisions to initiate prototype development. Those decisions typically precede the appearance of a prototype in testing (or in a Moscow May Day parade) by about three to four years. The free world must be concerned about what is not known -- about what the Soviets may be doing with new technologies which would have military potential. The extent of our knowledge is dominated by U.S. intelligence capabilities and, as systems become more sophisticated and complex, we must improve our technical intelligence to support the development of countermeasures in our weapon systems. We do know that there is little or no reason

to suppose that major innovations capable of drastically affecting the future military balance will abruptly cease in 1976. If we let the Soviets seize the technological initiative, we would become the ones who must react and copy, and the military balance could turn against us within a decade.

Consequently, we must continue to maintain a reasonable margin of technological superiority in areas important to U.S. military strength, both to offset our incomplete knowledge of Soviet technological progress and to provide hedges against unanticipated new threats or failures in any of our major weapons systems. The U.S. cannot guarantee that technological surprises will not develop and so must rely on its own scientific achievements.

This course of action is basic to guard against any one adverse event upsetting the U.S. deterrent posture. The Secretary of State said at a press conference on 16 September 1972:

> "....as one looks ahead in the more distant future, one has to recognize that the strategic balance now can be upset perhaps more decisively by qualitative changes than by quantative changes."

The Air Force Chief of Staff, General Jones, stated in his FY 1976 Posture Statement to Congress:

> "Our future security will depend in large measure upon maintaining technological superiority. Clearly then it is in our interest to support a dynamic research and development program."

The Director of Defense Research and Engineering stated in his FY 1977 Statement to Congress:

> "The principal question facing the United States is whether we will have sufficient capability to deter the Soviet Union in 1985 and beyond. In addressing this question, it is hard to escape the conclusion that the Soviets appreciate much better than do vocal critics of U.S. defense, the importance of technological leadership in preserving the power that permits nations to control their destinies."

The importance of preventing technological surprise became a prime topic among the nations top leadership. Dr. George Heilmeir was the current Director of the Defense Advanced Research Projects Agency and wrote extensively on the subject in an article which appeared in the May-June 1977 issue of "National Defense" magazine. Dr. Heilmeir pointed out that:

> "Technological surprise is not a term that lends itself to one definition. Indeed, there are at least five classes of technological surprise. Common

to each, however, is something which suddenly thrusts itself on the scene -- something which explodes on our consciousness rather than evolving in a predictable way. Perhaps the most vivid examples of technological surprise are those which involve systems based on new technology. The classic example is, of course, the atomic bomb.

But surprise may also be the result of systems based on the direct application of little known scientific principles. An example which comes to mind might be some new chemical or biological agent. Technical surprise need not involve new science or technology used in an entirely new system. It could involve the use of new technology to provide markedly upgraded performance in an existing system. Such was the case with the introduction of the jet-engined fighter near the close of World War II.

Technological surprise also could occur based on a new system which utilizes a novel application of existing technology. However, some of the more decisive instances of technological surprise involved the use of an old system in a new and novel way. A classic example is the German use of their 88-mm. antiaircraft guns in an antitank role.

The real difference between the surpriser and the surprised is usually not the unique ownership of a piece of new technology. The key difference is in the recognition or awareness of the impact of that technology and decisiveness in exploiting it.

World War II saw technological surprise at work on several fronts. Early in the war, the Germans used a combination of shaped-charge warheads delivered by gliders to attack and destroy the concrete bunkers at Eban Emal in Belgium and pave the way for German penetration through the low countries.

There were two problems to be solved: (1) A lightweight penetrator was needed to blast through reinforced concrete, and (2) the attack had to be conducted from topside, and stealth was absolutely necessary.

Eban Emal represented a classic marriage of technological and tactical surprise.

The allies had their own technological surprises. Radar and the tactical superiority of the Spitfire enabled Britain to stave off the Luftwaffe and win the Battle of Britain. The advent of

HELLO, OUT THERE

This is the first issue of a quarterly newsletter published by US Army Forces Command Opposing Forces Training Detachment - - RED THRUST. The RED THRUST STAR is devoted to providing information useful to those involved in the management, preparation, or conduct of OPFOR training. To be successful in this effort, we need your help. Please complete the brief questionnaire at the end of this issue. Your comments and suggestions will have a direct bearing on the shape and content of future editions.

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"It was nice to learn that our leaders knew a great deal about our adversaries' weapons, equipment, and tactics it would have been better had this information gotten to us."

--- Israeli Infantryman, 1973

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WHAT RED THRUST'S ABOUT

Our mission at RED THRUST is to help YOU to exploit and pursue all available information on potential adversaries of the US. Program goals and objectives are specified in AR 350-2, Opposing Forces (OPFOR), which is applicable to all components of the Army. HQ FORSCOM has published Supplement 1 to this AR for further guidance to using elements. That supplement gives the FORSCOM Opposing Force Training Detachment (RED THRUST) the mission of providing OPFOR information, advice, and assistance, primarily on-site, to active and reserve component combat and combat support units. RED THRUST was activated 14 January 1977 at Fort Hood, Texas, and we literally "hit the ground running." A partial listing of units we've visted appears later in this newsletter.

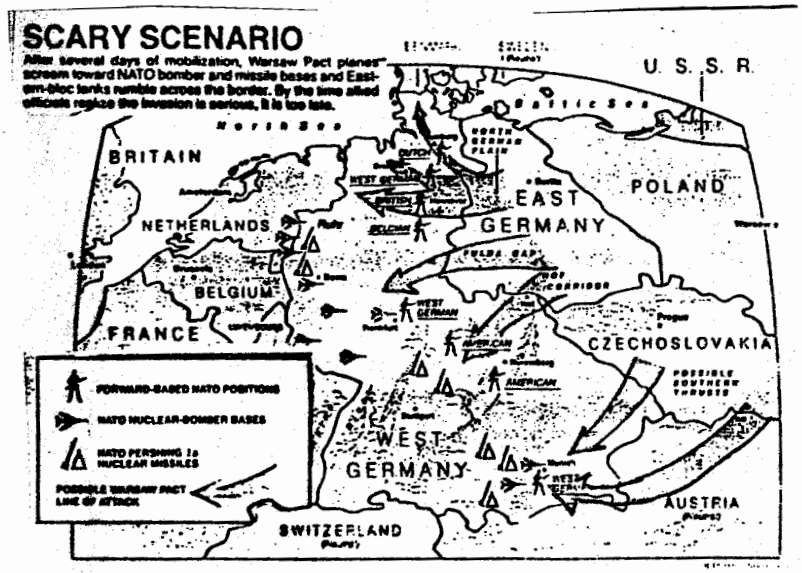
We exist to help you develop the most effective and realistic OPFOR training program possible for your troops, NCOs, and officers. All costs associated with support visits are borne by RED THRUST. A wide variety of training methods and materials has been developed. Assistance will be tailored to the needs and requirements of the requestor insofar as they are consistent with FORSCOM OPFOR training standards.

HERE IS WHAT RED THRUST CAN PROVIDE YOUR UNIT:

1. Command-Level Seminar. This presentation is viewed as an entry session in a training support visit, and is recommended for the DIV/BDE/BN commander, his principal staff officers, and primary subordinate commanders. Purpose of the seminar, which lasts approximately an hour, is to provide an executive forum for the discussion of OPFOR goals and training techniques, and RED THRUST support capabilities.

2. OPFOR Training Manager Workshop. This is an informal discussion session designed to benefit those who manage and administer the local OPFOR program. Emphasis is on two-way communications concerning training techniques and finding solutions to OPFOR training problems such as identifying ready sources of OPFOR reference materials and training aids. When germane, discussion may center around exploiting Foreign Material for Training (FMT), or how to organize, train, and field a maneuver OPFOR unit. The list of possible subjects is virtually limitless.

