throughout the development process. The panel gives developers and contractors valuable field information so that the needs of the GEN II Soldier load-bearing development are not lost to the system's higher-profile electronics. This effort includes a training program that exposes the contractors to the needs of the dismounted infantryman so they can better understand and respond to comments from users in the field.

The Force XXI battlefield will require full integration of the dismounted land warrior in the digitized net. To accomplish this, the Army's load-bearing capabilities must also advance. The SIPE ATD was an excellent beginning in the development of a head-to-toe soldier system. Land Warrior capitalizes on proven technologies while the GEN II Soldier ATD continues to evaluate new and maturing technologies.

The success of the 21st Century Land Warrior and the GEN II Soldier System ATD programs depends on an effective, systemic approach to load-bearing design. The Soldier Systems Command and its Natick Research and Development Center are working to ensure that the digitized, dismounted land warrior of the 21st Century will have a totally integrated and comfortable load-bearing system.

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The Company Air Assault Raid

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An air assault force achieves versatility and strength in offensive operations by combining the capabilities of rotary aircraft with those of the infantry and other combat arms to form a tactically tailored air assault task force. Offensive air assault operations are not merely the movement of soldiers to an attack position; they are deliberate, precisely planned, and vigorously executed combined arms combat operations, designed to strike over extended distances and terrain barriers to attack the enemy at points when and where he is most vulnerable.

Most air assault operations are characterized by deliberate and detailed planning, coordination, and preparation, and the success of these operations depends upon detailed intelligence. For these reasons, the most basic and suitable offensive operation for an air assault unit is a deliberate attack.

The advantage of an air assault raid is that it can project a combined arms capability to any depth on the tactical battlefield, where it can quickly mass firepower in key locations and at critical times to destroy enemy forces and equipment. Achieving depth quickly on the battlefield gives the tactical commander a distinct advantage. When an air assault company task force goes deep as a combined arms team, it brings massed combat forces and combined arms firepower to bear upon the enemy, destroys the enemy and his equipment, and may be quickly extracted for follow-on operations. The key difference between the air assault deep raid and the air assault deep attack is that the raid does not intend to hold terrain. An air assault task force performing a raid will achieve maximum destruction on the target and withdraw from the objective area once the mission is complete.

The planning, preparation, and coordination required to accomplish this mission are more complex than for any other attack a company commander can expect to make. For this reason, this article will discuss this operation in detail in each of the battlefield operating systems and through the five-phase reverse planning sequence associated with planning air assault operations.

An air assault company raid may have any or all of the following objectives:

- Destroy enemy forces.
- Disrupt enemy command and control.
- Disrupt lines of communication by destroying bridges and dams or blocking tunnels.
- Deprive the enemy of resources.

Before proceeding with the details of the reverse planning sequence, it is important to identify the command and control relationships for the operation. Normally, air assault combined arms operations have an air assault task force commander (AATFC), an air mission

commander (AMC), an air battle captain (ABC), and a ground tactical commander (GTC).

For an air assault company raid, the GTC is the infantry company commander. He must focus his analysis and efforts on the landing and ground tactical plans and must be generally free of the burden of planning and executing the staging and air movement plans (although he contributes to both). When the company commander is the GTC, the battalion commander, in most cases, assumes the responsibilities of the AATFC. The battalion is the lowest staff level suited to planning, coordinating, and executing air assault operations, particularly the staging, loading, and air movement plans. Even if a raid has a platoon as the ground tactical force, the battalion commander still assumes the responsibilities of the AATFC, because a company staff does not have the resources to plan, coordinate, and command and control an air assault operation.

METT-T will drive the decision on who assumes AATFC responsibilities. Together with armor and infantry, combat aviation forms the nucleus of the Army's maneuver forces and is therefore also capable of planning, coordinating, and executing a combat air assault from the perspective of the air assault task force commander. For example, the division aviation brigade may be assigned a sector of operations or a series of engagement areas to cover in the deep operations area. At times, the division commander may task organize the aviation brigade with ground maneuver forces to control a zone of action at or near the front line of troops, or on a critically exposed flank. When in the defense, the aviation brigade commander may control the covering force, using one or more ground maneuver battalions to physically control terrain. Thus, in these situations and with this task organization, when a combat air assault is required, the aviation brigade will most likely fill the role of the AATFC.

