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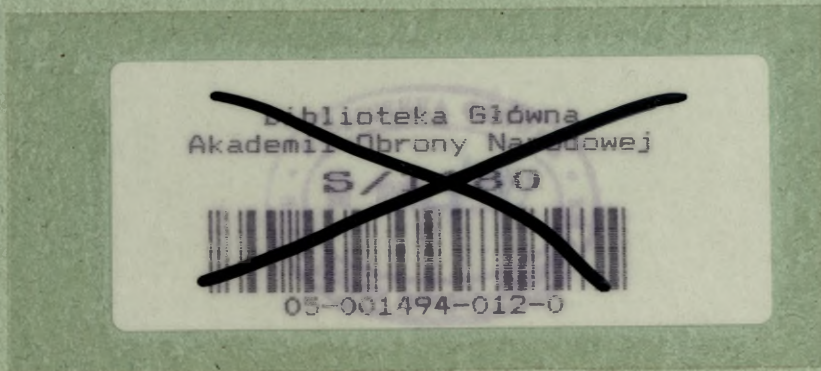
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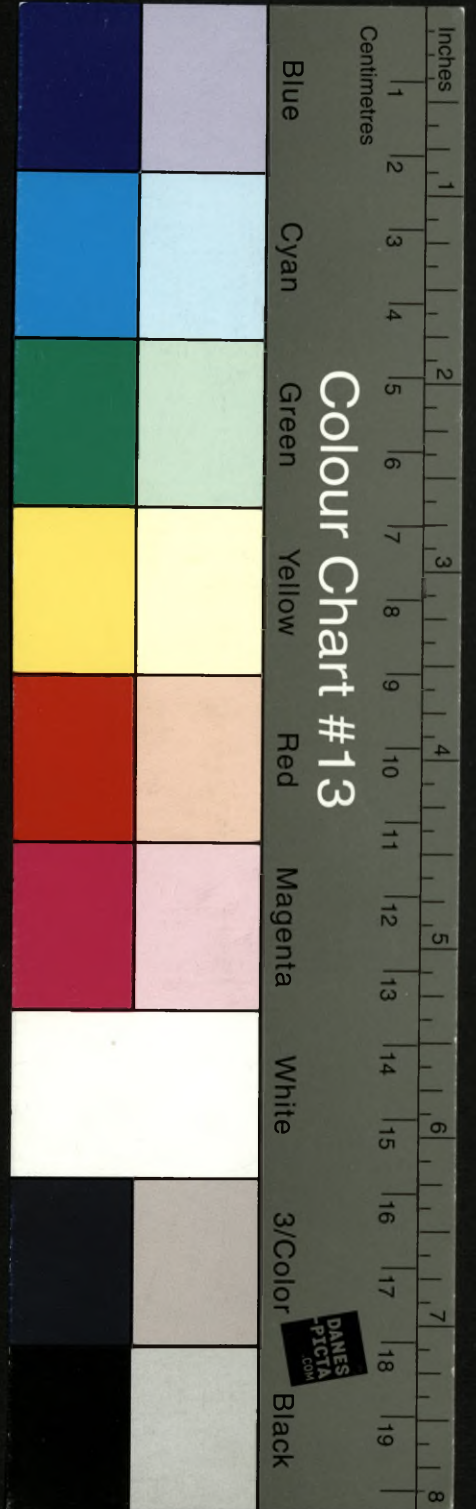
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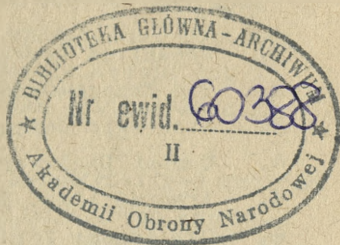
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AKADEMIA OBRONY NARODOWEJ

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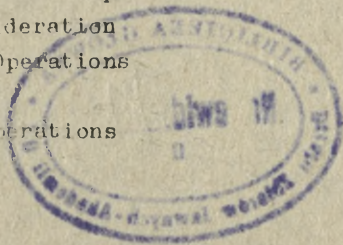


Warszawa

wrzesień 1990

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Urbanized Terrain

Commanders have always recognized the importance of urban centers as strategic objectives, but directly seizing cities and towns has always been difficult. Such efforts consume enormous resources, degrade the momentum of offensive operations, restrict maneuver, and consume time. Therefore, commanders should not commit forces to urban areas unless doing so can realize specific advantages.

Modern armies that fight in the heavily industrialized regions of the world may have great difficulty in avoiding urban combat. Previously separated population centers have expanded to form extensive urban belts. Commanders and staff officers must learn to analyze urbanized terrain and to plan effectively for operating on it.

Maps often need updating to reflect the latest in construction and terrain alteration. Commanders and staff need to learn to work with maps of different scales: lower scale for greater resolution of detail within cities and normal scale to control the overall battle. The urban fight can be isolated from the overall battle if commanders view the battles separately.

Corps and division commanders are responsible for major urban areas. At brigade level and below, commanders concern themselves with smaller cities, towns, villages, and strip areas. At lower levels of command the makeup and composition of urban terrain become increasingly important.

The defender normally has the advantage in built-up areas. He has readily available protection as well as concealment and covered routes of movement within the area. On the other hand, the attacker can isolate and bypass built-up areas, but he may be required to attack others. He is then faced with fighting from the outside into a well-defended position. Both attacking and defending forces will take advantage of urban cover and concealment.

The Franco-German Brigade

Complete formation of the Brigade will take about two years. Both the commander and the executive officer positions will rotate every two years, along with the commanding officer of the mixed battalion, the chief of staff and the operations officer. Other staff positions remain fixed. The personnel and logistics staff officers will be German, the intelligence officer post remains undecided and the staff information management officer will be French. Each nation will provide approximately the same number of soldiers, with a total of 4,200. Neither country is adding troops for the Brigade; consequently, the assets will come from the existing force structures. In the West German case, units will come from the Home Defence Brigade 55 (Brigade 55 will be retired) which is stationed in B8blingen. French forces are coming from the Force d'Action Rapide which is stationed in France. Plans call for the Brigade to be operational in late 1990 with the first exercises net scheduled before early 1991.

Organization

The Brigade will eventually be deployed as indicated in chart no. 1.

The German armored engineer company is the only unit that will be created from scratch, and the Brigade staff must be prepared to accept units as of October 1, 1989. Of the total Brigade force, 2,063 will be French, as will about half of the 1,000 vehicles. The staff is currently about 31 French and 22 German. The 110th French Infantry Regiment is already stationed in Donaueschingen and will be replaced by a unit coming from France to ensure that the French Corps stationed in West Germany remains at the current strength level.

Chart No. 1

CITY	UNIT	NATIONALITY	EQUIPMENT
Böblingen	- Bde HQ and HHC	FR/GE	M113 Armored Personnel Carriers, M577 Command Post Vehicles, GE/FR signal eq., light and medium trucks
Böblingen	- 552nd Jägerbattalion (Light Inf Bn)	GE	Currently 41 M113s to be replaced by 40 FUCHS (new wheeled infantry fighting vehicles) w/MILAN antitank (AT) missiles and mortars
	- Reconnaissance Company	FR	39 Véhicules Blindés légers (VBL* - Light Armored Jeep), 3 RASIT** and MILAN AT missiles
Donaueschingen	- 110th Infantry Regiment	FR	81 Véhicules de l'Avant Blindé (VAB-wheeled infantry fighting vehicle, 12 soldiers), 24 MILAN, 6 120mm mortars and 29 VBL
	- Light Armored Regiment	FR	36 AMX-10RC (wheeled light tank, 15 ton, 105mm) 25 VAB, 42 VBL and 6 20mm cannon for air defense
	- Engineer Company	GE	FUCHS, BIBER (tracked bridge layer), SCORPION (mine layer)
Horb (moving from Böblingen in 1989)	- 555th Artillery Battalion	GE	18 FH 105mm (will acquire towed FH 155mm in late 1989)
Stetten	- Mixed Support Battalion (includes mixed medical company and a French basic training company)	FR/GE	FR/GE vehicles
	- Antitank company	GE	12 PANTHER (tracked antitank, antihelicopter vehicle)
Engstingen	- Transportation Company (belongs to the Mixed Support Battalion)	GE	GE vehicles

* The VBL is a new light armored jeep. It carries the MILAN AT missile and a 7.62mm machine gun. It is amphibious and pressurized to fight in an NBC environment.

- The RASIT /Radar de Surveillance des Intervalles/ is a ground surveillance radar with a range of between 12 and 30 kilometers that detects troops, tanks or low-flying fixed wing aircraft or helicopters. The RASIT may also be used to adjust ground or air-to-ground fires.
-

Mission

There are numerous missions that could be given to the Brigade. However, the French sensitivity toward the NATO integrated command structure requires a mission statement that precludes confusion and ensures Franco-German control. Currently, the mission of the Brigade is to operate in the rear combat zone under the German Territorial Southern Command of the Military Region Command V (WBK V). Consequently, the Brigade would also assume the former mission of the Home Defense Brigade 55. However, the Brigade mission appears to be undergoing continuous scrutiny and may not be specified precisely until the final units are assembled in the fall of 1990. A possible mission could include operations under the control of a commander in a forward combat zone following a combined decision. In general, the Brigade would serve as a "force model" to develop and test procedures in the areas of tactical, operational and logistic cooperation, as well as to harmonize staff procedures. Future participation with other allied units has not been ruled out.

Numerous tactical employment possibilities will ensure best use of the light, highly mobile vehicles. European operations could profit from the speed and firepower of the Franco-German Brigade in actions such as rapid establishment of blocking positions which would rely heavily upon infantry and Milan/Panther antitank fires, receiving a unit conducting a rearward passage of lines, reconnaissance using the AMX-10-RC and VBL team, rear area operations requiring rapid reinforcement in scenarios where some firepower quickly is much better than more firepower later, and rear area security or counterterrorism missions. Two infantry regiments, a light armored regiment and a 155mm artillery battalion represent a force that could facilitate rear area combat operations (RACC) as well as forward area defensive actions on favorable terrain.

The Brigade will provide the French Army with coordination, comparison (if not friendly competition) and operations on a daily basis with allied forces.

Problems

No major end items of equipment are used in common by the battalion-sized units from the two countries. Consequently, the logistic infrastructure must cope with several different major pieces of equipment and the corresponding increase in the logistics tail. Additionally, a common decision on small arms has yet to be made. As far as employment considerations are concerned, significant staff coordination and compromise will be required in order to develop common operational concepts.

Conclusion

The Franco-German Brigade represents a true experiment in cooperation on a number of fronts. The challenges are numerous and only time will give the final results. It must be remembered that the Brigade does not belong to either West German Field Forces or to the 1st French Army, and that it holds a special status in both armies. For the moment there is no common superior command and each decision climbs up the respective army staff levels for discussion. The Brigade staff will be considerable and will be larger than any other in the regular NATO brigade, and in turn may provide some unique capabilities in coordination. At this point the Brigade falls nicely into the realm of cooperation between two countries that have much to gain as they both work toward a common 1990s defense for Europe in the framework of the Alliance. In the political realm it is hoped that closer coordination will follow in the areas of security policy and strategic concepts. On the military side the obvious benefits will be combined exercises, combined training of field grade officers, a tool to inspire joint and combined exercises, day-to-day operations and a means to facilitate armaments cooperation.

Exercise

Answer the following questions:

- 1/ What is the organization of the Franco-German Brigade?
- 2/ Will the Brigade be made up of already existing units or will some new units be created specially?
- 3/ How is the Brigade staff composed?
- 4/ What is the mission of the Brigade at present?
- 5/ Could the Brigade be given many missions? What kind?
- 6/ What are some of the missions the Brigade could perform?
- 7/ What kind of vehicles is the Brigade equipped with?
- 8/ What is RACO? What could facilitate such an operation?
- 9/ What are some of the problems the Brigade will be faced with?
- 10/ Do you think other European countries could create such two- or three-sided Brigades? Explain.

Strategic Defense Initiative /SDI/ .

On March 23, 1983, President Reagan announced his decision to direct "the establishment of a comprehensive and intensive research program, the Strategic Defense Initiative, aimed at eventually eliminating the threat posed by nuclear armed ballistic missiles." As originally conceived, SDI involved a three-layered defensive system dedicated to protecting the entire populace. In an intercontinental ballistic missile /ICBM/ attack, the first element of SDI would be employed during the boost phase. This entails launch until booster burnout and lasts from three to five minutes. Boosters provide a visible and vulnerable target to space-based weaponry, and according to the program's architects, this is when most of the ICMBs would be destroyed. Those remaining would be reattacked during the midtrajectory. This lasts up to 20 minutes, and occurs at the point where the ballistic missile has entered space prior to its descent. The surviving warheads would be attacked during the terminal phase while reentering the atmosphere, by ground-based anti-ballistic weaponry. There is less than a minute to intercept before the nuclear warheads would be detonated.

The original grandiose SDI scheme foresaw a global distributive mega-system consisting of early-warning satellites and space battle stations. Various configurations of battle stations were proposed, including those that contain weaponry, such as chemical and X-ray lasers, charged particle beams, and electromagnetic rail guns and hypervelocity miniature interceptor kinetic energy devices.

Most engineers and scientists not connected with the SDI program believe the system to be technically unachievable for many years into the future, if ever. A poll of former secretaries of defense prior to the Reagan administration revealed that all were skeptical of its feasibility. SDI is a very costly, high-risk program. It has been likened to a Maginot Line in space. Just as the Germans in World War II defeated France's

expensive showcase of fortifications along its border by simply going around it, advancing technology will certainly bypass the SDI system.

/DEFENSE AND DIPLOMACY Study No. 4 - September 1988/

Exercise

Answer the following questions:

- 1/ When would the first element of SDI be employed?
- 2/ How long would the boost phase last?
- 3/ When and how would most of the ICBMs be destroyed?
- 4/ When would those ICBMs that survived the boost stage be eliminated?
- 5/ How long would this procedure last?
- 6/ How would the surviving warheads be attacked?
- 7/ What is the terminal phase?
- 8/ What kind of weaponry was proposed for the battle stations?
- 9/ Do all experts think that SDI is feasible? Explain.
- 10/ What has SDI been compared to?