3. OPFOR Maneuver Unit Training. We have developed a program of instruction for training an OPFOR maneuver unit (OPFOR/MU) that requires seven training days - three classroom and four field. A training consultant experienced in OPFOR/MU training can work with you, on site, in developing and conducting your OPFOR/MU training.



electrical intercept and code-breaking technology once again demonstrated that mathematics was capable of providing technological surprises in direct and indirect ways.

According to accounts only recently made public, the ability to intercept and read German and Japanese codes may have played a far more decisive role in World War II than we had previously believed. But the use of mathematics in military applications is not at all new. Napoleon was the contracting officer for LaPlace, Fourir, and Lagrange.

The October 1973 Middle East war saw several instances of technological surprise -- most of them on the part of the Arabs. Electronic warfare was used extensively on the battlefield instead of above it. A new surface-to-air missile system, the SA-6, and a low-altitude antiaircraft gun system proved far more effective than we had previously thought.

It was also learned that antitank weapons (e.g., the Sagger missile) could do their job under the right conditions.

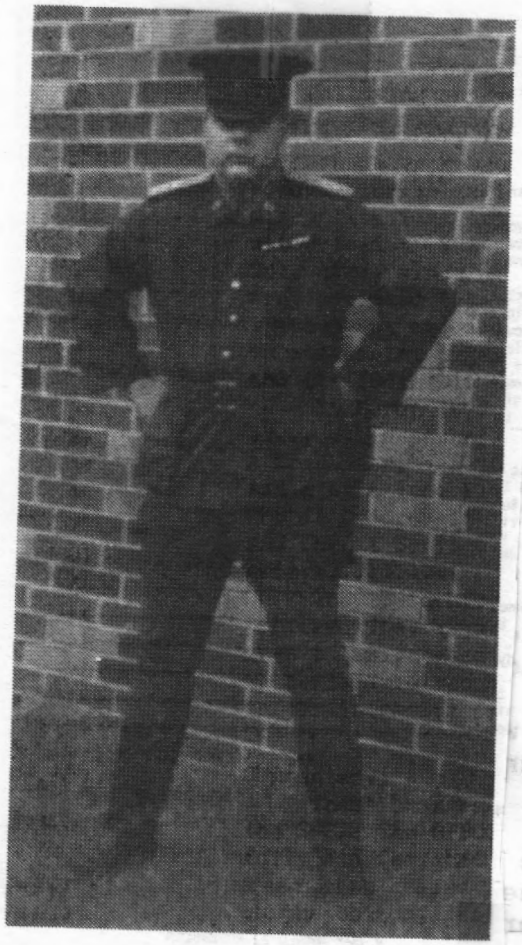
Fortunately for the Israelis, none of these surprises proved to be decisive, but, as their chief ally, we learned that technological surprise need not be based on new technology -- knowing the technology is really quite different from recognizing its tactical or strategic importance and exploiting it.

The key question is how does a democracy such as ours prevent technological surprise? The emphasis is on prevention because the nature of our open society and the present climate in the media make it very difficult for us to perpetrate technological surprise. Much of our advanced technology is already visible before it can become a force factor. I'm thinking of the F-14, F-15, B-1, F-16, and AWACS aircraft. How can these perpetrate technological surprise when their characteristics are openly discussed and debated?"

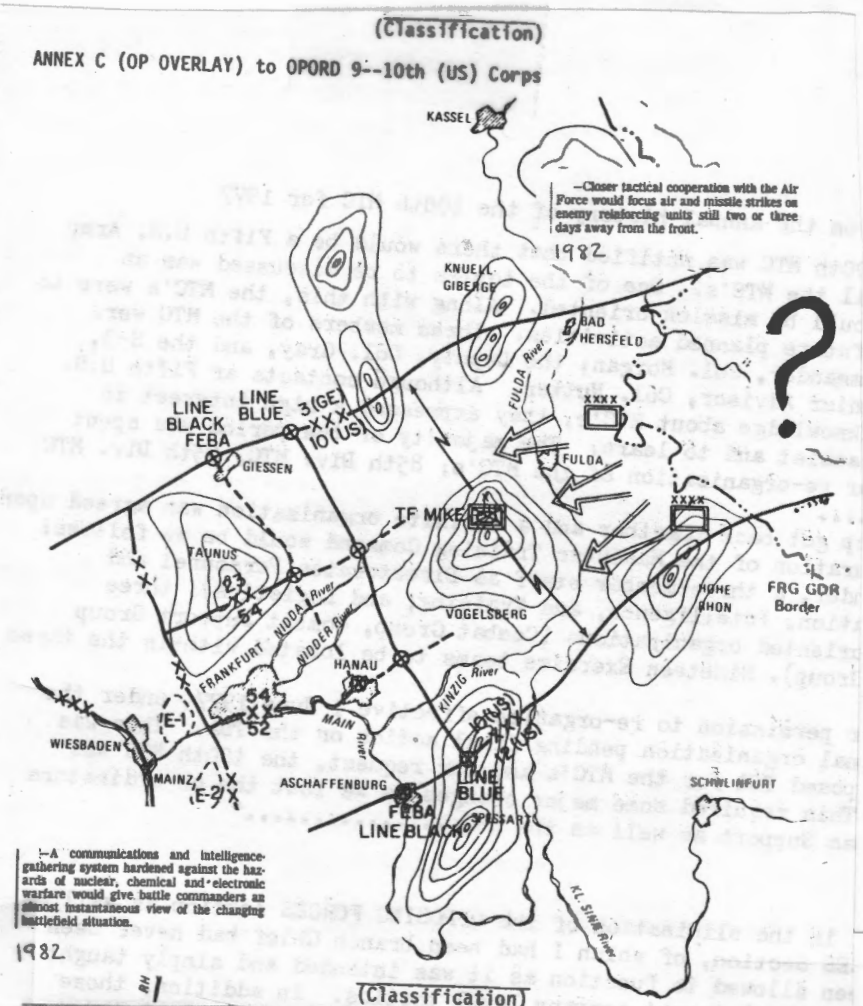
Dr. Heilmeir indicated that there were seven steps which a free society could take to prevent technological surprise. These were:

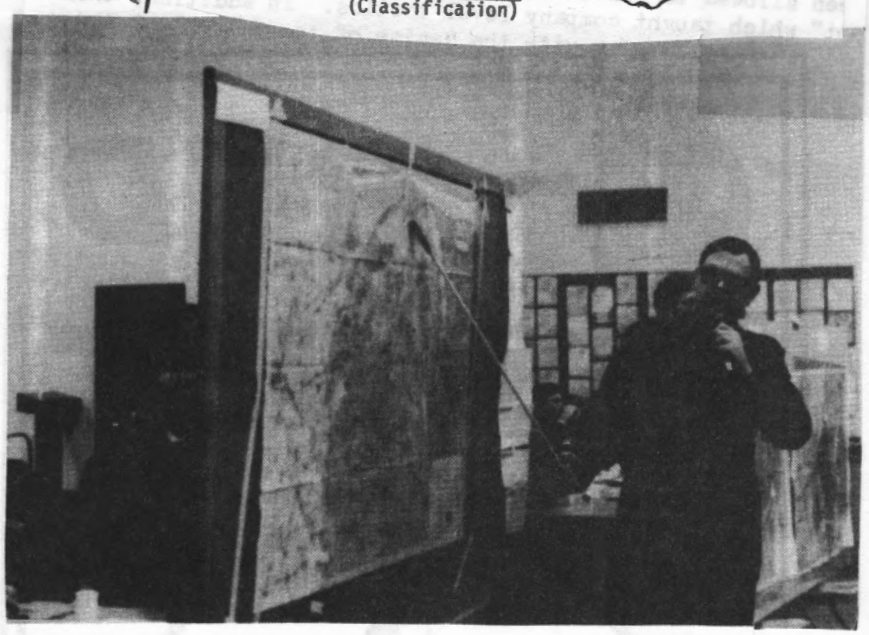
1. Maintain the technological initiative. Get there first so that you can understand what a potential adversary might be doing based on fragmentary evidence -- but also understand the asymmetrics in approach and philosophy.