The AMC is the aviation commander of the unit inserting the ground tactical force. For an infantry company air assault raid, an assault company has the lift capability for the dismounted infantry, and the assault helicopter company commander normally assumes AMC responsibilities. If attack aviation is used for air assault security of this size task force, an attack helicopter platoon is the size most likely to be used. The ABC is therefore the platoon leader of the team responsible for the air assault security tasks.

METT-T certainly has a role in deciding who will man these key command and control positions and what aviation and attack resources are used to insert the ground force. Because of the extraordinarily small margin of error during air assault raids, the role of AMC or ABC may be elevated to the assault or attack aviation battalion commander himself. Nonetheless, the general rule is that the AMC and ABC are the commanders of the aviation elements employed in the operation.

The key difference between the air assault deep raid and the air assault deep attack is that the raid does not intend to hold terrain.

The most critical plan for coordination and execution is the ground tactical plan, and this is really the company commander's (GTC's) actions on the objective. Since the intent of the raid is to mass firepower with surprise on any target on the tactical battlefield, it is to the GTC's advantage to land as close to the objective as possible. Although this advantage is a significant combat multiplier, the results can be disastrous if the insertion of the infantry is not properly executed.

The choice of the landing location demands careful consideration. Furthermore, a definition of "landing on or near the objective" is in order since it is not found in most manuals.

Landing on or near the objective occurs if the ground maneuver force is in a direct-fire small-arms engagement with the enemy as soon as it gets off the assault aircraft. Under these conditions, therefore, landing close to the objective requires continued suppression of all enemy direct-fire weapons and observation of the landing force. (How this continued suppression is achieved is discussed later in the fires paragraph.) The disadvantage of landing close, however, is that one unsuppressed enemy automatic weapon may destroy an assault aircraft along with all 12 to 20 soldiers on board. Therefore, the AATFC must ensure that he has properly prepared the conditions for the GTC's insertion.

If, on the other hand, these conditions cannot be established, the AATFC should consider having the GTC land at least one terrain feature away from the objective, out of range of enemy direct-fire weapons, observation, and sound. The disadvantage associated with this is conducting an attack without the distinct element of surprise that is inherent in air assault operations. Furthermore, if direct-fire systems cannot be sufficiently suppressed, the AATFC may consider landing far enough away where the insertion is not detected and surprise is achieved only through an infiltration assault.

In an ideal situation, the air assault company raid has both indirect and attack aviation fires. In simple terms, a scheme of maneuver integrated with fires would begin with a time-on-target (TOT) of the objective and landing zone (LZ). Once the fires lift, attack aviation covers the infantry insertion. Door gunners help sustain the suppression as needed. Infantry land, usually establish a support-by-fire element, and finally assault the objective. The enemy is destroyed and the infantry withdraw, occupy the extraction pickup zone (PZ), and are air-lifted back to their assembly area.

In not-so-simple terms, the integration of fires in this scheme of maneuver is absolutely critical to its success. On the basis of the enemy situation, fires should be planned on known and suspected targets, first on the LZ and then on the objective. If enough indirect fire assets are available, both target

areas should be hit at the same time. Indirect fire effects increase significantly during the first massed TOT impact, particularly if the defeat of enemy force is the desired effect. Otherwise, fires should be placed in priority to support the landing and then shift to the objective.

If the mission is outside indirect fire range of their current location, the AATFC may choose to air assault the artillery to a firing position closer to the objective. Good artillery units routinely practice air assault artillery raids, and their ability to execute this task is critical for deep raid attacks. Part of the fire plan must include no-fire areas, as scout, long-range surveillance, or special operations force elements must occupy them before the preparation is initiated.

The key to an effective fire plan is the suppression of all enemy direct fires and observation while landing. Artillery should shift off the LZ no earlier than 30 seconds before the first aircraft is down, and they do this by notifying the first serial of the first lift of their last round by marking it with a white phosphorous or ground burst illumination round. Indirect fires then shift to the objective to cover the infantry movement off the LZ into assault and support positions.