Combat Engineering

The role of the military engineer is to assist the armed forces of any country to "live, move and fight". In the pre-artillery days of siege warfare, it was the knowledge, skill and hard work of the engineers that enabled fortifications to be broken and allowed warriors to go into combat.

Since the turn of the century, military engineers have concentrated on two main areas. The first is the need to provide intimate engineer, or "sapper" support to the fighting troops - this has become known as combat, or close support engineering. The second is the need to provide support to the rear areas of the battlefield - building and improving roads, camps, ports and railways - this has become known as construction or general support engineering. While the developments in general support engineering are driven by those in the commercial civil engineering world, combat engineering has to keep pace with the changing tactics and equipment in use on the battlefield.

Combat engineers today are expected to support the increasingly heavy armored equipments now being produced, cope with the massive spread of urbanization on the battlefield, support air forces that need to be able to operate away from the runways, and support light airmobile and airborne forces, often with very limited assets.

Protection

Combat, or close support, engineering tends to be divided into three main areas. The first is protection, which is the slowest to change with time. The main threat to ground forces is indirect attack by aircraft, missile and artillery fire. The best protection is camouflage, deception and digging. Soviet forces take all three areas seriously. They have dedicated camouflage engineer troops and allocated engineers to deception tasks.

NATO troops tend to regard camouflage as an all-arms responsibility, and their engineers concentrate on digging. Much

civilian vehicles are generally unsuitable for work under fire or in nuclear, biological or chemical conditions. Civilian equipment is slow-moving, and lacks communications and protection.

Digging equipment required to operate under enemy fire needs to have armored protection. This role can be filled by armored civilian construction equipment, dozer blades mounted on tanks or digging attachments on armored engineer vehicles.

Mobility

Mobility support to armored formations takes a considerable amount of engineer effort and is the most equipment-intensive area of combat engineering. The mobility support provided by engineers can be considered in four areas: Counter Obstacle Vehicles (COV); Mine Clearance Equipment; Bridging; and Cross-Country Mobility Support. Levels of mobility support required by different armies vary, even within Europe, depending on the terrain over which they operate and the forces they are supporting.

Countermobility

COVs and civilian construction equipment can all play a significant part in countermobility operations. The construction of antitank ditches, craters and rubble obstacles are all effective, especially when used in conjunction with mines.

In Central Europe, the countermobility battle has become more complex with the spread of urbanization and the introduction of new building materials. The rapid destruction of modern bridges on reserved routes is particularly difficult. To counter the increased strength of structures, larger explosive charges are now being developed, together with better charge fixing and access methods.

Work is also continuing on remote firing devices, which will allow a demolition party to be located some distance from its targets and to fire several separate demolitions from one firing point.

Mines

Mines play a key role in countermobility operations. Mines fall into two groups: mines laid conventionally - by hand or mechanized methods - and remotely delivered mines (RDMS). Most armies possess conventionally laid mines. These are normally laid in pre-planned minefields with a variety of fuzes designed to exacerbate the clearance problem.

The majority of recent mine development has centered around minimum metal mines, as they are currently almost undetectable. These mines, both antitank and antipersonnel, can be laid conventionally or remotely.

Fuzing of mines is an area that has had considerable development in recent years. Electronic fuzes are now in service, which allow mines to be neutralized after a pre-set time. The possibilities of extending electronic fuzing, for example to allow minefields to be activated, deactivated and to self-destruct, are endless and will add greater flexibility to obstacle plans.

Methods of laying mines have also undergone improvements. The ability to deliver mines to areas of the battlefield by artillery rockets and missiles gives ground forces considerable flexibility. This allows minefields to be 'on call' to defend troops, and as such can be used to gain surprise. However, obtaining the correct density of mines, especially when hard surfaces require blocking, is difficult and cannot always be achieved. There are also serious reservations about the lack of capability of modern RDMS to inflict serious damage to main battle tanks. Furthermore, the problems of clearing all scatterable and remotely delivered mines once a conflict has ceased will be immense, especially as minefields may not be marked and records will be scarce.

Engineer Reconnaissance

Engineer tasks that do not succeed often owe their failure to a bad reconnaissance, which selected the wrong bridging site or the wrong piece of equipment. The Warsaw Pact is the only major armed force that has specifically designed an engineer

rece vehicle. This vehicle - the IPR or IRM as it is now designated - is exceptional as it is tracked, armored, submersible and carries much engineer rece equipment. Many NATO forces would benefit from similar effort being devoted to such a vehicle. The specialist training of engineer rece troops is often overlooked in predominately peace-time armies.

The Future

Tomorrow's battlefield, with considerable increases in numbers of helicopters, will be a more mobile environment than ever before. The introduction of the attack helicopter and airmobile forces is likely to have an effect similar to the introduction of the tank and mechanized troops carriers at the end of World War I. The change in the political climate between East and West is likely to mean that smaller, lighter forces will be expected to be multi-roled to carry out many different missions worldwide. This will test the ingenuity of the military engineer. There will still be the requirement to keep armed forces living, moving and fighting, but equipment will have to be lighter or improvised when the objective is reached. This will return the emphasis to the skills of the individual engineer, who will have to be as intelligent, skillful, tough and adaptable as ever before.

/DEFENSE AND DIPLOMACY - November 1989/

Exercise

Answer the following questions:

- 1/ What is the role of the military engineer?
- 2/ What are the two areas which military engineers concentrate on nowadays?
- 3/ How can combat or close-support be divided?
- 4/ What is the main threat to ground forces?
- 5/ Is camouflage regarded in the same way by Soviet and NATO troops? Explain.

- 6/ What is the most equipment-intensive area of combat engineering?
- 7/ What are the four areas of mobility support provided by military engineers?
- 8/ Why has countermobility battle become more complex in Central Europe?
- 9/ What is being developed to counter the increased strength of structures?
- 10/ What equipment plays a very import part in countermobility operations?
- 11/ How can mines be divided?
- 12/ What can you say about the improvements in the methods of laying mines?
- 13/ How can mines be laid?
- 14/ What is the IPR or IRM?
- 15/ Will the future battlefield be a very mobile environment?

The Armoured Light Cavalry

"Recce", the commonly used abbreviation for reconnaissance, has a role in defence as well as attack. In central Europe recce vehicles constitute a screen forward of the main body of troops. In the fluid fighting which would follow a major attack, recce troops might find themselves behind enemy lines. Here they would be able to observe the build up of an enemy attack and the nature of the vehicles or equipment being moved forward behind the FLOT. With good communications they would be able to identify targets for deep attack weapons and air strikes and send this information back to their own forces.

In an attack, recce probes enemy positions, locates obstacles either natural or man-made and acts almost like the sharpest point of a wedge. It finds a crack in an enemy position, makes a lodgement and then this is followed up by the greater weight of the wedge composed of armour, SP artillery and APC mounted infantry.

In a chemical environment, recce locates and marks contaminated areas.

In conventional operations a reconnaissance patrol locates enemy minefields and might be required to identify their pattern and construction. Engineer recce is a 'hands on' operation since measurements must be made and obstacles like cuttings, ditches and river banks examined. The speed of the current in a river and the nature of the going in the area of a potential bridging site must be checked. Equipment like ladders and inflatable recce boats may need to be carried for this work.

Experienced reconnaissance units should be able to observe the enemy without alerting them - thus some of the work may be done away from a vehicle, on foot or from a hide position. Camouflage nets as well as a high degree of personal camouflage and field craft skills are essential. Radar reflective coatings on vehicles as well as IR paint help to reduce vehicle detection.

However, gathering information in a modern battle field is not now exclusively the preserve of an armoured 'light cavalry' reconnaissance screen. Electronic Intelligence, Drones and RPVs, recce missions flown by manned aircraft, observations from FOQs, MFCs and FACs will also help build up or possibly clutter the picture.

The problem today is that the variety of agencies tasked with information gathering can swamp a headquarters with intelligence, observation and contact reports.

In this context a crewed recce vehicle has a commander who can filter out some of the information at source rather than funnelling everything back to an HQ. To make these observations and decisions he needs the right tools. A fast mobile cross-country vehicle is essential, it cannot therefore carry heavy armour. The most common recce vehicle is a light-armoured car - however, such a vehicle can be seen as a 'signature' - showing an enemy that they will soon be on the receiving end of an attack. In some conflicts, light soft skinned 'jeep' type vehicles have been favoured since they are less obvious. A modified Land Rover or a long range desert patrol vehicle is often the image that comes to mind when 'reconnaissance' is mentioned. They have their role and also a certain glamour, however, in a fire fight they may have to rely on very fast reactions and heavy suppressive GPMG fire to extricate themselves. Better to put a layer of armour plate between the crew and the enemy.

An APC with good radio communications, a small crew, but no external evidence of its recce role, is a better way round the signature problem. Tracked vehicles can have an advantage over wheeled in soft wet going.

A recce vehicle must have good communications and good day and night vision equipment. In the future, recce vehicles may be equipped with an on-board computer capable of identifying vehicles from a library of thermal or visual signals, much as some current radars can detect helicopters by their rotors. As 'eyes and ears' for an HQ, a recce vehicle will be required to report enemy positions or movement.

By the nature of their role, recce troops are more independent than MBTs or APC mounted infantry and so must be more self contained. Besides communications and observation and monitoring equipment, they will need to carry their own camouflage nets, rations, water, fuel, ammunition and sleeping bags. Some of this can be stowed externally, but an armoured car or light A.V. can be cramped when it is fully stowed. For this reason a modified APC is useful since it has more internal space as well as a 'neutral' appearance.

In summary a recce vehicle can be wheeled or tracked. Armament may range from 7.62mm GPMG to soft recoil 105mm gun. However, armament is not a priority since the role of the vehicle and its crew is to observe and gather information. Armour protection is essential in any Central Front battlefield. A degree of autonomy may be required with the crew capable of living away from the logistic chain. Crucially they should be well equipped with a range of sensors capable of locating and identifying radio, radar and visual information. This should then be sent promptly by secure radio link to their HQ.

/DEFENCE - November, 1988/

Exercise

Answer the following questions:

- 1/ What does "recce" mean?
- 2/ What could recce troops do if they found themselves behind enemy lines?
- 3/ What does recce do in an attack?
- 4/ Does recce also play a part in a chemical environment? What is it?
- 5/ How does a reconnaissance patrol act in conventional operations?

- 6/ How can recce vehicles be camouflaged?
- 7/ What way, other than by light cavalry reconnaissance, is information gathered on a modern battlefield?
- 8/ What must the commander of a recce vehicle do with information his patrol has gathered?
- 9/ What kind of recce vehicle is most common?
- 10/ What kind of vehicle is most ideal for recce? Explain.
- 11/ What can you say about recce troops being more self-contained?
- 12/ Is armament a priority in a recce vehicle?
- 13/ What is the main role of the crew of a recce vehicle?

Challenges for the US Army

There is no simple Formula for winning wars. Defeating enemy forces in battle will not always insure victory. Other national instruments of power and persuasion will influence or even determine the results of wars. Wars cannot be won, however, without a national will and military forces equal to the tasks. Although successful military operations do not guarantee victory, they are an indispensable part of winning.

Identifying the Challenges

The US Army must meet a variety of situations and challenges. It can expect to be committed in either of two environments. It may fight on a sophisticated battlefield with an existing infrastructure of communications, air defense, logistic facilities, and ports. Or, on a relatively unsophisticated battlefield, it may have to create an infrastructure or choose to fight without one; it must be ready to fight light, well-equipped forces or sophisticated terrorist groups. It must be prepared to fight highly mechanized forces. In the areas of greatest strategic concern, it must expect battle of greater scope and intensity than ever fought before. It must anticipate battles fought with nuclear and chemical weapons.

Such battles are likely to be intense, deadly, and costly. To win, it must coordinate all available military forces in pursuit of common objectives. The US Army must retain the initiative and disrupt the opponent's fighting capability in depth with deep attack, effective firepower, and decisive maneuver. Soldiers and units must prepare for such battles, and the Army's operational concept must enable it to win.

The four basic challenges to the Army will be the battlefield, leadership, readiness, and training.

Nonlinear Maneuver Battles

In modern battle, the US Army will face an enemy who expects to sustain rapid movement during the offense and who will probably use every weapon at his disposal. Breaking or restraining the

enemy's initial ground attacks will not end the hostilities. The Army must be prepared to fight campaigns of considerable movement, complemented by intense volumes of fire and complicated by increasingly sophisticated and lethal weapons used over large areas.

Opposing forces will rarely fight along orderly, distinct lines. Massive troop concentrations or immensely destructive fires will make some penetrations by both combatants nearly inevitable. This means that linear warfare will most often be a temporary condition at best and that distinctions between rear and forward areas will be blurred. Air and ground maneuver forces; conventional, nuclear and chemical fires; unconventional warfare; active reconnaissance, surveillance, and target-acquisition efforts; and electronic warfare will be directed against the forward and rear areas of both combatants.

Lethal Systems

Potential enemies of the US will probably field large quantities of high-quality weapon systems whose range and lethality equal or exceed that of the US. Potent ground and air systems, complemented by closely-coordinated, precision-guided munitions, will concentrate enormous combat power, especially at the points of decision.

Sensors and Communications

Wide-ranging surveillance, target-acquisition sensors, and communications that provide intelligence almost immediately will affect the range and scope of battle. Sensors offer the commander more than just timely information on deep enemy locations and activity. They also serve as the basis for attacking enemy follow-on forces with artillery, Air Force attack aircraft, attack helicopters, irregular forces, and nonlethal weapons such as jamming and deception. These attacks have but one purpose - to support the ground commander's overall scheme. Therefore, the sensors and communications that make them possible are particularly valuable.