2. Timely intelligence is needed. If one is to deduce capabil-



Major William L. Howard, Chief of the OPPOSING FORCES BRANCH of the 100th MTC in a U.S. Army uniform modified to represent a Soviet Officer.





In 1977, the 100th MTC was tasked with a series of exercises for the Michigan National Guard. The first two exercises were for the Rear Area Operation Center. This unit was a co-ordination center for rear area operations and required a Corps level scenario for implementation. LTC Hal Griffin's team was chosen and I served as the chief controller, having developed the scenario. Captain Barbara Conrad, a nurse came along as a Medical Unit Reactor. While very weak in Corps Level Operations, it served as a learning experience for her. By late fall, I had been selected as the Corps G2 Controller for a Ranger Infantry Company, which served as the eyes and ears of the Corps Commander. This exercise was followed by a Corps Support Command exercise for the entire Michigan National Guard Support troops. The exercise would have been even more realistic if a CAMMS exercise had been held at the same time.

ity based on fragmentary evidence and signs, these must be provided in a timely manner. Intelligence which is treated as history simply won't do. For intelligence to be useful, it must be timely and correctly assessed by those who can do something about it.

3. Develop options.

4. Develop mechanisms that provide for an orderly response when a technological surprise suddenly appears.

5. Make tactical and doctrinal flexibility part of our training and test and evaluation processes.

6. Create an atmosphere of cooperation and exchange between technologists and commanders of real forces. This might be done by a friendly competition in which the technologists could present five or ten new concepts and the commanders would compete as teams for the most imaginative tactics using new technology. But more is needed. Technologists and commanders must work together in the evaluation of technology -- a kind of test marketing -- a further refinement on "fly before buy."

7. Finally, there needs to be a close working relationship between defense-oriented scientists and engineers and their colleagues in the industrial and university technical communities.

Dr. Heilmeir's article went on to outline ten areas where technological surprise could be critical or even decisive. These were Space Defense, Anti-submarine Warfare, Undersea Vehicles, Passive Surveillance, "Really Smart" Weapons, Threat-Intensive Electronic Warfare, Submarine Launched SAM's, Armor, Ballistic Missile Defense as well as several other areas.

1976 was an important year in other respects. By April 1976, my promotion to Major in the Army Reserve had caught up with me and I had made the monumental decision to return to college and study engineering technology. Within the Reserve system, I had become the Chief of the Opposing Forces branch of the 100th Maneuver Training Command. This Reserve unit, composed of 315 senior officers and NCO's, many of whom were combat veterans had the mission of conducting training exercises for Reserve and National Guard units in a four state region which included Michigan and Ohio. My intention was to implement some of Dr. Heilmeir's suggestions, primarily in the area of intelligence, cooperation between commanders of real forces and technologists and to develop a close working relationship between defense oriented scientists and engineers and their colleagues in the industrial and university technical communities. I also served as an instructor at the Armor Center for the better part of four summers. Regrettably, the ~~unit~~ Maneuver Training Command was reorganized and my section was disbanded.

Red Square '77

For the first time the new Soviet T-72 tanks were shown to the public and delegations attending the parade in the Red Square for the 60th anniversary of the October Revolution.

A large number of T-72s were shown (46 vehicles) during the parade (a total of 336 military vehicles drove past the tribune) which proved to be significantly different from last year's parade when very few battle tanks were on display.

According to American military information sources, more than 2,000 T-72s have been built since 1976 whilst production started in 1974. The other major novelty consisted of the first official showing of the new 152 mm self-propelled gun (See ARMIES & WEAPONS No. 32 page 21) on a hull based (with a few modifications) on that of the SA-4 GANEF anti-aircraft system.

The parade was thus decidedly more "aggressive" than last year's, which only included defensive missile systems and no combat vehicles. We are including a short photographical reportage which shows the more significant vehicles to take part in the parade. On the basis of the photographs that we have received, we can speculate on the features of the Soviet new tank:

The New Soviet T-72 Tank

Thanks to some French visitors and a Gamma photographer, the new Soviet T-72 tank can be examined in detail. The model shown here, belonging to the Taman Guards Division, differs from those seen earlier in East Germany.

The production version of the tank measures approximately 23 feet long, 10.5 feet wide and only 4.7 feet high. The crew of three is, necessarily, short.

Tank commander and gunner ride in the turret, which is equipped with a 125-mm smooth bore, auto-loading gun, capable of firing three kinds of ammunition, while the driver is located in the center of long, steep front glacis.

The vehicle is reported to be 41 tons, have a new 700 hp engine, a maximum speed of 100 kph (60 mph), an unrefueled range of 500 km (300 miles), and carry 40 rounds of main gun ammunition. A 7.62-mm machine gun is mounted coaxially with the main gun and a 12.7-mm machine gun is mounted atop the turret.

Both tank commander and gunner have two forward looking periscopes and separate infrared lights and sights. The commander also has two rear looking vision blocks, while the gunner has what may be either a laser rangefinder, a stereoscopic rangefinder or both.

Observant tank watchers will also note the T-72 has only one antenna, meaning the battalion operates on only one frequency; there is a built-in bulldozer below the front glacis, so the already low tank can dig itself in even lower; and the T-72 has forward hinged side skirts over the road wheels to detonate antitank rounds before they can do any real damage. All in all, this is a formidable and innovative machine.

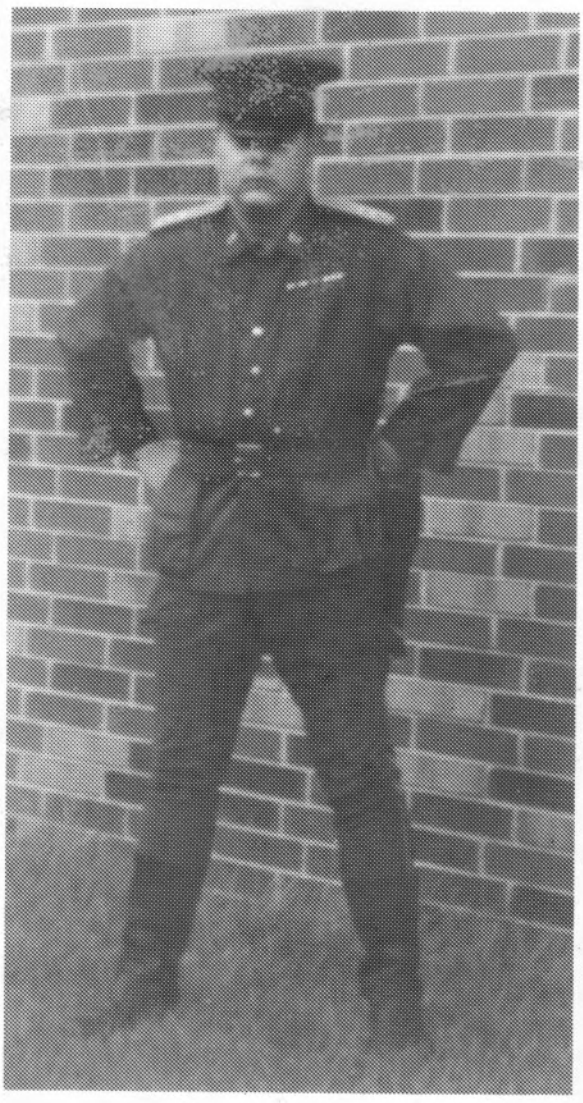
The emphasis in the field seemed to be on quickly getting new equipment out to the troops that would be effective against what was already in the field. The difference in attitude between the combat soldiers and the Ordnance/Engineer becomes apparent at this point and was compounded by the Engineer/Scientist in the quest for ever newer concepts and weapons technology. Fort Knox, home of the Armored Force, was in the process of incorporating "new doctrine and tactics" into training. The major points that were being made were based on experience from the Arab-Irsaeli war as applied to the defense of central Europe. I was also a student in the Command and General Staff College course and it was obvious that all training was geared toward conflict in Europe and the Mid-East. Numerous briefings were given on Soviet equipment and we were fortunate to have several captured Soviet vehicles to examine. The main thrust of the armor officer advanced course was to prepare our Reserve and National Guard officers to fight on the modern battlefield. Unfortunately, the officers would return to units whose equipment was not up to modern combat. Training exercises that were conducted also lacked realism.