Before the artillery shifts, attack aviation assumes responsibility for sustaining the suppression during the critically vulnerable landing. On the basis of intelligence reports, they will cover the LZ and, if necessary, service known and identified targets on the objective. Door gunners in the first serial provide cover during the final seconds before landing, but they are marginally effective at best, judging from lessons learned in Vietnam. In subsequent serials, door gunners are seldom used in the LZ because of the threat of fratricide.

Typical employment guidance for attack aviation elements is to provide air assault security. Normally, this means they will conduct route reconnaissance, provide route security, assist in suppression of enemy air defense (SEAD) missions by calling in artillery or servicing the target themselves, and overwatch the insertion. Other considerations are to have them conduct a deliberate attack on known targets on the LZ or the objective in conjunction with the preparatory TOT. After the insertion, they can seal the objective, continue to provide close-in attack fires for the GTC, screen a suspected enemy avenue of approach, or begin search and attack operations.

The AATFC's fire support officer is responsible for integrating attack aviation fires into the overall fires plan. Additionally, he must carefully work with the AMC, the ABC, and the AATFC's S-2 to balance whether attack aviation should mass during the initial surge or risk fewer assets during the insertion to sustain security in case the GTC's projected time on the ground is longer than expected.

Always a point of confusion is the command and control relationship between the ABC, the AMC, and the AATFC for both movement and target servicing. Field Manual 90-4, *Air Assault Operations,* assigns the AMC the responsibility for getting all aviation assets to the objective in accordance with the execution checklist, and for providing command and control for their fight.

In today's Army, an air assault company raid is one of the most potent and deadly operations available to the tactical commander.

From our experience, it works best to have the AMC responsible for the air movement of the attack aviation, which is inherent in his responsibility to command and control all aviation assets. When employed to service targets, however, attack aviation becomes a maneuver element and should be commanded and controlled by the AATFC. Since the AATFC is controlling all fires and maneuver units, he must also integrate attack aviation.

When the GTC or one of his platoon leaders needs the assistance of attack aviation, the AATFC assigns the asset to the company commander or the on-scene platoon leader. Communication is on the GTC's command net, and the link is directly between the ABC and the on-scene leader. Once the target is serviced, the ABC assumes his position under the AATFC.

The GTC's initial actions on landing, a plan designed to support the ground tactical plan, is critical to sustaining suppression on enemy weapon systems. Aircraft must land as close to cover as possible. Infantrymen exit through the side of the aircraft nearest the woodline and immediately run to cover. Since the landing heading is known, the soldiers will know which door to use. The old exiting technique of running to the outside of the rotor blades, getting down until the aircraft departs, and then moving to cover is fraught with error. Arriving aircraft on an LZ at night signal your arrival and presence on the most critical danger area. Sustaining your presence in the openness of this danger area any longer than necessary keeps your soldiers exposed for too long. Soldiers must exit, sprint to cover, regroup, get oriented, and then move out to their support and assault positions. That's why aircraft need to land near the woodline, to further reduce the exposure of infantrymen while in the open danger area.

An exception to the single-door exit may be in a hot LZ. While exposed to direct or indirect fire, aircraft may "bounce" on the LZ or hover just long enough to allow the infantry to conduct a mass exit from all sides of the aircraft. But the principle is still the same—to have the infantry immediately sprint to cover once on the ground.

Since the landing plan is built upon the ground tactical plan, the GTC should carefully plan the arrival of his serials in the order he wants to insert them into the fight. For example, if it is important to achieve immediate direct fire suppression on enemy weapons, a support element should be included in the first serial. Members of this element immediately exit the aircraft, run to cover, get oriented, then move to the

position where they can provide suppressive fire.

Some landing plans allow the support element to land directly on the support position. When this occurs, the positioning of key weapons in the aircraft greatly contributes to quick suppression. For example, two M60 machinegunners may be assigned to the door seats so that they exit immediately upon landing and, on command of the support element leader, put their guns into action and begin their support fires. Well-drilled units can have effective rounds down range within 20 seconds of the first wheels-down aircraft. The support element leader works the seat assignments for the rest of the support element in the same way, thus facilitating the quick exit, then movement to and establishment of the support-by-fire position.