Nuclear and Chemical Warfare

A growing number of nations can employ chemical and nuclear weapons and are apparently willing to use them. US forces must plan to fight in an environment where nuclear and chemical weapons pose a clear and present danger. Accordingly, they must be organized, equipped, and trained to meet the unique challenges to be faced on the integrated battlefield; Tactical nuclear weapons will drastically change the traditional balance between fire and maneuver. On the modern battlefield, nuclear fires may become the predominant expression of combat power, and small tactical forces will exploit their effects. The destructive effects of nuclear weapons will increase the tempo of decisive combat. Engagements will be short and violent. Decisive battles may last hours instead of days or weeks.

Combat and Control

At the very time when battle demands better and more effective command and control, modern electronic countermeasures may make that task more difficult than ever before. Commanders will find it difficult to determine what is happening. Small units will often have to fight without sure knowledge about their force as a whole. Electronic warfare, vulnerability of command and control facilities, and mobile combat will demand initiative in subordinate commanders. The commander who continues to exercise effective command and control will enjoy a decisive edge over his opponent.

Air Systems

Air mobility and air power will extend the battle to new depths for all combatants. Effective air defenses or air superiority by one combatant could represent a significant advantage in the conduct of operations.

Austere Support

The Army must be prepared to fight its battles at the end of long, vulnerable lines of logistical support. It may have to fight outnumbered against an enemy with significantly shorter supply lines.

Rear Area Combat

Support projected forward from rear areas will be subject to attack by subversion: terrorism; large airmobile, amphibious, or airborne forces; and long-range conventional, chemical, or nuclear fires.

Urban Combat

Combat in built-up areas will be unavoidable, especially in Europe. Attack and defense in urban areas and the fluid battle beyond them will require that corps and divisions apply coherent plans for urban warfare.

Desert Combat

Combat in vast arid regions over extended frontages will require imagination and skillful adaptation.

Leadership

The fluid nature of modern war will place a premium on leadership, unit cohesion, and effective, independent operations. The conditions of combat on the next battlefield will be less forgiving of mistakes and more demanding of leader skill, imagination, and flexibility than any in history.

Readiness

Forward deployed forces may have to fight on a few hours' notice. Other components of the force may have only days or weeks to make final preparations for war. Commanders must have effective plans for those important days or weeks, and they must train for specific missions they anticipate. They must insure that each officer, NCO, and soldier is individually prepared for battle and is able to perform his job as part of the unit.

Unit readiness cannot be a reality without logistical readiness - the availability and proper functioning of materiel, resources, and systems to maintain and sustain operations on a fluid, destructive, and resource-hungry battlefield. The training of support units is as important as the training of tactical units. Support units should be vigorously trained under conditions similar to those anticipated in combat.

Training

Soldiers must be prepared for combat both professionally and psychologically. Training is the cornerstone of success. Training is a full-time job for all commanders in peacetime, and it continues in wartime combat zones regardless of other operations or missions. On the day of battle, soldiers and units will fight as well or as poorly as they were trained before battle.

Soldiers receive most of their training in their units. There they can best train as individuals and as members of teams under conditions that approximate battle. Unit training aims at developing maximum effectiveness with combined and supporting arms. Once units meet basic standards, commanders should review the same tasks under more difficult conditions. Unit training must simulate as closely as possible the modern battlefield's tempo and scope. Unit training should include combined and supporting arms teamwork, which is far more effective than separate training.

The complexities of modern combat make it increasingly important to concentrate on unit training programs for leaders and teams. Those who direct weapon systems and small units must be as competent as those who operate them. Commanders must strike a balance between training soldiers and subordinate leaders. They must take time to train subordinate leaders, building their confidence and teaching them to exercise initiative before attempting complex collective tasks. Such a practice will insure soldier and unit morale, confidence, and effectiveness.

Meeting the Challenges

The US Army can meet these challenges. Armies win by generating superior combat power in battles and throughout campaigns. Superior combat power depends on three fundamentals. First and foremost, it depends on good people - soldiers with character and resolve who will win because they simply will not accept losing. Next, it depends on armaments sufficient for the task at hand. Finally, it depends on sound, well-understood, and practical concepts for fighting.

The character of modern battle and the geographical range of the US national interests make it imperative that the Army fight as part of a team with the tactical forces of the US Air Force, the US Marine Corps, and the US Navy. It is also critical that commanders prepare themselves to fight alongside the forces of one or more of its nation's allies. Teamwork in joint and combined operations will be an essential ingredient of any battles the Army will have to fight.

The AirLand Battle Doctrine

The AirLand Battle doctrine outlines an approach to fighting intended to develop the full potential of US forces. Operations based on this doctrine are nonlinear battles, which attack enemy forces throughout their depth with fire and maneuver. They require the coordinated action of all available military forces in pursuit of a single objective.

Air and ground maneuver forces; conventional, nuclear and chemical fires; unconventional warfare; active reconnaissance, surveillance, and target-acquisition efforts; and electronic warfare will be directed against the forward and rear areas of both combatants. The AirLand Battle will be dominated by the force that retains the initiative and, with deep attack and decisive maneuver, destroys its opponent's abilities to fight and to organize in depth.

By extending the battlefield and integrating conventional, nuclear, chemical and electronic means, forces can exploit enemy vulnerabilities anywhere. The battle extends from the point of close combat to the forces approaching from deep in the enemy rear. Fighting this way, the US Army can quickly begin offensive action by air and land forces to conclude the battle on its terms.

Exercise

Answer the following questions:

- 1/ What are the two environments the US Army can be expected to be committed in?
- 2/ How can the US Army disrupt the opponent's fighting capability?
- 3/ Can you name the four basic challenges to the US Army? What are they?
- 4/ What does nonlinear maneuver battle mean?
- 5/ What will be directed against the forward and rear areas of both combatants?
- 6/ What will affect the range and scope of battle?
- 7/ What do sensors offer a commander?
- 8/ Can nuclear weapons increase the tempo of combat?
- 9/ What effect will nuclear weapons have on the duration of battles?
- 10/ What may make effective command and control difficult in modern warfare?
- 11/ How will air mobility and air power affect a battle?
- 12/ What will rear area support be subjected to?
- 13/ Can urban combat be avoided in modern war?
- 14/ What is important to insure modern war a fluid nature?
- 15/ Is unit readiness closely linked with logistical readiness? Explain.
- 16/ How should support units be trained?
- 17/ Is the training of a soldier very important? Why?
- 18/ Is the training of soldiers only undertaken in peacetime?
- 19/ Where is it carried out in wartime?
- 20/ Should the training of soldiers be undertaken outside the unit? Explain.
- 21/ How should subordinates be trained?
- 22/ What is AirLand Battle Doctrine?

Combat Fundamentals

An Army's Operational Concept is the core of its doctrine. It is the way the Army fights its battles and campaigns, including tactics, procedures, organizations, support, equipment and training. The concept must be broad enough to describe the operations in all anticipated circumstances. Yet it must allow sufficient freedom for tactical variations in any situation. It must also be uniformly known and understood.

Operational Concepts

The object of all operations is to destroy the opposing force. At the foundation of the US Army's operations are the principles of war and their application to classical and modern theories. The Army's basic operational concept is called AirLand Battle doctrine. This doctrine is based on securing or retaining the initiative and exercising it aggressively to defeat the enemy. Destruction of the opposing force is achieved by throwing the enemy off balance with powerful initial blows from unexpected directions and then following up rapidly to prevent his recovery. The best results are obtained when initial blows are struck against critical units and areas whose loss will degrade the coherence of enemy operations rather than merely against the enemy's leading formations.

Army units will fight in all types of operations to preserve and to exploit the initiative. They will attack the enemy in depth with fire and maneuver and synchronize all efforts to attain the objective. They will maintain the agility necessary to shift forces and fires to the points of enemy weakness. The operations must be rapid, unpredictable, violent and disorienting to the enemy. The pace must be fast enough to prevent him from taking effective counteractions. Operational planning must be precise enough to preserve combined arms cooperation throughout the battle. It must also be sufficiently flexible to respond to changes or to capitalize on fleeting opportunities to damage the enemy.

This requires that the entire force thoroughly understand the commander's intent. Subordinate leaders must align their operations with the overall mission. They must develop opportu-

nities that the force as a whole can exploit. Large unit commanders must encourage initiative in their subordinates. They must also be able to shift their main effort quickly to take advantage of enemy weaknesses that their subordinates discover or create. Success on the modern battlefield will depend on the basic tenets of AirLand Battle doctrine: initiative, depth, agility, and synchronization.

Initiative

Initiative implies an offensive spirit in the conduct of all operations. The underlying purpose of every encounter with the enemy is to seize or to retain independence of action. To do this we must make decisions and act more quickly than the enemy to disorganize his forces and to keep him off balance.

To preserve the initiative, subordinates must act independently within the context of an overall plan. They must exploit successes boldly and take advantage of unforeseen opportunities. They must deviate from the expected course of battle without hesitation when opportunities arise to expedite the overall mission of the higher force. They will take risks, and the command must support them. Improvisation, initiative, and aggressiveness - the traits that have historically distinguished the American soldier - must be particularly strong in their leaders.

Depth

Depth, important to all US Army operations, refers to time, distance, and resources. Momentum in the attack and elasticity in the defense derive from depth. Knowing the time required to move forces - enemy and friendly - is essential to knowing how to employ fire and maneuver to destroy, to disrupt, or to delay the enemy.

Commanders need to use the entire depth of the battlefield to strike the enemy and to prevent him from concentrating his firepower or maneuvering his forces to a point of his choice. Commanders also need adequate space for disposition of their forces, for maneuver, and for dispersion.

Depth of resources refers to the number of men, weapon systems, and materiel that provide the commander with flexibility and extend his influence over great areas. Commanders need depth of time, space, and resources to execute appropriate counter-moves, to battle the forces in contact, and to attack enemy rear forces.

The battle in depth should delay, disrupt, or destroy the enemy's uncommitted forces and isolate his committed forces so that they may be destroyed. The deep battle is closely linked with the close-in fight. All involved weapons, units, and surveillance assets must contribute to the commander's overall objective. When we fight an echeloned enemy, such operations may be vital to success.

Reserves play a key role in achieving depth and flexibility. Important in any battle is the commander's decision on the size, composition, and positioning of his reserves. They are best used to strike a decisive blow once the enemy has committed himself to a course of action or revealed a vulnerability.

Finally, commanders must be prepared to engage enemy airborne or airmobile forces that attack our rear areas. They must insure that combat service support units can survive nuclear and chemical strikes and still support the fast-paced battle. These are other aspects of the in-depth battle.

Agility

Agility requires flexible organizations and quick-minded, flexible leaders who can act faster than the enemy. They must know of critical events as they occur and act to avoid enemy strengths and attack enemy vulnerabilities. This must be done repeatedly, so that every time the enemy begins to counter one action, another immediately upsets his plan. This will lead to ineffective, uncoordinated, and piecemeal enemy responses and eventually to his defeat.

An organization's flexibility is determined by its basic structure, equipment, and systems. Units should have an appropriate mix of soldiers and equipment to complete their tasks. Mission,

enemy, terrain, troops, and time available (METT-T) should control any permanent or temporary reorganization.

The mental flexibility necessary to fight on a dynamic battlefield is more difficult to describe but easier to achieve. The Army has traditionally taken pride in its soldiers' ability to "think on their feet" - to see and to react rapidly to the changing circumstances. Mental flexibility must be developed during the soldier's military education and maintained through individual and unit training.

Synchronization

Synchronized operations achieve maximum combat power. However, synchronization means more than coordinated action. It results from an all-prevailing unity of effort throughout the force. There can be no waste. Every action of every element must flow from understanding the higher commander's concept.

Synchronized, violent execution is the essence of decisive combat. Synchronized combined arms complement and reinforce each other, greatly magnifying their individual effects. In AirLand Battle doctrine, synchronization applies both to conventional forces, and, when authorized, to nuclear and chemical weapons. It also characterizes our operations with other services and allies.

Forceful and rapid operations achieve at least local surprise and shock effect. Commanders must look beyond these immediate effects when they plan operations. They must make specific provisions in advance to exploit the opportunities that tactical success will create.

Levels of War

War is a national undertaking which must be coordinated from the highest levels of policymaking to the basic levels of execution. Strategic, operational, and tactical levels are the broad divisions of activity in preparing for and conducting war. While the principles of war are appropriate to all levels, applying them involves a different perspective for each.

Strategic

Military strategy employs the armed forces of a nation to secure the objectives of national policy by applying force or the threat of force. Military strategy sets the fundamental conditions for operations.

Operational

The operational level of war uses available military resources to attain strategic goals within a theater of war. Most simply, it is the theory of larger unit operations. It also involves planning and conducting campaigns. Campaigns are sustained operations designed to defeat an enemy force in a specified space and time with simultaneous and sequential battles. The disposition of forces, selection of objectives, and actions taken to weaken or to out-manuever the enemy all set the terms of the next battle and exploit tactical gains. They are all part of the operational level of war. In AirLand Battle doctrine, this level includes the marshalling of forces and logistical support, providing direction to ground and air maneuver, applying conventional and nuclear fires in depth, and employing unconventional and psychological warfare.

Tactical

Tactics are the specific techniques smaller units use to win battles and engagements which support operational objectives. Tactics employ all available combat, combat support, and combat service support. Tactics involve the movement and positioning of forces on the battlefield in relation to the enemy, the provision of fire support, and the logistical support of forces prior to, during, and following engagements with the enemy.

At corps and division, operational and tactical levels are not clearly separable. They are guided by the same principles. An operation designed to defeat an enemy force in an extended area does so through operational maneuver and a series of tactical actions.

Exercise

Answer the following questions:

- 1/ What is an Army's operational concept?
- 2/ What is the object of all military operations?
- 3/ Can you explain in your own words what AirLand Battle Doctrine is?
- 4/ How will army units fight in order to preserve and exploit the initiative?
- 5/ What will success on the modern battlefield depend on?
- 6/ What is initiative in the military sense?
- 7/ Should subordinates have initiative? Explain.
- 8/ Must subordinates always stick to the expected course set out?
- 9/ What traits should be strong in American military leaders?
- 10/ What is "depth"?
- 11/ What is "depth of resources"?
- 12/ What ought battle in depth do?
- 13/ Are reserves important in achieving depth and flexibility? Explain.
- 14/ What kind of units attack rear areas?
- 15/ What does agility require?
- 16/ What is METT-T?
- 17/ How is maximum combat power achieved?
- 18/ What are the levels of war?
- 19/ What is the strategic level?
- 20/ What do we mean by "operational" level?
- 21/ What are campaigns?
- 22/ What is the tactical level?
- 23/ When are operational and tactical levels not quite separable?