In an effort to overcome the lack of realism, the Army established the Red Thrust Detachment at Fort Hood. Their purpose was to develop a means of training military units in Soviet tactics. They began to travel about the countryside, providing instruction on Soviet doctrine and tactics. Each unit was then supposed to conduct its own training program. In October, 1977, the 100th MTC received their presentation which was excellent for anyone planning a corps level intelligence exercise, but it lacked any real use for Battalion level training, especially in non-combat branches. I sent a complete set of our documents to the unit, in the hopes that it might save them from re-learning past mistakes. The military was under pressure to field new equipment and part of the pressure came from an awareness of the new Soviet equipment and doctrine being presented.

As previously discussed, the Army had been working on a replacement for its M60 series of tanks. The MBT 70 had been the leading contender but had been dropped due to cost. The Germans fielded their new Leopard tank. The British were also working on new tanks. The Swedish developed their "S" tank and Israel began development of a new tank as well as development of a tank industry. Within nine years they would field the Merkava tank. The Republic of South Korea also began to develop a tank industry, having also developed a small arms industry.

In 1977, the Soviets paraded their new T72 tank at the 20th anniversary of their defeat of the Germans in WW II. Military observers took numerous photographs of these new tanks and French military officers were treated to an in-depth inspection of one of these tanks that had been assigned to the Taman Guards unit. Almost immediately, old questions posed by Western intelligence were answered and new questions were raised. What exactly were the capabilities and limitations of this tank? Again scientists were at work asking what is the next advance that is possible in Soviet

Close-up of the four barreled ZPU-4 antiaircraft weapon with its heavy 14.5mm machine guns.



DEPARTMENT OF THE ARMY
UNITED STATES ARMY FORCES COMMAND
OPPOSING FORCE TRAINING DETACHMENT (RED THRUST)
FORT HOOD, TEXAS 76544

18 Nov 77

Dear Bill:

wanted to drop you a note along with our newsletter.

As yet I have not had a chance to study the things you sent; I have been on the road almost constantly for the past few weeks, with no relief in sight until about 10 December.

I appreciate you sending those things very much and I am sure we can use some, or all of it.

I will try to get a chance to look everything over carefully in December and will return to you then, unless you need them back sooner.

Best regards,

Chuck Russell

tanks. Ordnance Intelligence personnel were concerned about its manufacture and logistic support as well as capabilities and limitations. Armor officers were asking, "Can we defeat it and with what?"

The Army's Technical Intelligence operations had now been expanded to a battalion size unit and designated the 11th Military Intelligence Battalion and were assigned to INSCOM. Their primary task was the renovation of vehicles recovered in the Mid-East to be used for training and preparation of Technical Intelligence Bulletins that provided a detailed analysis of foreign vehicles and equipment.

Teams were fielded to transport the displays of weapons to the field for classes. Once completed, the team left a series of slides with the unit to be used in unit training, however, the weapons were not supplied to the unit. Within a few years, the training aid support centers produced various replicas of soviet small arms.

At the extreme upper achelon of the United States government, a sensitive intelligence operation was in progress. ARKADY N. SHEVCHENKO, a Soviet diplomat who was serving as Under Secretary General of the United Nations, was supplying the United States with information on the Soviet Union. In a pre-publication review of his book, "Breaking With Moscow," Mr. Shevchenko indicated that he provided Washington with information on the Soviet position on strategic arms limitations talks, frictions and maneuvers inside the Kremlin and provided secrets on Soviet planning and intentions in Europe, Africa, Central America and other foreign policy arenas. While there were no major coups for the United States cited in the book, it did provide insights into many Soviet moves.

There is, of course, a difference between understanding the other sides intentions and capabilities and formulating a response and then being able to implement the response. While the U.S. may have known about Soviet intentions and capabilities, and may have had responses of varying degrees of complexity, implementation of overt military action was not considered. Public opinion against the military was quite prevalent, and the public was not made aware of the Soviet threat. American military forces were receiving briefings on the Soviet armed forces from a variety of sources. Intelligence officers provided "threat briefings" and intelligence organizations produced numerous books and studies, each suited to particular needs of their organizations. One of the more successful programs that had been developed was a film produced by the Foreign Science and Technology Center entitled, "A Look Down The Soviet Barrel." This film was shown quite widely in service schools and at training sites. In addition, the Technical Intelligence Battalion at Aberdeen proving Ground provided displays of captured material. For the most part, these were items that had been captured in Vietnam or recovered from the Mid-East.

Events in Iran and Afghanistan, as well as other areas made it apparent that the United States might have to deploy a contingency force to some far distant part of the world. The term that was

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applied was Rapid Deployment Force. Again, like the Strategic Army Corps of the 1950's, this force was composed of ground combat troops from Fort Bragg, North Carolina. McDill Air Force Base in Tampa, Florida became the headquarters for this force. Intelligence support for this organization was to be provided by the 525th Military Intelligence Group at Fort Bragg. Key elements of this organization remained as in past organizations, however, the 180th Military Intelligence Detachment (T.I.) was organic to the unit. This unit consisted of one officer and numerous enlisted personnel. This units mission was to provide the commander with an analysis of the vulnerabilities of enemy weapon systems. They were there -- not on call from an arsenal as had been the case in 1954.

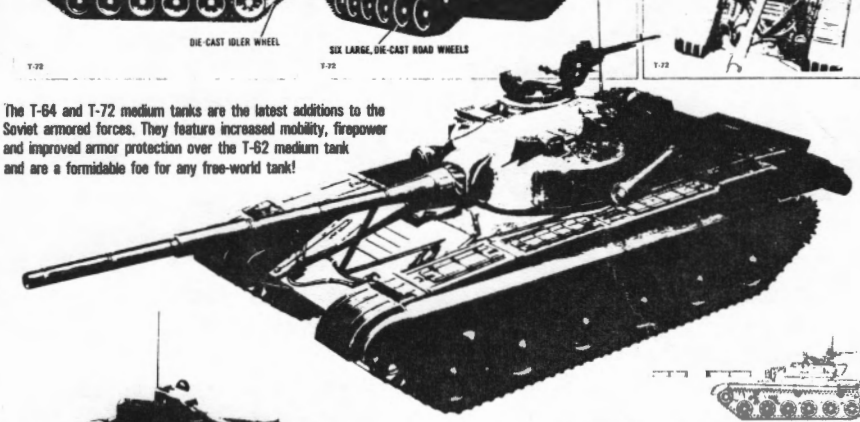
The Chief NCO was SFC Melvin Fukuda. I had many exchanges of letters and information with SFC Fukuda, both as a Reserve Officer and as a member of Battelle Labs Ordnance Technology Group. The 180th received numerous classified studies of fielded weapons from both the Foreign Science and Technology Center and the 11th Military Intelligence Battalion at Aberdeen Proving Ground. I supplied the detachment with unclassified reports on T54 tanks and other items of military equipment as well as unclassified reports on Science and Technology. Had the Rapid Deployment Force been committed, it would have provided the R&D Labs a closer liasion with information freshly off the battlefield. Regrettably, the unit was de-activated shortly before the force was committed into combat in Grenada. Another element established at Fort Bragg was the FORSCOM Intelligence Training Detachment.