Although the AATFC and his staff base the air movement plan on the GTC's landing and ground tactical plan, the GTC has a few important points to consider. Again, the ability to mass forces at a decisive point on the ground and to put the correct combat ratio in the sequence and location needed is unique to air assault operations.

This concept is a significant force multiplier for a deep air assault raid, and the AATFC must make sure enough aircraft are available to insure the GTC's success. Piecemealing forces into the fight compromises the principles of mass and surprise and forces the GTC to focus his effort in two directions, one on the fight toward the objective and the other behind him, trying to link up his arriving units in the support or assault positions.

A second important consideration in the air movement plan is to be able to communicate during flight. The GTC and his key leaders must know how to operate the aircraft ICS system. During air mission coordination, key leaders' locations and communication nets are identified; then the AMC ensures that they are correctly installed before arriving on the PZ. The GTC must not only be able to communicate with the aircraft crew, but he should be equally adept at talking to the AATFC and his sub-unit leaders on other aircraft during flight. If there is a change in H-Hour, or an intelligence update the scouts have passed on to the ABC (who may have arrived in an uncompromised observation position of the objective area 10 to 20 minutes early), the AATFC must be able to pass this on to the GTC, and the GTC must be able to pass it to his key leaders all during flight. Acquiring and sharing this information before touchdown is a significant combat multiplier, and good units can disseminate the information and also adjust their plan as necessary, given rehearsed branches and sequels, while in flight.

The AATFC is responsible for establishing the PZ, along with receiving and staging the ground tactical unit. He and his staff command and control the PZ. Although they may task the GTC to provide guides and perhaps security, the GTC presents himself ready to execute his mission at the PZ to the AATFC. He then stages in accordance with the staging plan, loads, and executes.

Depending upon METT-T, there are advantages to having aircraft arrive on the PZ early and to have a cold start. One reason for doing this is to give the soldiers an opportunity to rehearse their actions on loading and landing, and to allow the leaders to confirm the communication arrangements. It is also good to ensure that all procedures and elements are correctly in place at the start. When aircraft do arrive early, planners must consider the crew window to make sure the time on the ground does not interfere with the time needed for the operation itself. On the other hand, the AATFC may not want aircraft sitting in a PZ for any extra time that would expose them to enemy fire or compromise the mission.

Any discussion of an air assault company raid must include communications, because only with a reliable system can the many moving parts be synchronized. The key radio net in the entire operation is the command aviation net (CAN), which is an FM net used by both aviators and ground forces. Other nets used are the air battle net (ABN), the air assault task force (AATF) net, and the fire support (FS) net.

The ABN is a VHF/UHF net used by the AMC primarily to command and control the movement of aircraft from the PZ to the objective. The FS net is used by the FSO to control indirect fires while enroute (SEAD) or to initiate or shift preparatory fires on the LZ and the objective. The AATF commander's net (in this case, the battalion command net) must be monitored but will probably not have any users until well after the AATFC goes to ground. And since this operation is a quick in and out, that will not occur in most cases.

So the CAN becomes the net of choice for most elements. All aviators monitor it. The AATFC commands and controls with it. The GTC and his subelement leaders monitor it during flight (using the aircraft radios), and the GTC uses it as his higher headquarters' net once on the ground. Scouts call their intelligence reports in for all to monitor, and attack aviation monitors the development of the ground tactical plan in the event he must support the GTC.

In today's technological Army, an air assault company raid is one of the most potent and deadly operations available to the tactical battlefield commander. It brings a combined arms capability, using the principles of mass and surprise, to a decisive point on the battlefield, regardless of depth and terrain. But synchronizing the many assets used in this operation requires the detailed planning of a knowledgeable air assault task force staff and company task force commander. It is only through the tough and realistic training of the leader and staff tasks that we can insure the conditions necessary for success. And when that occurs, no enemy can stand against this brutally effective combat air assault.

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