Dynamics of Battle

Dynamics of battle refers to the interaction of factors that decide battle. Force ratios and the effects of fire and maneuver are significant in deciding battles; however, a number of intangible factors often predominate. Among these intangible factors are state of training, troop motivation, leader skill, firmness of purpose, and boldness - the abilities to perceive opportunities, to think rapidly, to communicate clearly, and to act decisively. The effects of these factors create tangible and reversible relationships. To understand the dynamics of battle, it is important to understand combat power and the role of its component elements - maneuver, firepower, protection, and leadership.

Combat Power

Combat power is relative, never an absolute, and has meaning only as it compares to that of the enemy. The appropriate combination of maneuver, firepower, and protection by a skillful leader within a sound operational plan will turn combat potential into actual combat power. Superior combat power applied at the decisive place and time decides the battle.

Maneuver. Maneuver is the dynamic element of combat, the means of concentrating forces in critical areas to gain and to use the advantages of surprise, psychological shock, position, and momentum which enables smaller forces to defeat larger ones. More specifically, it is the employment of forces through movement supported by fire to achieve a position of advantage from which to destroy or to threaten destruction of the enemy. The object of maneuver at the operational level is to focus maximum strength against the enemy's weakest point, thereby gaining strategic advantage. At this level, successful maneuver is achieved through skillful coordination of fire in depth with movement of larger units. At the tactical level, maneuver contributes significantly to sustaining the initiative, to exploiting success, to preserving freedom of action, and to reducing vulnerability. Successful

maneuver at this level depends upon skillful movement along indirect approaches supported by direct and indirect fires.

The effect created by maneuver is the first element of combat power. Effective maneuver demands battlefield mobility; knowledge of the enemy and terrain generated by reconnaissance and other intelligence activities; effective command and control; flexible operational practices; sound organization; and reliable logistical support. It requires imaginative, bold, competent, and independent leaders; discipline; coordination, and speed; well-trained troops; and logistically ready units. Effective maneuver protects the force and keeps the enemy off balance. It continually poses new problems for him, renders his reactions ineffective, and eventually leads to his defeat.

Firepower. Firepower provides the enabling, violent, destructive force essential to successful maneuver. It is the means of suppressing the enemy's fires, neutralizing his tactical forces, and destroying his ability to fight. This is done by killing, wounding, or paralyzing the enemy's soldiers and by damaging the materiel and installations necessary for his continued combat effectiveness. Firepower is delivered by personal arms, crew-served direct fire weapons, mortars, artillery, cannons and missiles, air defense guns and missiles, attack helicopters, Air Force and Navy aircraft, and Naval gunfire bombardment.

The effect of firepower on the enemy and not its unapplied or misused potential makes a vital contribution to combat power. It is the accuracy and effectiveness of munitions which ultimately contribute to combat power. Therefore, efficient target-acquisition systems, viable command and control, a steady supply of ammunition, and the tactical mobility necessary to place weapons within range of critical targets are necessary ingredients of this element of combat power.

Protection. Protection is the shielding of the fighting potential of the force so that it can be applied at the decisive time and place. Protection has two components. The first includes all

actions to counter the enemy's firepower and maneuver by making soldiers, systems, and units difficult to locate, to strike, or to destroy. Among these actions are security, dispersion, cover, camouflage, deception, suppression, and mobility. These actions routinely include the reinforcement and concealment of fighting positions, command posts, and support facilities. The second component includes actions to keep soldiers healthy, to maintain their fighting morale, and to diminish the impact of severe weather. It also means keeping equipment in repair and supplies from becoming lost.

As in the other elements of combat power, the effects of protection contribute to combat power. These effects are measured by the fighting potential available at the moment of decisive combat.

Leadership. Leadership provides purpose, detection, and motivation in combat. Leaders function through personal interaction with their men and through command and control systems and facilities. While leadership requirements differ from squad to echelons above corps, leaders must be men of character; they must know and understand soldiers and the physical tools of battle; and they must act with courage and conviction. The primary function of leadership is to inspire and to motivate soldiers to do difficult things in trying circumstances. Leaders must also understand how to control and to integrate fire and maneuver and how to use terrain. They must know how to combine direct and indirect fires, how to use air and naval fires, and how to substitute massed fires for massed troops.

This is the component upon which all others depend. Again, it is the effect the leader creates through proper application of his potential maneuver, firepower, and protection capabilities which generates combat power. Throughout history, victory has gone to the leader who understood and used the means at his disposal to the best advantage. Therefore, leaders are the crucial element of combat power. It is up to them to turn the potential of men, weapons, and resources available into superior combat power.

Leaders must set the preconditions for winning on the battlefield; therefore, superior combat power has its roots in proper preparation. Preparation includes many matters of long-term concern to the Army at the highest levels - force design, equipment design, and procurement, to name only a few. The tactical commander has a more immediate perspective. To him, preparation involves logistic readiness and motivation. It means c o n t i n u o u s planning and training to the moment of, and even during, battle. It means training throughout campaigns because every endeavor causes the unit to learn either good or bad habits. Continuous training under all conditions insures positive skills that will contribute to success in battle. Commanders must demand excellence under all conditions and must strive to make it habitual.

In the final analysis and once the force is engaged, superior combat power derives from the courage of soldiers, the excellence of their training, and the quality of their leadership.

/'OPERATIONS' FIELD MANUAL 100-5/

Exercise

Answer the following questions:

- 1/ What do we mean by "dynamics of battle"?
- 2/ Name some of the factors significant in deciding a battle. What are they?
- 3/ What are the effects of these factors?
- 4/ What is combat power?
- 5/ What is maneuver?
- 6/ What enables smaller forces to defeat much larger ones?
- 7/ What is the object of maneuver at operational level?
- 8/ What is the role of maneuver at tactical level?

- 9/ What does effective maneuver demand?
- 10/ What is firepower?
- 11/ How is the enemy's ability to fight destroyed?
- 12/ How is firepower delivered?
- 13/ What is protection in its military meaning?
- 14/ What are the components of protection?
- 15/ How do leaders function?
- 16/ What kind of men must leaders be?
- 17/ What is the main function of leadership?
- 18/ What must a leader understand and know well?
- 19/ What part does the leader play in combat?
- 20/ What does "preparation" mean to a tactical commander?

Combat Imperatives

Success in battle - achieving superior combat power - also depends on using tactics appropriate to mission, enemy, terrain, troops, and time available. The effectiveness of maneuver, firepower, and protection depends on how the commander combines operational procedures, battle drills, or other measures from an established repertoire to solve a particular problem. Doctrine establishes common techniques of fighting throughout the force. The successful tactician depends on proven techniques and on troops who are well-versed in employing them. Standardized practices actually enhance flexibility; but they must be more than just a series of routine approaches to solving types of operational problems. As he plans and fights the battle, the tactician must understand the seven imperatives of combat:

1. Insure unity of effort.
2. Direct friendly strengths against the enemy weaknesses.
3. Designate and sustain the main effort:
4. Sustain the fight.
5. Move fast, strike hard, and finish rapidly.
6. Use terrain and weather.
7. Protect the force.

1. Insure Unity of Effort

The principles of war that provide the basis for this imperative are objective, unity of command, and simplicity. Its fundamental requirements are effective leadership and an effective command and control system through which the commander -

- . Learns what is going on,
- . Decides what to do about it,
- . Issues the necessary orders,
- . Keeps track of how the battle is going.

This process is dynamic. Its primary measure of effectiveness is whether it functions efficiently and more quickly than the enemy's. At its heart are the commander and his system for command and control. The commander must insure a unified, aggressive, quick, precise, agile, and synchronized effort throughout the force.

Unity of effort depends on motivation - getting all involved to work quickly and well. Important to motivation in a high-risk environment are mutual trust, confidence, loyalty, and pride - the notions that describe relationships between leader and led. Leaders must **convince** subordinates that objectives are possible and thus deserve total dedication.

Unity of effort requires that the commander and his staff see the battlefield realistically. To do this, they must continuously study their resources, the enemy, and the terrain from a perspective that extends from the unit's rear boundary to the forward edge of its area of interest. Because he can never know everything, the commander will make decisions based on imperfect information. He must, therefore, make realistic demands for intelligence in a clear order of priority. Commanders must avoid the temptation to gather more detail than they need and thus clog the flow of timely, vital information.

Unity of effort also requires continuous assessing of the battle conditions, both enemy and friendly, as the basis for sound decisions and firm directions for the force as a whole. Modern forces have decentralized and institutionalized much of the decision process, especially that involved with supporting arms and services. As decision making decentralizes, the need for unity of effort grows. Commanders who are flexible rather than mechanical will win decisive victories.

A plan which promotes unity of effort must have a well-defined, comprehensive mission statement. The commander identifies his goals through mission orders that leave his subordinates the greatest possible freedom. Because plans must be implemented

by units under stress, simple plans are best. If a plan is necessarily complex, it must incorporate simple control measures and insure that subordinates' individual tasks remain simple. Since commanders cannot foresee, plan or communicate instructions for every potential event they should not attempt to control every action of their subordinates. The chaos of battle will not allow absolute control. As battle becomes more complex and unpredictable, decision making must become more decentralized. Thus, all echelons of command will have to issue mission orders. Doing so will require leaders to exercise initiative, resourcefulness, and imagination - and to take risks.

Risk-taking in combat has two dimensions. One has to do with the danger to men and materiel involved in the mission; the other with accomplishing the mission. All leaders must take risks of both types independently, based on a prudent assessment of the situation. An informed risk, however, should not be confused with a gamble. A gamble is a resort to chance in the absence of either information or control. Although a gamble may be necessary in a desperate situation, a subordinate should have his commander's approval.

Mission orders require commanders to determine intent - what they want to happen to the enemy. Their intent must be consistent with their superiors' and must be communicated clearly to their subordinates. During battle, commanders must support and develop the local successes of their subordinates. They must commit reserves where there is the greatest chance of success. They must concentrate fires wherever the enemy is vulnerable. While detailed orders may be necessary at times, commanders must trust their subordinates to make correct on-the-spot decisions within the mission framework. Such decentralization converts initiative into agility, allowing rapid reaction to capture fleeting opportunities. Mission orders need to cover only three important

points:

- . They should clearly state the commander's objective, what he wants done, and why he wants it done
- . They should establish limits or controls necessary for coordination
- . They should delineate the available resources and support from outside sources

The subordinate commander must fully understand his commander's intent and the overall mission of the force. If the battle develops so that previously issued orders no longer fit the new circumstances, the subordinate must inform his commander and propose appropriate alternatives. If this is not possible, he must act as he knows his commander would and make a report as soon as possible.

To insure that his concept is driving the operation to completion, the commander must follow up. He must have an overall view of the battle based on reports from subordinates, information from surveillance systems, and his own personal observations. He must compare enemy and friendly situations, assess progress, and if necessary, issue fragmentary orders (FRAGO) to adjust assigned tasks. This process of follow-up and reassessment is one of the commander's critical responsibilities.

2. Direct Friendly Strengths Against Enemy Weaknesses

The principles of war that provide the basis for this imperative are maneuver and surprise. To determine what tactics to use, commanders must study the enemy. They must know enemy organization, equipment, and tactics - how the enemy fights. More specifically, they must understand the strengths and weaknesses of the enemy force they are about to fight. Techniques that work in one instance against one enemy may not work against another enemy or even the same enemy at a different time and place. Commanders should determine and take into account the capabilities, limitations, and idiosyncrasies of particular enemy units.

The good tactician looks for an approach that focuses his own strengths against the enemy's weaknesses. Weaknesses may result from gaps in the enemy's dispositions, his predictability, or the character of his soldiers or units. Commanders must strive to attack the enemy where his operational, technical, or human weaknesses make him most vulnerable.

Meeting the enemy where he is strongest is sometimes unavoidable, but doing so deliberately is extremely hazardous. However, it may be necessary to support an indirect effort elsewhere with a direct approach. Sometimes an immediate, violent, quickly executed, direct frontal assault can capitalize on enemy unreadiness.

Our tactics must appear formless to the enemy until the last possible moment. They must deceive him about our true intentions. They must confuse him by threatening multiple objectives, each of which he must be prepared to defend. They must surprise him whenever possible, simply by doing what he least expects. All such efforts must be fully integrated into operational plans.

3. Designate and Sustain the Main Effort

The principles of war that provide the basis for this imperative are mass and economy of force. The commander identifies the main effort when he states his intent. Designating the main effort links each subordinate commander's actions to those around him. Such a link maintains cohesion and insures synchronization. Yet it also permits initiative.

Whether in an attack, a defense, or any other operation, the main effort is assigned to only one unit. All other elements support and sustain the effort of that unit. If that unit encounters unexpected difficulties, or if a secondary effort meets with unexpected success, the commander may shift his focus by designating a new unit to make the main effort. In this way he can shift the concentration of forces, fires, and required logistics in the direction required to best achieve his aim.

To succeed against superior numbers, the commander must not limit his attack or defense to the vicinity of the forward line of own troops (FLOT). He supports the main effort by fire or

maneuver that reaches deeply into the enemy's zone of action. He strikes the enemy's vulnerable high-value targets or engages his still undeployed follow-on forces. Thus, the commander seeks to set the terms of battle throughout the depth of the battlefield.

The purpose of concentrating effort is to shock, paralyze, and overwhelm the enemy at the chosen time and place. To achieve this effect, the tactician designates the objective and plans the employment of combat, combat support, and logistics means, using each to the greatest advantage in the overall scheme. By proper integration he achieves an effect that is greater than the sum of its parts.