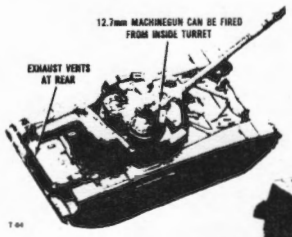
By way of background, in 1972 FORSCOM tasked the Forces Command Security Intelligence Command located at Fort Bragg to provide operational security and counterintelligence training to elements of the 30th Infantry Division, a National Guard unit located in North Carolina, South Carolina, and Georgia. These initial programs were so successful that in October 1972 FORSCOM proposed the creation of a special detachment dedicated to the intelligence and security awareness training needs of all the CONUS-based Army Reserve and National Guard units. This detachment was manned by personnel assigned to the 1st Military Intelligence Battalion (Aerial Reconnaissance Support) and to the 519th Military Intelligence Battalion. This detachment's early training programs consisted of Security Awareness Training, Intelligence MOS Training, and Intelligence Command Post Exercises.

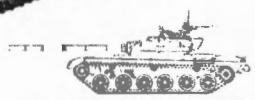
On 16 March 1979 the FORSCOM Intelligence Training Detachment was formally organized as a Table of Distribution and Allowance unit assigned to XVIII Airborne Corps and stationed at Fort Bragg, North Carolina. This TDA authorized 49 intelligence training and support positions dedicated to one unique mission: TO PROVIDE ON-SITE MOBILE TRAINING TEAMS TO ASSIST FORSCOM RESERVE AND ACTIVE COMPONENT UNITS TO ATTAIN AND MAINTAIN A HIGH STATE OF INTELLIGENCE TRAINING AND READINESS. FITD's curriculum consisted of five basic intelligence-related programs which are geared to the individual soldiers assigned to Reserve Component and National Guard elements:

COMPARISON T-72 SOVIET T-64 MEDIUM TANKS

The T-64 and T-72 medium tanks are the latest additions to the Soviet armored forces. They feature increased mobility, firepower and improved armor protection over the T-62 medium tank and are a formidable foe for any free-world tank!

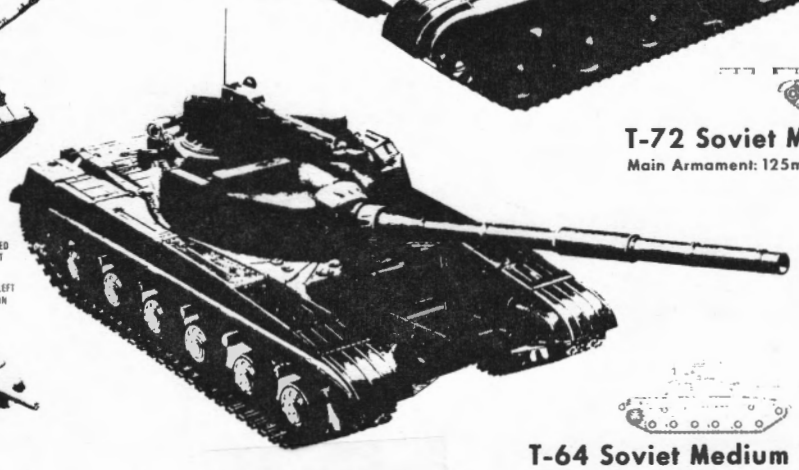






T-72 Soviet Medium Tank

Main Armament: 125mm Smoothbore Gun



T-64 Soviet Medium Tank

Main Armament: 125mm Smoothbore Gun

PREPARED BY THE MISSILE INTELLIGENCE PRODUCTION DIVISION, INTELLIGENCE AND THREAT ANALYSIS CENTER, US ARMY INTELLIGENCE AND SECURITY COMMAND (INSCOM)

The first program was the SOVIET ORIENTATION TRAINING which introduced the individual Army Reserve or National Guard soldier to his potential Soviet adversary. This 3 1/2-hour-long briefing began with a discussion of the individual Soviet conscription system, and general military training. This briefing also included information about the general force strengths of both the United States and the Union of Soviet Socialist Republics. It included visual and oral comparisons of American and Soviet weapons to include company-level and individual weapons. These comparisons showed the individual soldier what he would be facing in a tactical environment. In addition, the FITD instructor team brought selected Soviet small arms to the training site to be used for hands-on demonstrations. The second program was SECURITY AWARENESS TRAINING which taught Army Reserve and National Guard combat arms personnel the operational security (OPSEC) methods and individual intelligence gathering and reporting methods applicable to the offensive and defensive phases of a tactical situation. The FITD team used slides and realistic scenarios to develop the outcome of several tactical situations depending upon the proper or improper use of OPSEC methods and intelligence reporting procedures. This 3 1/2-hour-long briefing included samples of enemy interrogation techniques and enemy information collection techniques which result in the development of the enemy's intelligence data base. Security Awareness Training emphasized the individual soldier's responsibility as one of his commander's most important intelligence collection assets.

The final three programs were UNIT TRAINING which provided Reserve Component Military Intelligence units with skill enhancement training for MOS's 96B (Intelligence Analyst), 96C (Interrogator), 96D (Imagery Interpreter), and 97B (Counterintelligence Agent); STAFF TRAINING which was designed to introduce the Intelligence Staff sections of Reserve and National Guard units to the employment, capabilties, and tasking of intelligence collection assets and an INTELLIGENCE COMMAND POST EXERCISE which offered the Intelligence Staff Section, Subordinate Intelligence Staff Sections, and its supporting military intelligence element an opportunity to work together and to practice their skills in a simulated tactical environment.

Annually, FITD provided realistic and on-site intelligence training to more than 13,000 personnel from more than 150 United States Army Reserve and National Guard elements located throughout the continental United States. FITD training programs were funded by FORSCOM at no cost to the requesting unit, except for administrative supplies and/or the movement of personnel to a common training site, if required. FITD training programs were performance-oriented and were designed to maximize student participation in an uninhibited atmosphere where students are encouraged to experiment with new concepts and to learn through their mistakes. FITD training programs are continually updated to reflect the latest doctrinal, equipment, and TOE changes for both friendly and opposing forces units. Specifically, training was to be oriented to meet RC-CEWI requirements. FITD training was not an evaluation or test

and no after-action reports regarding performance were provided to higher headquarters. FITD existed strictly to enhance and augment the internal training plans of Reserve and National Guard units.

This unit appeared to be a duplication of the efforts of the Red Thrust Detachment at Fort Hood who also had been fielding training programs, however, this unit went one step further in that they put on training programs which included unit personnel as opposed to a slide presentation. In addition, III Corps at Fort Hood created an OPFOR Detachment which conducted training for elements of III Corps at Fort Hood.

These programs were excellent programs, but they were effective only as long as the team was on-site. Once they had departed, intelligence training fell apart as units did not have the people or equipment needed to sustain the program. As an example, a letter to the editor of Soldier of Fortune magazine appeared on the subject.

"MICHIGAN NG NOT LIKE TEXAS...

Sirs:

It was refreshing to read about a National Guard unit that actually goes into the field and engages in realistic training with 100-percent involvement. We are lucky if they give us blank adapters, much less blanks. After reading of the 36th Airborne (SOF, April '80), I feel there is still hope.

I belong to an armored unit here in Michigan, in fact the only one, but unfortunately, our O&T people do not subscribe to OPFOR training the way the Texans do -- hence our poor retention rate. In our case, I'm afraid there are those that will die wishing they had spent less time planning battalion parties and more time with worthwhile training. As in many Guard units, our problem is one of leadership.

As for equipment, we are at least "blessed" with the "latest" and like the 36th Airborne have the M202A1 launcher. The difference is that while the Texans train with theirs, I seriously doubt there's more than a handful of people in our battalion who know what they're for, much less that we have them.

Sincerely,
Walt Anderson
Cassopolis, Michigan"

This letter caused quite a controversy since Walt Anderson did not exist! The 100th MTC had been the unit which conducted the training exercise for this unit, and I had prepared all the OPFOR for the exercise!

Several years earlier, a book on WW III had appeared in print and in 1979, many people received a letter from General George Keegan, United States Air Force. He quoted a passage from the book, "WW III, August 1985" by a British Army officer, General Hackett, which described a potential conflict in Europe. General Keegan's letter read in part:

"Fellow American,

"His tank topped the crest, and there opened up before him the most frightening sight he had ever seen. The open ground below, stretching to a faintly seen line of trees about 2 kilometers away, was swarming with menacing black shapes coming fast towards him. They were tanks, moving in rough line-abreast about 200 metres apart, less than 1,000 metres off and closing the range quickly. Another line was following behind and a third just coming out of the trees. The world seemed full of Soviet tanks."

This passage isn't from a novel. It's from a scenario of how World War III might begin with a Russian invasion of Europe.

I served in the Air Force for 33 years, in fact, the last 6 years of my career I was in charge of Air Force Intelligence.

Sadly, I must report to you that General Hackett's scenario could become reality. I watched helplessly as the military might of the free world, NATO and the United States, deteriorated rapidly."

The American military was not totally unprepared but was moving ahead cautiously. The "system" was preparing for a new generation of combat vehicles. Doctrine and tactics were changing and to counter the threat posed by the ever expanding force of Soviet tanks, the Army and Air Force were developing new antitank weapons. The troop training programs were expanding and greater emphasis was being placed on the acquisition and use of foreign material.

During much of 1978 United States public opinion was beginning to change. Events in Iran resulted in the overthrow of the Shah, and the capture of the American Embassy. "America held hostage" was the news media's name for the experience. In August 1979, the Army Times printed an article entitled, "Army Gets Load of Warsaw Pact Arms." It was pointed out that with the aid of a not otherwise identified "private organization" the Army has acquired a boatload of Warsaw Pact arms, ammunition, tracked vehicles and military clothing for use in training exercises.

While Pentagon officials will not discuss specifics of the deal or where the weapons and ammo came from, they say the equipment is

A Russian BTR-60P is driven into its defensive position prior to the training exercise.

of Warsaw Pact manufacture, and "is not very sophisticated." Four armored personnel carriers are in the foreign weapons consignment, they say.

delete the underlined portions

The equipment arrived in the States in late July aboard a Yugoslav freighter and was unloaded at the Naval Weapons Center at Earle, New Jersey. Defense Department officials decline to say where or when the weapons were loaded on the ship. However, they say that the government of Yugoslavia -- which is not a member of the Warsaw Pact -- played no role in the transaction.

Arrangements for shipping the equipment were made by a private business organization that Pentagon officials refuse to identify. They say "freighter availability" was the firm's main consideration in selecting the Yugoslav vessel for the shipment.

Officials declined comment about the ultimate Stateside destination of the Warsaw Pact equipment, but they say it will be used for training.

In September 1978, General Alexander Haig, the NATO Commander had been quoted in Army Times as saying that the Soviets would not bring up to jumping off points sufficient quantities of war material to launch a surprise attack. International Defense Review pointed out that the Soviets were deploying T72 tanks to East Germany, but were not returning the T62's they replaced to Russia and were leaving them in place. The implications of this action were clear. In addition, there were reports of improvements being made to the T72 tanks. In any case, in the event of a Soviet invasion, there would be an increased need for reconnaissance elements to locate Soviet second echelon units. The principle force for this mission was some form of long-range recon patrol. Two such units existed in the National Guard structure. One such unit was Co. F, 425th Infantry of the Michigan National Guard.

The 100th maneuver Training Command was assigned the mission of conducting a training exercise for this unit. I served as the Corps G2 for this exercise. We lacked up-to-date training aids of Soviet equipment so we were forced to make use of commercially available models of T34 and T55 tanks to convey the idea of "new" tanks as replacement for "old" tanks. It reinforced my belief that additional Technical Intelligence teams would be needed in the early stages of any future conflict. My writing project for the Command and General Staff College was on the role of Technical Intelligence in support of combat operations and peacetime training and supply of the opposing force, as well as for design of new weapons. In late 1979, I sent an extract to the FORSCOM (Forces Command) Commanding General.

By October 1979, I received the following reply from General Shoemaker:

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY FORCES COMMAND
FORT MCPHERSON, GEORGIA 30330

AFCG

23 October 1979

Dear Major Howard:

The FORSCOM staff has reviewed your study on activating technical intelligence units in the Reserve Component (RC) force structure. Clearly this field is one about which you have considerable first hand knowledge and your desire to see that technical intelligence units are activated in the RC structure is commendable.

Your study indicates that activating technical intelligence units would result in increased training and deployment capabilities for FORSCOM. Through the Opposing Force (OPFOR) and Foreign Materiel for Training (FMT) Programs we are familiarizing our Active Component (AC) personnel with the foreign equipment they are likely to encounter in future conflicts. However, the lack of adequate training time available to Reserve and National Guard units, coupled with present shortages of Warsaw Pact weapons and ammunition, has hampered efforts to effectively expand these programs beyond the AC forces. Activating technical intelligence units in the RC force structure would not alter this situation.

Adequately trained RC technical intelligence units could enhance FORSCOM's deployment capabilities. However, the lack of foreign materiel would deny these units a viable peacetime role and provide little opportunity to effectively train unit personnel for a wartime mission. Under these conditions, and because of current manpower and funding constraints, FORSCOM is forced to place its priorities elsewhere.

In view of the above facts, activating technical intelligence units in the RC structure is not advisable at this time. If, in the future, enough foreign materiel becomes available to provide adequate training for the total force, this headquarters will review this position. Thank you for bringing to my attention an issue which needed surfacing.

Sincerely,

R. M. SHOEMAKER
General, U. S. Army
Commanding

I did not agree with the General's assessment, but took no further official action at the time. There was, however, considerable discussion about changes to be made in the organization of intelligence units and the implementation of CEWI (Combat Electronic Warfare Intelligence) units in the USAR. There were, however, no plans to include Technical Intelligence field collection teams in these CEWI units.

In a separate arena, the Defense Advanced Research Projects

Agency had learned of new concepts in anti-tank weapons and had requested Battelle Memorial Institute's Columbus Laboratories to investigate the armor disruption-perforation potential of multiple-pulse shaped-charge jets and the ability of the U.S. shaped-charge community to develop this technology so that it could be used in weapons systems to disrupt-perforate advanced arrayed armors.

The available Soviet literature and hardware, the U.S. literature on hypervelocity impact and shaped charges, and the capabilities of U.S. Government and contractor facilities to support a potential weaponization program were reviewed. In the course of the program, the information available from the Soviet literature and data from Battelle's in-house-and-DARPA-supported experiments were explored and discussed with Government and contractor personnel.

could not

~~On the~~ basis of this study, it was concluded that the U.S. state-of-the-art cannot support an immediate weaponization of very high-velocity multiple-pulse shaped-charge jets due to both a lack of an empirical data base on target perforation and the inability of the hydrodynamic computer codes to specify material separations; however, personnel in the shaped-charge community expressed a desire to expand their capabilities if a technology base were to be established and a weaponization program initiated. Such a program had been outlined and recommended so that this technology could be used for the defeat of advanced armored targets by product improvements of existing weapons systems within three years.

At the same time, work was continued to establish the National Training Center at Fort Irwin, California, where a large portion of Warsaw Pact arms would be used to equip a Soviet-style fighting force. A large portion of the material would also go to Fort Hood, Texas, where the "Red Thrust" Detachment was preparing training programs for the maneuver enemy, however, none of this was made available to the USAR or National Guard.

equipment

By December of 1979, the nation's leadership was becoming concerned over the general trend in world events and the decline of America's military power. In December, eighteen Senators sent a five page letter to the President outlining their concern for our national defense. To summarize or extract from the letter would be misleading, hence, it is reproduced in its entirely, less signatures.