The increased need for dispersion on the nuclear-chemical-conventional battlefield compounds the problem of concentration. To move units rapidly and efficiently over preselected and coordinated routes, tacticians must plan and prepare extensively. They must also select and coordinate alternate routes in case primary ones are blocked.

4. Sustain the Fight

Battles or campaigns have often gone to the side that has been most successful in pressing the main effort to conclusion. To sustain the momentum that early successes generate, leaders must do two things. First, they must deploy forces in adequate depth and arrange for timely and continuous combat and combat service support at the outset of operations. Then, they must take risks and tenaciously press soldiers and systems to limits of endurance for as long as necessary.

Commanders deploy forces and logistic resources in depth to insure continuous, flexible operations and to protect the force. In the attack, they echelon forces and logistic resources in depth to maintain momentum and to exploit success. In the defense, depth insures continuity and flexibility for maneuver. It provides options for the defender if forward positions are penetrated. In both attack and defense, deploying in depth increases dispersion and decreases the vulnerability of the total force to nuclear and chemical fires.

To gauge the risks involved in pressing soldiers to the limits of their endurance, commanders must understand the human dimension. The confusion, extreme stress, and lethality of the modern battlefield place a heavy burden on courage and endurance. Commanders must assess human abilities and limitations as they plan and fight their battles. They must accurately gauge which units should lead, which should be replaced, and which should be reinforced. They must also be aware of the traditional concerns of weather, training, and leadership.

5. Move Fast, Strike Hard, and Finish Rapidly

The principles of war that provide the basis for this imperative are maneuver and mass. Speed has also always been important, but it will be even more important on the next battlefield because of sophisticated sensors and the possibility of conventional, nuclear, or chemical counterstrikes. To avoid detection, our concentrations must be disguised. To avoid effective counterstrikes, they must be short.

Speed allows the commander to seize and to hold the initiative, and thereby to maintain freedom of action. Quick, decisive action also makes the enemy react and deprives him of the initiative. When this happens, units should have well-conceived plans for exploiting their successes.

6. Use Terrain and Weather

Terrain and weather affect combat more significantly than any other physical factors. The ground has an immense influence on how the battle will be fought. It provides opportunities and imposes limitations, giving a decisive edge to the commander who uses it best. Most battles have been won or lost by the way in which combatants used the terrain to protect their own forces and to destroy those of the enemy. One of the best investments of the commander's time before battle is an intensive personal reconnaissance of the terrain.

Weather affects equipment and terrain, but its greatest impact is on the men. The commander must understand how weather and visibility affect his operations as well as the enemy's. He

anticipates changes in the weather, capitalizing on them when possible, and uses smoke to alter visibility when it suits his purposes. The impact of terrain, weather, and visibility has a decisive role.

7. Protect the Force

Successful commanders preserve the strength of the force. They do so by assessing security, keeping troops healthy and equipment ready, and sustaining discipline and morale.

Tacticians assure security by taking precautions against surprise. They must use aggressive reconnaissance, set out security forces, maintain operational security, avoid operational patterns, and practice deception. When time permits, they must build protective field fortifications. They must also disperse troops, especially on the nuclear battlefield. The degree of dispersion depends on the value of their force as a target, on whether it is mobile or static and on the probability of its being detected.

Leaders must habitually think about troop health and equipment readiness. In the past, disease and the elements have weakened entire formations. Likewise, equipment that is not properly maintained can fail, leaving forces at a serious disadvantage. Commanders must insist on proper maintenance both before and during battle. They must anticipate needs, conserve resources and be ready for emergencies.

In battle, unit cohesion is important to protection. Poor morale can weaken any unit. Enemy psychological warfare, an unsuccessful operation, or a surprising and violent display of enemy strength can degrade morale. Peacetime preparation, however, will contribute directly to a unit's strength and durability in combat. Soldiers who are always required to do it right in training will instinctively do so in combat.

Leaders create cohesion and maintain discipline, cohesive units will be on hand with functioning equipment when the decisive moment arrives.

Exercise

Answer the following questions:

1. What do we mean by "success in battle"?
2. What does success in battle depend on?
3. How many imperatives of combat are there?
4. What are the fundamental requirements that insure unity of effort?
5. What does unity of effort depend on?
6. How must a commander and his staff see the battlefield in order to achieve unity of effort?
7. How should battle conditions be assessed?
8. What have modern forces done to the decision process?
9. Why is it best that the plan for promoting unity of effort be simple?
10. What are the dimensions of risk-taking in combat?
11. What is the difference between risk and gamble?
12. What must be determined in a mission order?
13. How should commanders react towards decisions by their subordinates during battle?
14. What important points must be covered by a mission order?
15. What is FRAGO?
16. What must a commander do to be able to determine what tactics to use against an enemy?
17. Should the enemy be met where his strength is greatest? If not, why not?
18. Why should our tactics appear formless to the enemy until the last moment?
19. When does a commander identify the main effort?
20. How many units is the main effort assigned to?
21. What is FLOT?
22. What is the reason for concentrating effort?
23. Why is dispersion a must on the nuclear-chemical-conventional battlefield?
24. How can a commander sustain the momentum achieved in early successes?
25. Why do commanders deploy forces and logistic resources in depth?

26. What does "depth" insure in defense?
27. Why will speed be of great importance on the future battle-field?
28. What physical factors affect combat most?
29. How does weather affect equipment and terrain?
30. How do successful commanders protect their force?
31. How do tacticians assure security?
32. What precautions against surprise should be taken?
33. Why should the commander always think about troop health and equipment readiness?
34. What do we mean by "equipment readiness"?
35. Is unit cohesion important in battle? Explain.

Weather and Terrain

Weather and terrain have more impact on battle than any other physical factor, including weapons, equipment, or supplies. The terrain on which battles are fought will present opportunities to both sides. In some cases the advantages are unmistakably clear. Indeed, most battles have been won by the side that used terrain to protect itself and to reinforce fires to destroy the enemy. To be effectual, commanders must understand the nature, uses, and reinforcement of terrain. They must also understand how weather affects troops and equipment. To retain the initiative, they must be able to operate in adverse conditions and during periods of limited visibility.

Weather

Weather affects equipment and terrain, but its greatest impact is on the soldiers. Cloud cover, rain, snow, dust, light conditions, and temperature extremes will combine in various ways to affect troop efficiency. Control becomes difficult. Troops tend to seek shelter and to neglect chores which expose them to the elements. Security is difficult to insure in stationary positions.

Perhaps the most important effect of weather is on the soldier's ability to function effectively in battle. Inclement weather generally favors an attacker because defending troops will be less alert. Successful defense under limited-visibility conditions (night, fog, or smoke) depends on thorough planning. Necessary movement must be thoroughly rehearsed. At night, apprehension rises among troops waiting to defend. While a successful defense under these conditions depends on thorough planning, limited visibility makes it easier to move troops secretly and to achieve surprise. At night the advantage also belongs to the attacker.

Units must therefore be prepared to attack at night - to switch from defense to offense or to continue an attack already begun. Attack under limited-visibility conditions should strive

to achieve surprise. It should be pursued aggressively and violently with an uncomplicated maneuver scheme.

Weather also affects some equipment and weapon systems. Night, fog, or smoke reduce the useful ranges of most weapon systems. Despite technical advances in night vision equipment, these conditions usually call for a change in tactics. The blinding effect of nuclear fires is greater at night than during day. Nighttime atmospheric conditions generally favor the use of chemical agents.

Sub-zero weather may improve trafficability, but it also adds to maintenance problems. Extreme heat reduces aircraft load limits, and heat waves from the surface can make optical systems less effective. Sandstorms in the desert can raise havoc with equipment.

Rain or snow and the resulting mud reduce mobility. They place heavier loads on automotive systems of all kinds, thereby increasing maintenance requirements. They also hamper recovery operations and replacement of major items like tanks, infantry fighting vehicles, trucks, and cannons.

Cloud cover reduces air support on both sides and affects terminally guided artillery projectiles. Weather can determine the duration of nuclear and chemical weapons' effects and the extent of downwind hazard.

Two general observations summarize the effects of weather on operations:

- Good physical conditions, acclimatization, and sound discipline at the small-unit level can overcome the adverse effects of weather and visibility. They can give a well-prepared force an advantage over an ill-prepared enemy.
- The leadership time and effort required to care for the soldiers who are accomplishing the mission increases proportionately with the severity of weather.

The commander should select the best course of action to complete the mission only after thorough consideration of the favorable and unfavorable effects of weather on personnel, weapon systems, and equipment.

Terrain

Terrain forms the natural structure of the battlefield. Early in the planning process, commanders must recognize its limitations and possibilities, using it to protect friendly operations by putting the enemy at a disadvantage.

Analyzing Terrain

Every level of command must study the terrain's limitations and opportunities. Platoon leaders concentrate on wood lines, streams, and individual hills in preparing their operations. Corps commanders analyze road nets, rail nets, drainage patterns, and hill systems.

Commanders analyze terrain in light of the unit's mission. Such analysis will include a unit's assigned area of responsibility and the surrounding terrain which may affect operations. They analyze potential for cover and concealment, for movement and obstacle effect, and for observation and direct fire effect. They must recognize the battlefield's natural structure, and the necessity to improve or overcome it to accomplish the mission. Fire, maneuver, and obstacle plans are designed and integrated to fit the terrain.

Terrain analysis, intelligence preparation of the battlefield, and engineer operations are all basic to the operational use of terrain. Surrounding areas are included so that approaches to the battlefield, its flanks, and its rear are properly evaluated. After studying the area in detail, they provide the commander with an assessment, including the ground's general organization, dominant features, chief avenues for movement, and key areas. The staff or commander specifies named areas of interest as a means of focusing the surveillance and interdiction efforts of the unit. In terrain analysis, intelligence and operations officers identify significant features such as obstacles and key or decisive terrain, air and ground avenues of approach, and defensible terrain.

Key Terrain

Key terrain refers to any feature which, in the control of a combatant, will affect the conduct of an operation. The commander designates key terrain after he has analyzed his mission.

Decisive Terrain

The commander may designate certain key terrain as decisive terrain if it will have an extraordinary impact on his mission. Many battlefields may not have decisive terrain. To designate terrain as decisive is to recognize that the mission, whether offensive or defensive, depends on seizing or retaining it. The commander designates decisive terrain to communicate its importance in his concept of operations, first to his staff and, later, to subordinate commanders.

Avenues of Approach

- Avenues of approach are evaluated in terms of their -
- Potential to support maneuver units of a specified size and type;
 - Access to important areas and adjacent avenues;
 - Degree of canalization;
 - Cover and concealment;
 - Effect on line-of-sight communications;
 - Obstacles.

A good avenue of approach must support rapid movement along its length. Obstacles should be avoidable or reducible in reasonable time. The obstacle effects of nuclear fires, atomic demolition munitions, and scatterable mines must also be taken into account. An avenue should be broad enough to permit maneuver along its course. It should have parallel spurs or branches to bypass strong defenses. Enough covering terrain should be available to permit part of the force to overwatch the rest. Combat support units and combat service support units must be able to move along the avenue in support of the attacking force. This may also be done over parallel routes or along routes which are uncovered as the attack gains ground.

If the enemy has air superiority, the avenue should provide concealment from the air. Air avenues for attack helicopters, airmobile forces, and close air support have different characteristics. A good air approach provides terrain masking from air defense radar and direct-fire air defense weapons.

Analyzing avenues of approach is as important to the defender as to the attacker. The defender must accurately determine the main approaches to his sector and identify the internal avenues which will permit him to maneuver against the attacker.

Defensible Terrain

Defensible terrain refers to ground that affords -

- Long-range visibility
- Cover and concealment
- Obstacles which canalize or retard movement into the defended area and secure the flanks of the defender
- Covered routes between positions and covered approaches to the attacker's flank or rear areas

To a large degree, terrain in the defensive sector will determine the design of the defense. Static defenses can be mounted only in areas where terrain makes bypassing difficult or otherwise limits the movement of an attacker to a few routes. Dynamic defenses require maneuver space, good avenues of movement, and strong positions in depth. Special conditions, such as heavily urbanized terrain, difficult cross-country mobility, or dense vegetation, require special consideration in defense.

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Exercise

Answer the following questions:

1. What physical factors have more impact on battle than any other ones?
2. What does weather affect?
3. What kind of weather can troop efficiency be affected by?

4. Who benefits best in very bad weather, the defender or the attacker?
5. Does limited visibility help in combat? How?
6. Who has advantage of night?
7. How is equipment affected by weather? Explain.
8. What problems can extreme temperatures carry with them?
9. How can the effects of weather on operations be summarized?
10. Why should terrain be analyzed by a commander?
11. Whom is terrain analysis conducted by?
12. What is key terrain?
13. What is decisive terrain?
14. How are avenues of approach evaluated?
15. What is a good avenue of approach?
16. What must defensive terrain contain?

Nuclear and Chemical Weapons

The immediate effects of nuclear weapons are blast, thermal radiation, electromagnetic pulse (EMP), and initial nuclear radiation. They can cause major personnel and materiel losses and change the tempo and direction of the battle.

Nuclear weapons can cause tree blowdown, urban destruction, fires, radiological contamination, and in some cases, flooding. EMP from a nuclear explosion can burn out unshielded electronic equipment, including radars, weapon systems, data processing, and communications systems. Nuclear weapons also produce long-term residual radiation from fallout or rainout.

Chemical weapons can also produce immediate and delayed effects. They contaminate individuals, terrain, equipment, and supplies. Prompt use of protective equipment and shelters will significantly reduce casualties. But using protective equipment and shelters can also reduce individual and unit efficiency.

In the past, some units have continued to fight effectively despite losing many personnel and much equipment over a long period. On the next battlefield, however, nuclear weapons and chemical agents may inflict large losses very quickly. Such large and sudden losses will likely shock and confuse poorly trained or psychologically unprepared troops.

In addition to taking immediate losses, units suffering such attacks will be weakened by long-lasting effects. Long-term residual radiation can contaminate supplies, facilities, equipment, terrain, and uncovered food and water. Soldiers exposed to different levels of radiation will vary in effectiveness.

Against an enemy with a nuclear-chemical capability, forces must conduct operations with the knowledge that such weapons may be used at any time. First use, and especially surprise use, of nuclear-chemical weapons by the enemy must not allow him to win. Commanders must act to accomplish the mission with least risk. Their plans should include measures for survival and re-constitution.

Units will survive by anticipating nuclear-chemical attacks. They must take the following steps to avoid becoming lucrative targets:

- **MAINTAIN ALERTNESS.** Commanders at all levels need to be continually alert to nuclear and chemical attack. They need to balance risk to their units against mission requirements. They need to adjust dispersion and MOPP /mission oriented protection posture/ without losing momentum.
- **INSTILL DISCIPLINE.** The unit needs to survive the shock of a nuclear or chemical attack and continue the mission. Troops should be physically and psychologically conditioned by frequent training in protective clothing. Leaders must know what to do, set the example, and motivate their soldiers.
- **AVOID DETECTION.** Units must use active and passive measures to defeat enemy target-acquisition capabilities. The commander of a unit that is a high-priority target must consider displacing whenever he suspects he has been detected.
- **REMAIN MOBILE.** Tactical mobility gives the commander the best chances for survival. He knows, however, that chemical and radiological contamination, tree blowdown, urban rubble, fires, flooding, and cratering affect mobility.
- **DISPERSE FORCES AND INSTALLATIONS.** Combat service support installations and troops in compact assembly areas are very vulnerable. The decision to disperse is an important one. Dispersion needs to be done intelligently. It must be based on knowledge of enemy doctrine and weapons, and it must include necessary provisions for massing dispersed units on short notice. The degree of acceptable dispersion will depend on the tactical situation, enemy capabilities, and available terrain.
- **SEEK TERRAIN SHIELDING AND COVER.** Natural terrain shields troops from the effects of nuclear and chemical weapons. Foxholes with overhead cover and simple shelters are used as much as possible. Extensive construction will usually take too long, and will increase the chance of detection.
- **INSURE LOGISTIC PREPAREDNESS.** The logistic system must function in the nuclear and chemical environment. Critical supplies can be stored under cover to prevent contamination. Logistic facilities should be dispersed, concealed, and redundant. Units should have sufficient protective clothing, decontamination equipment and materials, and medical supplies to meet initial demands.
- **PLAN FOR RAPID RECONSTITUTION.** Commanders must be prepared to continue the mission after a nuclear or chemical attack. Those who can reconstitute or replace lost units rapidly will have the advantage in the continuing battle. Following an enemy strike, commanders should assess the damage promptly and implement contingency plans quickly to replace lost units.

Exercise

Answer the following questions?

1. What are the immediate effects of nuclear weapons?
2. What else can be caused by nuclear weapons?
3. How should operations against an enemy with a nuclear-chemical capability be conducted?
4. How can units survive nuclear-chemical attacks?
5. What steps should be taken not to become an easy target for nuclear-chemical attacks?
6. How can alertness be maintained?
7. Why should discipline be instilled?
8. How can detection be avoided?
9. Why should forces remain mobile during nuclear-chemical attacks?
10. Should forces and installations be dispersed? Explain.

Defensive Electronic Warfare

Using countertactics to cope with enemy electronic warfare may mean the difference between survival or destruction. A command post or a weapon system cannot survive if its electronic emissions make it easy to identify and locate. In an active electronic warfare environment, the commander should take the following steps to conceal emitters or to deceive the enemy as to their identities and locations:

- . Change radio frequencies often to make it difficult for the enemy to identify targets.
- . Use directional antennas as a means of communicating only with the desired receiver.
- . Issue emission control orders (EMCON) to restrict use of the electromagnetic spectrum or to prohibit transmissions during particular periods. This prevents the enemy from collecting emission data. It may also prevent friendly emissions from unintentionally interfering with other critical friendly systems.
- . Employ manipulative electronic deception (MED) to alter electromagnetic profiles or to portray a notional unit in support of deception, countersurveillance, or an operations security (OPSEC) plan.
- . Use wire or cable communications whenever possible,

Operators must be trained to work in spite of electronic warfare. Subject to the constraints of security and governmental regulations, commanders should make their tactical training in electronic warfare as realistic as possible. Continued operations during electronic warfare environment require -

- Operators trained to use communications-electronics operation instructions (CEOI) effectively
- Short transmissions (under 10 seconds when possible; never more than 30 seconds)
- Operation on the lowest power possible
- Emitters concealed by terrain masking
- Electronic warfare-locating assets to target enemy REC assets for fire and air attack
- Alternate means for passing information
- Trained subordinates to act independently in support of the overall mission when communications fail

Exercise

Answer the following questions:

1. What can countertactics to enemy electronic warfare mean?
2. How can emitters be concealed in an active electronic warfare environment?
3. Can an enemy be deceived as to the identity or location of an emitter? Explain.
4. What is EMCON?
5. What does MED mean?
6. What do continual operations during electronic warfare require?

Tactical Intelligence

To be effective, the commander must know the battlefield. He must surprise the enemy and catch him at a disadvantage as often as possible. He must avoid the enemy's strengths and exploit his weaknesses. To do so, he must know the area of operations, the conditions, and the nature, capabilities, and activities of the enemy. He must know when and where to concentrate combat power. This information is obtained through intelligence activities. Intelligence provides the basis for tactical and operational decisions.

Scope of Intelligence

Commanders normally consider the battlefield in terms of the time and space necessary to defeat an enemy force or to complete an operation before the enemy can reinforce. Commanders should view the battlefield as having two distinct areas: an area of influence in which commanders fight the current battle and a larger area of interest in which commanders carefully monitor enemy forces that might affect future operations.

Areas of influence and interest are important because they normally contain the forces and features which constitute essential elements of information (EEI). They are means of focusing a unit's collection effort on the most important terrain or enemy units during an operation. The actual dimensions of influence and interest areas vary with the factors of METT and reflect the design of each operation. Time is a primary consideration. Higher headquarters convert time to distance so that reconnaissance, surveillance, and target-acquisition resources can focus to support the concept of operations. At corps level, for example, an operation generally takes 3 to 4 days. Therefore, the corps area of influence extends to about 72 hours beyond the FLOT, covering an area within which the corps will fight enemy formations that influence the operation.

Exercise

Answer the following questions:

1. How can intelligence be helpful in making tactical and operational decisions?
2. What are the areas of a battlefield?
3. What is the area of influence?
4. What does area of interest mean?
5. Why are both these areas important?
6. What is EEI?
7. How can the dimensions of influence and interest areas vary?
8. What is MEIT?
9. Is time an important factor?
10. What is FLOT?

Intelligence Collection

Continuous reconnaissance is the responsibility of all commanders. With or without specific orders, every unit must be prepared to conduct reconnaissance, surveillance, and target-acquisition (RSTA) with every means at its disposal. RSTA obtains reliable information about the enemy and the area of operations as quickly and as completely as possible. With this information commanders estimate enemy capabilities and courses of action. Reconnaissance seeks to discover the types, strengths, organizations, and behaviors of enemy forces and their locations, directions, and speeds.

The RSTA must be directed. The commander must establish priorities for the EEI he needs. He should task each reconnaissance activity or subordinate units to work first on the information essential for continued operations. The more rapidly the situation changes and the more far-ranging and mobile combat operations are, the more important reconnaissance becomes. Commanders routinely report essential RSTA results to subordinate and adjacent units, as well as to the next higher echelon of command.

Battalion

The battalion needs information about the enemy forces it is fighting, or may have to fight. Tanks and infantry companies, scouts, ground surveillance radar (GSR) sections, patrols, and artillery fire support teams (FIST) are the organic and supporting forces that obtain most of the information in the battalion area of influence. The battalion reports such information to its companies, adjacent battalions, and the brigade. The brigade and division provide area of interest information to the battalion.

Brigade

A divisional brigade may have no organic reconnaissance or security forces. The brigade obtains information about the area of influence from subordinate battalions, divisional or corps intelligence units, supporting field and air defense artillery units, divisional or corps cavalry, and adjacent brigades. The brigade reports the information it collects to its battalions, adjacent brigades, and the division. The division or corps reports area of interest information to the brigade.

Division

In the attack, the division interdicts echelons, reserves, and other enemy combat and combat support forces that are positioned in depth and can affect the operations of its brigades. In the defense, the division interdicts enemy follow-on forces to disrupt and delay them before they can join the battle.

Division commanders should locate enemy -

- . Regimental, divisional, and army command points,
- . Reserves,
- . Cannon and rocket artillery (particularly nuclear and chemical delivery units),
- . Air defense, radio electronic combat, aviation, airborne and airmobile units,
- . Service support forces in, or moving to, the divisional area of influence.

The division reports such information to subordinate units, adjacent divisions, and corps.

The division's own troops and the RSTA efforts of adjacent divisions and the corps provide area of influence information about enemy activities and terrain to the division. The primary intelligence collection assets of the division are its -

- Subordinate brigades,
- Cavalry squadron,
- Military intelligence battalion,
- Divisional artillery (especially its target-acquisition units),
- Nuclear, biological, and chemical (NBC) reconnaissance platoon,
- Air defense battalion,
- Divisional engineer and aviation units.

Tactical air reconnaissance, corps, and echelons above corps (EAC), including national systems, may also provide necessary information about locations, strengths, and movements of enemy forces and projections on when they will enter areas of influence.

Corps

The corps is generally the first level of command where reports from national and tactical intelligence systems come together.

Analyzing this information, an attacking corps commander directs, coordinates, and supports divisions operating against enemy combat and combat support forces. In the defense, the corps interdicts follow-on enemy forces, disrupting and delaying them before they can join the battle.

Within his areas of influence, a corps commander attempts to locate the enemy's -

- . Division and army command posts,
- . Nuclear and chemical delivery systems,
- . Radio electronic combat units,
- . Logistics installations,
- . Communications centers,
- . Frontal aviation operations centers.

A corps gets this information from -

- . Subordinate divisions and brigades,
- . Armored cavalry regiments,
- . Artillery units,
- . Military intelligence groups,
- . Aviation groups,
- . Engineers,
- . Adjacent corps.

Tactical air reconnaissance, the reports of theater air-defense brigades, and the assets of higher levels of command and allied forces also contribute to the corps intelligence effort.

A corps provides the information it collects to division, adjacent corps, and echelons above corps. A corps needs to know what enemy forces are in its area of interest, where they are going, and when they are expected to enter the corps area of influence. Echelons above corps, including national systems, provide this intelligence.

Echelons Above Corps (Theater Army and Army Group)

Division ground units and corps assigned reconnaissance and surveillance units can provide much of the information out of 150 kilometers beyond the FLOT. Military intelligence and cavalry units, which have primary responsibilities for intelligence collec-

tion, carry much of this load. Information and intelligence about the enemy and areas beyond 150 kilometers from the FLOT are provided to EAC and below by Army Intelligence and electronic warfare (IEW) organizations at EAC. The Army IEW structure at EAC fills US combat, support, and national requirements and provides intelligence for use by US joint and allied commands. Army IEW units at EAC interface with US Air Force and US Navy intelligence operations; they can also function with allied military forces and host nations. Army IEW units at EAC work with units from other US services and from national agencies and request collection coverage from them as required.

Army IEW units at EAC are tailored to fit specific needs of the commands at EAC. IEW at EAC supports both corps forces and Army units at EAC. The IEW organizations can also support a US unified or joint command and other US service components. IEW support to combined operations is conducted in accordance with multinational agreements, bilateral agreements, and less formal arrangements between two or more nations.

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Exercise

Answer the following questions:

1. Who or what is responsible for continuous reconnaissance?
2. What is RSTA?
3. What does reconnaissance try to discover?
4. Must RSTA be directed? Why?
5. What information does a battalion require?
6. Who gets information from a battalion?
7. Who despatches information to the battalion?
8. Does a brigade always have organic recon?
9. Where does a brigade receive its information?-
10. Whom does the brigade forward its information to?
11. Whom does a brigade get information from?
12. What does a division do to enemy follow-on forces in the defense? Why?

13. What information about the enemy should division commanders obtain?
14. Whom does the division report its information to?
15. What are the primary intelligence collecting assets of the division?
16. Who can provide the division with additional necessary information?
17. What is EAC?
18. What is the first level of command where national and tactical intelligence systems come together?
19. What does the corps do in the defense?
20. What does a corps commander do in his areas of influence?
21. Where does a corps get its information from?
22. Whom does the corps provide information to?
23. Does a corps need to know about the enemy forces in its area of interest? Explain.
24. What are Army IEW units?
25. How is IEW support conducted to combined operations?

The Intelligence System

The intelligence system coordinates the collecting means of subordinate levels of command, taps external sources and supporting assets of higher levels of command for intelligence, and analyzes the information from all sources. It links all levels of command together through ASIC's which provide rapid and reliable intelligence for tactical commanders.

Intelligence, however, is not necessarily the same as combat information. Raw data that can be used for fire or maneuver as received, without interpretation or integration with other data, is combat information. Combat information is used for the rapid tactical execution of maneuver and fire support in response to the immediate enemy situation. Once validated, integrated, compared, and analyzed, raw data may become intelligence. In some cases, the same data can be both combat information and intelligence.

Systems of intelligence and electronic warfare support measures (ESM) acquire a great deal of combat information. Those systems must provide immediate information to commanders for combat action, and they must also forward the information for processing by intelligence production centers.

Combat systems operators, commanders, and staffs must exchange combat information freely to insure its timely exploitation. Intelligence officers must be trained to make immediate distribution. Higher commands can sometimes supply necessary intelligence. For example, EAC and national-level collection assets support corps requirements, and corps collecting means support division and brigade operations.

The intelligence and electronic warfare organizations at EAC, corps, and division analyze and integrate information from all sources. Brigades, battalions, and companies normally report combat information up, and receive intelligence down, their respective chains of command.