United States Senate

WASHINGTON, D.C. 20510

December 17, 1979

The President
The White House
Washington, D.C. 20500

Dear Mr. President:

For some months now the Senate Foreign Relations Committee, the Armed Services Committee, and the Intelligence Committee have been carefully examining the SALT II agreement to determine if it meets our nation's national security interests. Public hearings on the Treaty have been accompanied by numerous private meetings among Senators of both parties, Administration officials, and other individuals possessing experience and expertise in arms control and related matters.

From the hearings and from those individual meetings, a number of important issues have emerged regarding both the proposed SALT II Treaty and the state of our nation's defense posture.

With respect to the Treaty, we as individual Senators are deeply concerned over certain provisions of, and omissions from, the Treaty. We hope that during the course of Senate deliberations our concerns can be met. We are concerned over the Protocol terms and their precedential effect. We are also concerned over the Treaty provisions relating to "heavy" missiles, verification, limitations on potential basing modes for the MX missile, the threat posed to the United States by the Backfire and other Soviet weapons not limited by the Treaty, and other issues. We are hopeful that these problem areas can be resolved in a manner that strengthens the SALT Treaty and improves the SALT process.

In addition to these Treaty issues, we are also concerned over the ongoing slippage in America's comparative military position, awareness of which has been accentuated by the Senate's deliberations on SALT and by recent international events. In the last decade, the Soviet Union has attained at the very least essential equivalence in strategic weapons, has eliminated NATO's longstanding superiority in theater nuclear forces, and has expanded an already preponderant advantage in ground forces and civil defense capability. Furthermore, the Soviets are reducing our qualitative edge in tactical air

forces and have constructed a navy that, for the first time in modern history, threatens traditional Western supremacy on the high seas. These trends have been accompanied by a growing Soviet and Soviet-sponsored threat to the West's sources of energy and raw materials.

The erosion that has taken place in the East-West military balance can be principally attributed to the failure of the U.S. and our Allies to compete effectively with Moscow in the military arena in the past 15 years. While diverting substantial conventional forces to the conflict in Southeast Asia in the 1960's and early 1970's, we remained, in the category of nuclear arms, basically content to live off of capital invested in the 1950's and early 1960's. In so doing, we provided the Soviet Union the opportunity to steal a massive military march on the West. That the Soviets took advantage of that opportunity is no longer questioned.

During the period 1970-1978, the Soviet Union invested a total of $104 billion more than the United States in military equipment and facilities, and $40 billion more in research and development. According to the CIA, the Soviet Union is still militarily outspending the United States overall by at least 40 percent annually; in the critical categories of investment in weapons procurement and research and development, they are outspending us by a 2:1 ratio.

We do not believe that the SALT II agreement currently before the Senate can be held directly responsible for this erosion in America's military position. However, during the seven years that the agreement was in negotiation, the hopes for significant arms control did influence our force planning and the support for defense initiatives. Thus, efforts which may have been needed to counter the mounting Soviet threat were delayed, curtailed, or even abandoned. Ratification of a SALT II Treaty will not reverse trends in the military balance adverse to the United States.

We applaud the statements by both you and Secretary of Defense Harold Brown relating to the Five-Year Defense Program. We reserve the right to examine the submittal in detail, but it does represent a positive step in acknowledging the Soviet buildup and in committing to real increases in defense spending and capability.

We have ourselves met on several occasions to discuss those considerations that will be foremost on our minds as the Senate approaches its full floor debate on the Treaty. All of

us are agreed that the Treaty issues mentioned above are important and that the manner in which they are resolved will influence our final decision on Treaty ratification.

We are also agreed that the SALT II Treaty cannot be judged in a vacuum. In our view, the Treaty represents but one facet of a much broader East-West relationship that encompasses political and economic, as well as military dimensions. Our final judgment on the Treaty will therefore not be confined solely to the merits or flaws of the Treaty alone. We regard the following considerations as crucial:

1. The absence of definitive Administration proposals designed to narrow the strategic nuclear window of vulnerability which will occur during the early and mid-1980's.

2. The longstanding adverse trends in our own defense posture, and the extent to which the Administration's proposed Fiscal 1981 Defense Budget and Five-Year Defense Plan establishes a firm foundation for reversing those trends, in both conventional and nuclear forces. We believe that an objective review must be made in the immediate future as to our manpower procurement problems.

3. The plans and programs envisioned by the Administration to improve our intelligence capabilities, with particular emphasis on investment in high-technology collection systems and professional analytic resources. The need is also apparent to reconstitute our sensitive operational intelligence capabilities.

4. The impact of the SALT II Treaty on our ability in concert with our NATO allies, to modernize European-based nuclear and conventional forces. We are particularly interested in the Administration plans as to the deployment date for ground-launched cruise missiles.

5. The global military and political climate, particularly the increasingly aggressive activities in the Third World of the Soviet Union and its proxies. We are interested in the Administration plans to deter and counter such behavior over the coming decade. We regard such behavior as inconsistent with the underlying spirit of the SALT process.

6. The effect of the Treaty on long-term prospects for meaningful arms control, with respect not only to the

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attainment in SALT III of "deep cuts" in existing levels of strategic armaments, but also to significant progress in our other arms control efforts such as the negotiations on Mutual and Balanced Force Reductions in Europe. The SALT process so far has failed to restrain the momentum of the Soviet Union's ongoing military buildup.

We believe that the Salt II debate will provide a unique opportunity not only to examine the Treaty itself, but also to seek a bipartisan consensus on long-range national security strategy and arms control.

Further, we attach great value to the pursuit of arms control, provided it enhances our nation's security. Should circumstances arise in which there are insufficient votes either to strengthen or to ratify the Treaty, we believe that serious consideration should be given to postponement. In view of the unforeseen delays in the Senate debate, persistent worldwide tensions, and national political considerations, any such postponement should be effective through the Presidential and Senatorial elections of 1980. As we have indicated, we regard an effective SALT process as being in our nation's interest.

Each of the undersigned, of course, gives different weight to these individual items but this letter expresses our general concerns. Because of our concerns, largely covered by this letter, we are uncommitted as to how we will cast our votes on the SALT II Treaty and proposed changes.

We look forward to discussing these issues in detail with you and members of your Administration.

100

News of the
CENTURY

VOL. 2 NO. 3 | 100th DIVISION (TNG) | MARCH, 1979

Division receives six M48-A5 tanks

By MG. Charles Beach, Jr.

The delivery of six newly reconditioned M48-A5 tanks to Fort Knox from Redstone Arsenal, Ala. strengthens the Division cross-training mission significantly.

Plans are being made to position these new tanks at our new WET site located at Lexington Signal Depot, Lexington, Kentucky and our new training site at Fort Campbell.

These new M48-A5 tanks, in addition to the two M60 tanks presently on hand, will provide the immediate availability of armor to conduct more realistic IDT training.

The M48-A5 tank is an updated version of the M48-A service tanks with significant characteristics of the new M60. Its power source is the diesel engine, the 105MM main gun is its battle weapon, and also it incorporates a 7.62 calibre machine gun.

Present planning identifies the positioning of these tanks not later than March 30. With a total of eight tanks and six M113's, the Century Division is the only training Division undergoing Armor cross-training having such a diversity and adequacy of armor which should better insure our successful attainment of skill level II at the projected completion date.

Through the combined efforts of U. S. Army Readiness Region VI, and COL Armstrong's advisors group, the development of our WET site at Lexington Signal Depot is progressing on schedule. $80,000.00 has been appropriated for the development of this WET site and a most comprehensive plan is in the process of approval to provide spacious classrooms, maneuver areas, cafeteria and even billets at this site.