Exercise

Answer the following questions:

1. Do you know what ASIC is?
2. Is intelligence the same as combat information?
3. What is combat information?
4. What is combat information used for?
5. When does combat information become intelligence?
6. Is it possible for the same data to be both combat information and intelligence?
7. What is ESM?
8. Are ESMs able to gain a lot of combat information?
9. What must such systems do with information they receive?
10. Must combat information be exchanged?
11. Who should exchange such information?
12. Why must combat information be exchanged freely?
13. Who analyzes and integrates information for all sources?

Battle Command and Control

Command and control is the exercise of command, the means of planning and directing campaigns and battles. Its essence lies in applying leadership, making decisions, issuing orders, and supervising operations. At the operational level it concerns the organizations, procedures, facilities, equipment, and techniques which facilitate the exercise of command.

Staffing, equipment, and organizational concerns vary among levels of command. In every case, however, the only purpose of command and control is to implement the commander's will in pursuit of the unit's objective. The system must be reliable, secure, fast, and durable. It must collect, analyze, and present information rapidly. It must communicate orders, coordinate support, and provide direction to the force in spite of enemy interference, destruction of command posts, or loss and replacement of commanders. The key measure of command and control effectiveness is whether it functions more efficiently and more quickly than the enemy's. Effective operations depend on the superiority.

Communications on the contemporary battlefield will be uncertain. Opportunities to inflict damage on the enemy and to accomplish the mission will arise and pass quickly. Command and control doctrine assumes that subordinate commanders exercise initiative within the context of the higher commander's concept. Staff assistance and coordination are indispensable to conducting sustained operations, but the mutual understanding which enables commanders to act rapidly and confidently in the crisis of battle is equally important.

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Exercise

Make five questions to the above text.

Combined Arms

Victory on the battlefield will hinge on fully synchronizing combat forces. Weapons and units are more effective when they function separately.

The term combined arms refers to two or more arms in mutual support to produce complementary and reinforcing effects that neither can obtain separately. Technically, combined arms refers to coordinating weapons of differing characteristics. For example, guns and missiles can combine in the air defense of a key installation; or mines, mortars, or grenade launchers can cover the lead space of a machine gun's field of fire. Tactically, combined arms refers to coordinating units of different arms or capabilities. For example, armor and mechanized infantry should operate together routinely. Artillery and mortars must support their maneuver, and engineers must assist it. Air defense must cover vulnerable forces and facilities. Complementary combined arms should pose a dilemma for the enemy. As he evades the effects of one weapon or arm, he places himself in jeopardy of attack by the other.

Combined arms also reinforce each other. The effects of one supplement the effects of another to create a cumulative effect. This massing of effects is also discernable at both technical and tactical levels. Technically, it may involve engineer preparation of fighting positions, the teamwork of observation and attack helicopters, or the massing of all antitank fires against an armored threat. Tactically, it may involve concentrating all types of maneuver forces or fires to create mass.

At the tactical level, forces maneuver to attack the enemy's flanks, rear, or supporting formations. Doing so sustains the initiative, exploits success, and reduces vulnerability. Normally supported by direct and indirect fires, tactical maneuver attempts to obtain a local position of advantage. Often part of the maneuvering force provides fire to support movements of other parts. Once it comes into contact with the enemy, the maneuvering force advances using the fire and movement technique. One element of an engaged force adds its suppressive direct fires to the

supporting indirect fires of mortars, artillery, naval guns, or close air. This firepower makes movement by another element possible. A force may close with the enemy by alternating its elements between fire and movement.

At the operational level, corps and divisions maneuver to envelop, to turn, to penetrate, or to block enemy forces. Although it may not be directly tied to fire, such movement is also maneuver.

Effective use of maneuver and firepower depends on good intelligence throughout a unit's area of interest and influence. It also requires sound staff and operational procedures that permit rapid and coordinated reactions to opportunity. Through battle drill, battalions and smaller units attain the speed and flexibility so necessary to effective operations. In larger units, contingency plans are the basis of this flexibility.

The basic combined arms maneuver element is the battalion task force. Battalion task forces are organized from infantry battalions, tank battalions, and cavalry squadrons. Field and air defense artillery, engineers, and Air Force and Army air elements provide support. Battalion task forces can be infantry-heavy, tank-heavy, or balanced. They can also be pure, depending on the brigade commander's plan. Armor and infantry, the nucleus of the combined arms team, provide flexibility during operations over varied terrain. Infantry assists the advance of tanks in difficult terrain, while armor provides protection in open terrain. They can develop both complementary and reinforcing effects. A similar synergy exists in defense or delay.

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Exercise

Answer the following questions:

1. When are weapons and units most effective?
2. What does "combined arms" mean?
3. What does "combined arms" mean technically? Give some examples.
4. What does "combined arms" mean tactically? Give examples.

5. Are complementary combined arms a threat to the enemy?
Explain.
6. Do combined arms reinforce each other?
7. What kind of effect do combined arms create?
8. What do forces do to the enemy at tactical level?
9. What do the forces achieve for themselves by doing so?
10. What do corps and divisions do to the enemy at operational level?
11. What does effective use of maneuver and firepower depend on?
12. What is the basic combined arms maneuver element?
13. What are battalion task forces?
14. What are these forces formed from?
15. What units provide support for the battalion task forces?

Units

Infantry

Light infantry can operate effectively in most terrain and weather.

In mounted operations, infantry units can -

- Occupy strongpoints as pivots for maneuver
- Make initial penetrations for exploitation by armor and mechanized infantry
- Attack over approaches that are not feasible for heavy forces
- Capture or defend built-up areas
- Control restrictive routes for use by other forces
- Follow and support exploiting heavy forces.

In dismounted operations, airborne, airmobile, or other-light infantry leads the combined arms attack, and all other arms support the infantry attack.

Mechanized Infantry

Mechanized infantry complements armor in its ability to hold ground. It provides overwatching antitank fires and suppresses enemy infantry and antitank guided missile elements. Infantrymen can dismount -

- To patrol difficult terrain
- To clear or to emplace obstacles and minefields
- To infiltrate and to attack enemy positions
- To protect tanks in urban and wooded areas and in limited-visibility conditions

Mechanized infantrymen have the same mobility as tankers but less firepower and protection. Armor and mechanized infantry must perform as a team to defeat enemy armored forces on the modern battlefield.

When equipped with infantry fighting vehicles, mechanized infantry is significantly more capable. So equipped, it can accompany tanks in mounted assault. In the attack, such infantrymen can act as fixing forces. In the defense, they act as pivot points for maneuvering tank-heavy forces.

Armor

In mounted warfare, the tank is the primary offensive weapon. Its firepower, protection from enemy fire, and speed create the shock effect necessary to disrupt the enemy's operations and to defeat him. Tanks can destroy enemy armored vehicles and suppress enemy infantry and antitank guided missile elements. Tanks can break through suppressed defenses, exploit the success of an attack by striking into the enemy's rear areas, and boldly pursue enemy forces. Armored units can also blunt enemy attacks and rapidly counterattack in force.

Armored units also have limitations. They are vulnerable in close terrain, such as forests and cities, and under limited-visibility conditions. They cannot cross most rivers and swamps without bridging, and they cannot climb steep grades.

Armored Cavalry

The basic tasks of armored cavalry units are reconnaissance and security. The ability of armored cavalry units to find the enemy, to develop the situation, and to provide the commander with reaction time and security also make them ideal for economy-of-force missions. Armored cavalry forces can delay an attacking enemy as well as assist in a withdrawal. They are also capable of attacking and defending, although these are not their normal missions.

Field Artillery

The principal fire support element in fire and maneuver is the field artillery. It not only provides conventional, nuclear, or chemical fires with cannon, rocket, and missile systems; but it also integrates all means of fire support available to the commander. Field artillery is capable of suppressing enemy direct fire forces, attacking enemy artillery and mortars, and delivering scatterable mines to isolate and to interdict enemy forces or to protect friendly operations. It contributes to the deep battle of delaying or disrupting enemy forces in depth and by suppressing enemy air defense systems to facilitate Army and Air

Force air operations. The artillery can also screen operations with smoke or illuminate the battlefield. Normally as mobile as the maneuver forces it supports, field artillery can provide continuous fire in support of the commander's scheme of maneuver.

Air Defense Artillery

Air defense units provide the commander with security from enemy air attack by destroying or driving off enemy close air support aircraft and helicopters. Their fires can degrade the effectiveness of enemy strike and reconnaissance aircraft by forcing them to evade friendly air defenses. Short-range air defense (SHORAD) systems normally provide forward air defense protection for maneuver units whether they are attacking, delaying, withdrawing, or repositioning in the defense. Air defense secures critical facilities, such as command posts, logistic installations, and special ammunition supply points. It also protects convoys and lines of communication. In conjunction with US Air Force elements, Army air defense plays a significant role in protecting friendly air maneuver and in attacking enemy air maneuver units.

Combat Engineers

Combat engineers contribute to the combined arms team by performing mobility, countermobility, and survivability missions. Mobility missions include breaching enemy minefields and obstacles, improving existing routes or building new ones, and providing bridge and raft support for crossing major water obstacles. Countermobility efforts limit the maneuver of enemy forces and enhance the effectiveness of our fires. Engineers improve the survivability of the friendly force by hardening command and control facilities and key logistic installations and by fortifying battle positions in the defense. In addition, combat engineers are organized, equipped, and trained to fight as infantry in tactical emergencies.

Army Aviation

Three types of Army aviation units participate in combined arms operations: attack, helicopter, air cavalry, and combat support aviation.

Air Support

The Air Force is an equal partner in the air-land battle. It supports the battle with counterair and air interdiction operations, offensive air support (OAS), and tactical airlift operations.

Electronic Warfare Units

The military intelligence battalion (combat electronic warfare intelligence /CEWI/) detects important enemy communications nets and intercepts their traffic to provide the commander with intelligence. It also directs electronic countermeasures, primarily jamming, against enemy fire direction and command and control communications, air defense radar, and electronic guidance systems. This capability to locate the enemy, to intercept his messages, and to hamper his operations at critical periods contributes directly and indirectly to the effectiveness of combined arms operations.

/'OPERATIONS' FIELD MANUAL 100-5/

Exercise

Answer the following questions:

1. Can light infantry operate effectively in all kinds of terrain and weather?
2. What can infantry units do in mounted operations?
3. When does light infantry lead a combined arms attack?
4. Whom does mechanized infantry complement and why?
5. What is the role of mechanized infantry?
6. When do mechanized infantrymen dismount?
7. Do mechanized infantrymen have the same mobility as tankers?
8. What differences are there between mechanized infantrymen and tankers?
9. What can mechanized infantrymen do when they are equipped with infantry fighting vehicles?
10. How do mechanized infantrymen act in the attack and in the defense?

11. What is the primary offensive weapon in mounted warfare?
12. What can tanks do to the enemy?
13. What are the limitations of armor units?
14. What are the basic tasks of armored cavalry units?
15. What else can armored cavalry units do?
16. What is the basic fire support element in fire and maneuver?
17. What does field artillery provide?
18. What can field artillery do to the enemy?
19. What is the field artillery's contribution in battle?
20. How can artillery screen operations?
21. What do air defense units provide the commander with?
22. What can the fires of air defense units do?
23. What is SHORAD?
24. What does SHORAD provide?
25. What does air defense secure?
26. What does air defense protect?
27. What is the contribution of combat engineers in battle?
28. What do combat engineers do in mobility missions?
29. How do engineers improve the survivability of friendly forces?
30. Are combat engineers capable of fighting as infantry? When?
31. How many types of Army aviation units participate in combined arms operations?
32. What units are they?
33. How does the Air Force support the battle?
34. What is OAS?
35. What is CEWI? What is its role?

Purposes of Defensive Operations

Defensive operations achieve one or more of the following:

- Cause an enemy attack to fail
- Gain time
- Concentrate forces elsewhere
- Control essential terrain
- Wear down enemy forces as a prelude to offensive operations
- Retain tactical, strategic, or political objectives

The immediate purpose of any defense is to cause an enemy attack to fail. The other listed reasons contribute to purposes beyond the immediate defense.

It may be necessary to gain time for reinforcements to arrive or to economize forces in one sector while concentrating forces for attack in another. In either case, a defense or a delay may achieve these purposes.

In some cases a force may be defending because it cannot attack. The defender then uses his advantages of position and superior knowledge of the terrain to cause the enemy to extend himself. Once the enemy has been weakened and adopts a defensive posture, the defender maneuvers to destroy him with fires or counterattacks.

In other cases, portions of a force may be required to retain key terrain or essential tactical, strategic, or political objectives. In some instances, airmobile or airborne forces must first seize and hold such objectives until a larger force can link with the defender. An underlying purpose of all defensive operations is to create the opportunity to change to the offensive. All activities of the defense must contribute to that aim.

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Exercise

Make five questions to the above text.

Types of Defensive Operations

Types of defensive operations include the defense, the delay, the defense of an encircled force, and rear area protection operations. Other combat activities normally associated with defensive operations include counterattacks, passage of lines, withdrawals, and reliefs to continue the defense. In defensive operations, portions of large corps or division-size forces may be conducting any of these operations or activities:

- DEFENSE. The defense is a coordinated effort by a force to defeat an attacker and to prevent him from achieving his objectives.
- DELAY. A delaying operation is usually conducted when the commander needs time to concentrate or to withdraw forces, to establish defenses in greater depth, to economize in an area, or to complete offensive actions elsewhere. In the delay, the destruction of the enemy force is secondary to slowing his advance. Counterattacks and defenses by elements of a delaying force may be necessary in such operations.
- DEFENSE OF ENCIRCLED FORCES. Those defending units intentionally and unintentionally bypassed on a nonlinear battlefield must continue to contribute to the overall defense.
- REAR AREA PROTECTION OPERATIONS. The rear areas must be defended during any operation. The threats may vary from individual acts of sabotage to major regimental attacks and even to division-size airborne or airmobile attacks.
- COUNTERATTACKS AND SPOILING ATTACKS. Counterattacks and spoiling attacks may enhance both the defense and the delay. They may occur forward of or within the main battle area. Counterattacks by fire involve maneuvering to engage an enemy's flank or rear. A well-executed counterattack to the flanks or rear of an enemy just as he meets a resolute

defense to his front can entirely upset his plan. Companies and larger forces may launch counterattacks to retake critical terrain or to destroy an enemy. They may also assist a friendly unit to disengage. Launched as the enemy gathers his offensive force, a spoiling attack can prevent him from attacking or give the defender additional time to prepare.

- WITHDRAWALS. In a withdrawal, all or part of a force disengages from the enemy for another mission in another area. A partial withdrawal may be necessary in either the defense or a delay.
- RELIEFS TO CONTINUE THE DEFENSE. There are two kinds of relief. The relief-in-place is common when units have similar organizations or when occupied terrain must be retained. The area relief is practical when units are dissimilar or when improved defensive terrain is located away from the line of contact.

All coordination, reconnaissance, planning, and control for relief should be simple and efficient. Control, speed, and secrecy can insure simplicity and efficiency. Control, the most important principle, should receive the most command involvement. All relief decisions must consider the time available and allow for advance reconnaissance. The larger the units involved in the relief, the more time will be required for planning and coordination. Both hasty and deliberate reliefs must be concealed from the enemy. Reliefs should be conducted during periods of reduced visibility and when the enemy is least likely to attack. Any change in the defensive plan should normally wait until the relief is complete.

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Exercise

Answer the following questions:

1. What types of defensive operations are there?
2. What combat activities associated with defensive operations do you know?

3. What is defense?
4. When is a delaying operation usually conducted?
5. Is the destruction of the enemy force the main objective in the delay?
6. Do encircled forces continue to contribute in the defense, or not?
7. Must rear areas always be defended?
8. What are the threats to rear areas?
9. When are counterattacks and spoiling attacks carried out?
10. When can a spoiling attack prevent the enemy from attacking?
11. What do forces do in a withdrawal?
12. When may partial withdrawal be necessary?
13. What kinds of relief are there?
14. When is relief-in-place common?
15. When is area relief practical?
16. What can insure simplicity and efficiency to coordination, reconnaissance and planning?
17. Is control an important principle?
18. Ought reliefs be concealed from the enemy? Why?
19. When should reliefs be conducted?
20. Should changes be made in defensive plans during the relief?

Defense Considerations

To plan effective defenses, commanders must consider the five factors discussed below.

Mission

The first consideration in planning the defense is the mission. It defines the area to be defended, and it must be analyzed in terms of the higher commander's overall scheme. Defending broad frontages forces the commander to accept gaps. Defending shallow sectors in which there is little ground to yield reduces flexibility and requires the commander to fight well forward. Narrow frontages and deep sectors increase the elasticity of the defense and simplify concentration of effort, which create a stronger defense. In planning his defensive posture, the commander also considers subsequent missions.

Enemy

The second consideration in planning the defense is the enemy - his procedures, equipment, capabilities, and probable courses of action. Defending commanders must look at themselves and their sectors for weaknesses that the enemy will seek to exploit and then act to counter them. They may also be able to identify probable enemy objectives and approaches to them. In a defense against an echeloned enemy, they must know how soon follow-on forces can attack. If the defender can delay such forces, they can defeat a strong echeloned enemy piecemeal - one echelon at a time. If the defenders can force the enemy to commit follow-on echelons sooner than planned, they upset his attack timetable, creating exploitable gaps between the committed and the subsequent echelons.

Terrain

The third consideration in organizing the defense is terrain. The defending force must exploit any feature of the terrain that impairs enemy momentum or makes it difficult for him to mass or to maneuver. Defenders must engage the attacker at those points

along his avenue of approach where the terrain puts him at greatest disadvantage. Controlling key terrain is vital to a successful defense. Some terrain may be so significant to the defense that its loss would prove decisive. Decisive terrain is usually more prevalent at brigade and lower levels. Terrain itself is seldom decisive in division or corps defense. However, when it is, commanders must make it a focal point of the defensive plan.

Troops

The fourth consideration is the mobility and protection of the defending force relative to the opposing forces. Armor and mechanized forces can move on the battlefield with minimum losses even under artillery fire, while infantry cannot. Once engaged, infantry elements must remain where they are initially positioned and dug in. They disengage when the attack is defeated or when counterattacking forces relieve the pressure on them. However, infantry defenses against enemy infantry attacks in close terrain can be fluid battles of ambush and maneuver.

Time

The fifth consideration in organizing the defense is time. The defense needs time for reconnaissance; for preparing initial, supplementary, and subsequent positions; for fire planning; and for coordinating maneuver, fires, terrain reinforcement, and logistic support. To give MBA forces additional preparation time, the commander may order a high-risk delay by a covering force. Lack of time may also cause a commander to maintain a larger-than-normal reserve force.

Exercise

Answer the following questions:

1. What are the five factors commanders must consider on planning a defense?
2. What does the mission define?
3. What must be considered regarding the enemy, while planning defense?
4. Must defending commanders also assess their own positions and weaknesses while planning defense? Why?
5. How should terrain be considered during the planning of defense?
6. Who should control key terrain?
7. How should troops be assessed regarding defense?
8. Is time an essential factor in planning defense? Explain by giving examples.

Deep Battle Operations

Deep battle operations in the defense turn the table on the attacker by limiting his options, destroying his plan, and robbing him of the initiative. They can delay the arrival of follow-on forces, or cause them to be committed where and when it is most advantageous to the defense. They can also disrupt enemy operations by attacking command posts at critical stages in the battle or by striking and eliminating key elements of an enemy's capability.

Areas of interest and influence extend far enough forward of the FLOT to give the commander time to react to approaching enemy forces, to assess his options, and to execute operations accordingly. The deep battle begins before the enemy closes with the maneuver forces. It goes on during combat in the CFA and the MBA, and it usually continues after the direct contact between forces has ended.

In fighting the deep battle, the commander will maintain a current intelligence picture of enemy forces throughout his area of interest. Yet, he must focus his collection effort on areas and units of particular concern. To conduct a deep attack successfully, the fire support coordinator (FSCOORD), G3 and G2 must cooperate to insure that deep battle actions support the overall concept of the defense.

As enemy formations approach the FLOT, the commander will monitor them, seek high-value targets, and disrupt and delay them. Air-delivered weapons, field artillery fires, tactical nuclear weapons, air maneuver units, and unconventional warfare forces are the chief means of the deep battle. Because they are usually limited in number and effect, commanders must use them wisely and efficiently. Generally, more sensors and weapons become available as the enemy nears the FLOT. Effective employment of maneuver units in deep attack requires careful planning, IPB, and responsive surveillance once operations are underway.

Main Effort

Whatever the concept of operation, forces fight the decisive defensive battle either at the FEBA or within the MBA. The commander positions forces in the MBA to control or to repel enemy penetrations.

The commander assigns MBA sectors on the basis of the defending unit's capability, the terrain within the sector, and the larger unit's mission. The assigned sector usually coincides with a major avenue of approach. The force responsible for the most dangerous sector in MBA normally receives priority in the initial allocation of artillery, engineer, and close air support. It is the main effort. The commander strengthens the effort at the most dangerous avenue of approach by narrowing the sector of the unit astride it. He may use armored cavalry units or other maneuver forces to economize in rough sectors and to concentrate the major units on the most dangerous approaches, but he must do so without splitting secondary avenues of approach. The defensive plan must be flexible enough to allow changes in the main effort during the course of battle.

A significant obstacle along the FEBA, such as a river, favors a defense trying to retain terrain. It adds to the relative combat power of the defender. Reserves at all levels destroy forces which have penetrated such obstacles or established bridgeheads. Such attacking forces must be destroyed while they are small. If they are not, they can assist following elements to cross, build rapidly in strength, and rupture the coherence of the defense.

Corps and division commanders -

- . Follow developments in the MBA
- . Support important fights with additional nuclear or conventional firepower
- . Adjust sectors
- . Control movement of committed forces as necessary
- . Reinforce MBA units with fresh maneuver forces
- . Intervene at decisive junctures in the battle with reserves

As the close battle progresses, corps and division commanders continue to fight the deep battle. They monitor events beyond the FLOT and fight follow-on enemy forces to prevent them from outflanking defensive positions or overwhelming committed forces.

The commanders may also structure a deep defense with elements deployed within the MBA. He may enhance it by holding out a large mobile reserve and by committing fewer elements to the initial MBA defense. Committed elements in such a defense control the penetration until counterattack can eliminate it.

Large mobile forces may penetrate sections of the MBA. Penetration and separation of adjacent units is likely with nuclear and chemical operations. Nonetheless, MBA forces continue to fight while protecting their own flanks, striking at the enemy's, and driving across penetrations when possible. Division or corps reserves can defeat some penetrations, but others will pass into the corps rear area.

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Exercise

Answer the following questions:

1. Where is the decisive defensive battle fought?
2. What is MBA?
3. Why do commanders position forces in the MBA?
4. How are MBA sectors assigned?
5. What does the assigned sector usually coincide with?
6. What force receives priority in the MBA?
7. How does a commander strengthen the effort?
8. What must the defensive plan be like?
9. What is the role of the reserves?
10. How must attacking forces be destroyed? Why?
11. What is FLOT?
12. Can the MBA be penetrated? By whom? Explain

Retrograde Operations

A retrograde operation is an organized movement to the rear or away from the enemy. It may be forced or voluntary, but in either case the higher commander must approve it. Forces conduct retrograde operations to harass, to exhaust, to resist, to delay, and to damage the enemy. Such operations gain time, avoid combat under unfavorable conditions, or draw the enemy into an unfavorable position. They are also useful in maneuver to reposition forces, to shorten lines of communications, or to permit the use of a force elsewhere.

The three types of retrograde actions are delays, withdrawals, and retirements. In delays units give up space to gain time. They do not lose freedom to maneuver, and they inflict the greatest possible punishment on the enemy. In withdrawals, all or part of a deployed force disengages from the enemy voluntarily to free itself for a new mission. Withdrawals may occur with or without enemy pressure and with or without other units assistance. In retirements, a force not in contact with the enemy conducts an administrative movement to the rear.

All retrograde operations are difficult, and delays and withdrawals are inherently risky. To succeed, they must be well-organized and well-executed.

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Exercise

Answer the following questions:

1. What is a retrograde operation?
2. Is it always a forced action?
3. Who must approve such an operation?
4. Why do forces conduct retrograde operations?
5. What do forces achieve by such an operation?
6. What are the three types of retrograde actions?
7. What do delays give units?
8. Why does a force withdraw?
9. What does a force do in retirements?
10. Are retrograde operations easy? Expl. . .

Glossary

ACCB - air cavalry combat brigade
ADA - air defense artillery
ADC - area damage control
ADP - automatic data processing
ALOC - air lines of communication
alt - alternate
amb - ambulance
APOD - aerial port of debarkation
APOE - aerial port of embarkation
AR - Army regulation
ASIC - all-source intelligence center
ASP - ammunition supply point
ATP - ammunition transfer point
BAI - battlefield air interdiction
bde - brigade
BSA - brigade support area
CAS - close air support
catk - counterattack
cdr - commander
CEOI - Communications Electronic Operation
Instructions
CEWI - combat electronic warfare intelligence
CFA - covering force area
CFL - coordinated fire line
ci - counterintelligence
CINC - Commander in Chief
clr sta - clearing station
CMO - civil-military operations
COMMZ - communications zone
CONPLAN - operational plans in concept format
COSCOM - corps support command
CP - command post
CRC - control and reporting center
CSH - combat support hospital
CSS - combat service support

DAO - division ammunition officer
DISCOM - division support command
div - division
DMZ - demilitarized zone
DS -direct support
DSA - division support area
DSV - direct support unit
EAC - echelons above corps
E&E - evasion and escape
EEFI - essential elements of friendly information
EEI - essential elements of information
EMCON - emission control orders
EMP - electromagnetic pulse
ESM - electronic warfare support measures
EW - electronic warfare
FEBA - forward edge of the battle area
FIST - fire support team
fld - field
FLOT - forward line of own troops
FM - field manual
FRAGO - fragmentary order
FSCL - fire support coordination line
FSCoord - fire support coordinator
FSE - fire support element
GS - general support
GSR - ground surveillance radar
GSU - general support unit
HIMAD - high-to-medium-altitude air defense
HTF - how to fight
HUMINT - human intelligence
ICD - imitative communications deception
IEW - intelligence and electronic warfare
IPB - intelligence preparation of the battlefield

JAAT - joint air attack team
JCS - Joint Chiefs of Staff
J-SEAD - joint suppression of enemy air defenses
JTF - joint task force
JUWC - Joint Unconventional Warfare Command

LD - line of departure
LOC - lines of communication

MACOM - major Army command
MAU - Marine Amphibious Unit
MBA - main battle area
MED - manipulative electronic deception
METT - mission, enemy, terrain and troops
METT-T - mission, enemy, terrain, troops and time available
MI - military intelligence
MOFP - mission oriented protection posture
MOUT - military operations on urbanized terrain
MP - military police
MRO - materiel release order
MSR - main supply route

NAI - named areas of interest
NATO - North Atlantic Treaty Organization
NBC - nuclear, biological, chemical
NCA - national command authority
NCMA - national command and military authorities

OAS - offensive air support
obj - objective
OIR - other intelligence requirements
OPCON - operational control
OPLAN - operational plan
OPORD - operational order
OPSEC - operational security

P&A - personnel and administration
pkg - package
PL - phase line
PNL - prescribed nuclear load

RACO - rear area combat operations
rad - radiation absorbed dose
RAOC - rear area operations center
RAP - rear area protection
REC - radio electronic combat
repl - replace
res - reserve(s)
RFL - restrictive fire line
RSTA - reconnaissance, surveillance, and target acquisition

SEAD - suppression of enemy air defenses
SHORAD - short-range air defense
SIGINT - signals intelligence
SOP - standing operating procedure
spt - support
sta - station

TI - target of interest

UN - United Nations
UW - unconventional warfare

WSRO - weapon system replacement operations

ZI - zone of interior

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