It should be one of the most sophisticated and complete training sites available to the U. S. Army Training Division. The 2nd Brigade is developing a WET site at Fort Campbell similar to the Division facility at Fort Knox which should provide this unit an unlimited training opportunity.

The unparalled and unprecedented support of our cross-training mission by FORSCOM and Fifth Army places an ever-increasing demand upon every member of the Division to effectuate greater efficiency and develop the most meaningful training program.

As always, we in the Century Division welcome this challenge and shall show our appreciation for this fine support by re-dedicating ourselves to the accomplishment of our cross-training mission on schedule and with the highest percentage of successful passage of the SQT by all members. Your rededication to this accomplishment can assure its success.

DIVISION GETTING TANKS . . . Although the Division will not receive M-60 model tanks like the one firing above on a Ft. Knox range, it will receive six M48-A-5 tanks with the features of the M-60 for training purposes. Each brigade will have two tanks for use in preparing for the armor One Site Unit Training (OSUT) mission.

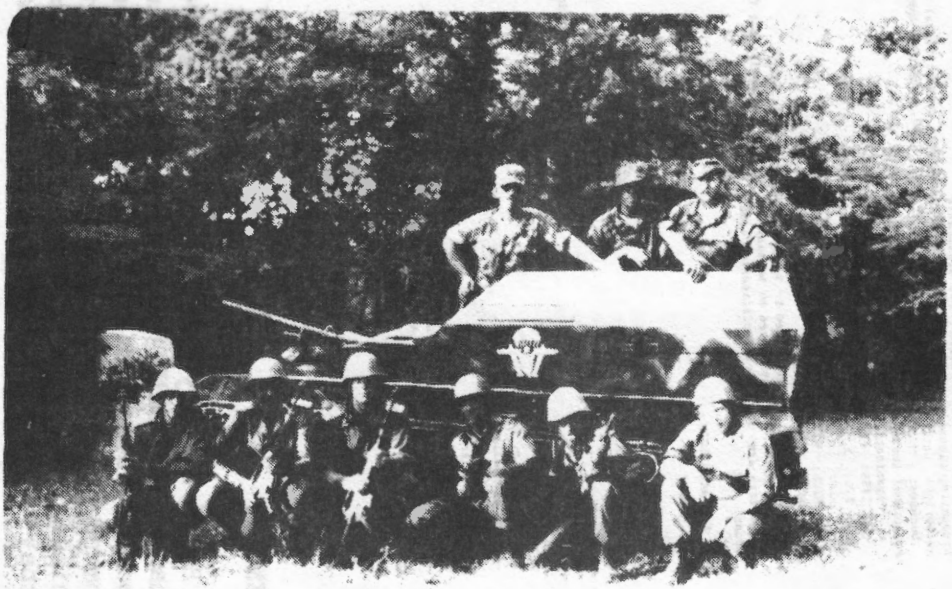
At the same time that Congress was becoming concerned, Soviet military forces invaded Afghanistan. Within months, the illusion of a quick initial victory was quickly dispelled and a long, bloody campaign began. Soviet weapon systems which had been seen or reported on were now in action. Through various means, the material was recovered and provided to the United States Intelligence community. The most visible of these operations was the collection of material by assorted "free agents" who were working for the staff of a popular magazine, "Soldier of Fortune." These mercenaries proved to be an embarrassment to the U.S. Intelligence community, if only because of the publicity they received. 221

Resistance to the Soviets came largely from Afghan guerilla fighters whose primary need was for small arms, antitank weapons and anti-aircraft weapons. Small amounts of the new Soviet equipment found their way to Research and Development Labs in the U.S. where tests and evaluation of these systems were performed. Again, the analyses would reveal defects as well as strong points. It would also provide an insight to Soviet capabilities in conventional warfare. For a variety of reasons, the Technical Intelligence Battalion at Aberdeen Proving Ground ceased transporting displays of Soviet material to the various training sites in the United States. 221

Because of the perceived need for additional armor units and to reduce the cost of armored training for the Army Reserve, the 100th Division had been designated to become an Armor Training Division and had begun the process of converting from Infantry to Armor. Many officers, myself included, transferred to Armor. Having spent three years in the Combat Service Support Group, I was anxious to move to one of the armor or cavalry units or teams in the MTC. This, however, was not to be the case. 221

The Maneuver Training Command had stabilized in organization and the organization was as decribed earlier. Two officers with no experience in Intelligence had been assigned as the OPFOR, INTELLIGENCE and Security Branch Chief and OPFOR operations officer. In late 1979, I was approached to take over the duties of the OPFOR operations officer. I accepted the assignment, but had little hopes of accomplishing anything in the field. There was a constant shortage of personnel in the National Guard and Reserve. The few exercises that I had been on, showed that the skill level of the troops was very low. As a result, training exercises had to be degraded to allow the units to function. We also lacked the intelligence support needed to make the intelligence portion realistic. I quickly determined that about all we could hope to accomplish was to keep our Team Intelligence/OPFOR officers informed of current events, doctrine and tactics. We began a 32 hour block of instruction on intelligence and OPFOR. P 221

In addition, I had begun work as an Ordnance Researcher with the Ordnance Technology Group of Battelle Columbus Laboratories. My principle duty was to serve as a liaison between the intelligence operations and the ordnance-oriented engineers and scientists. This



MSG Henry Strong, Captain James Booth of the 100th MTC pose with a group of OPFOR Soldiers alongside the mock-up Soviet ASU 57 built and fielded by the 100th MTC.

worked to the advantage of all concerned. Through my contacts with various organizations, I was able to secure samples of some of the items recovered in the mid-east and Afghanistan. I was very fortunate that the section had some very fine NCO's. The principle driving force was MSG. Henry Strong, a former Marine and not used to the slowness of the Army. Through his efforts, our NCO's developed a series of shoulder boards for an OPFOR uniform and got them out to the field long before the official uniform was approved.

The most ingenious device the section fielded, and the only one in the Nation, was a plywood panel arrangement which could be transported to various training sites in a station wagon. Once assembled, it formed a mock-up for an ASU 57, Soviet airborne assault gun. The unique part of the weapon was the Fort Lewis cannon. Originally developed at Fort Lewis, it had ended up at Fort Knox training aids. Powered by Oxygen and acetylene and ignited by a spark plug, it produced one hell of a bang which shocked everyone. Unfortunately, it was an obsolete Soviet system having been replaced in the Soviet inventory by the ASU 85 and BMD, but it served the purpose of shaking up rear area units.

Tom Nelson, president of ODIN International and Replica Models and a former Ordnance Technical Intelligence Officer was introducing a line of replica weapons. First Soviet weapon in the line was the TT33 pistol which was followed by the AK-47. These weapons, plus items from training aids at Fort Knox enchanced our presentations to the unit; however, we lacked sufficient supplies and people to field any consistant displays. While at Battele Labs, I began the process of reviewing all the literature available on U.S. and Soviet Weapons design and development with a primary emphasis on tanks and anti-tank weapons. One of the major problems in the material acquisition cycle was balancing the "needs driver with the technology drivers." There was a lack of effective communication in the material command and there was a pendulum which swings from side to side with the war and peace cycle. In wartime, the "need" for a new weapon system shows up very quickly, the "technology" to counter it may not develop as fast. Battlefield information from foreign conflicts was very slow to get back to material developers and combat development commands. Part of our function at Battelle was to expedite the flow of information.

Through the efforts of Defense Attaches, and other collectors, the Defense Department was being supplied with information on new foreign systems, and through the efforts of the Foreign Science and Technology Center, the Technical Intelligence Battalion and the various OPFOR programs, the military was becoming aware of the need for new weapons, much faster than ever before. Through the efforts of Battelle's Technology studies, the capability to develop counter-measures was also provided to the military.