> "Battle implies mobility, strategic and tactical. The army which seeks to fight another must be able to move quickly against it."
>
> —Captain B.H. Liddell Hart

The World War II Ardennes operations in the European theater in December 1944—known as the Battle of the Bulge—not only proved to be the German's last major offensive effort; it also weakened their defensive capabilities beyond recovery. Early in February 1945, the Allies launched offensives that did not relax in intensity until victory was finally won.

Movement problems dominated the logistics support of U.S. forces in the last few months of operations in Europe. The problem of movements went beyond the provision of adequate transportation. It involved the proper integration and coordination of several closely related factors such as port discharge, port clearance, and depot operations. The importance of movement control was never more evident than in early 1945, when the theater's supply organization faced the task of building up forward supply stocks for the resumption of the offensive, reducing the large supply backlog accumulating at the continental ports, and handling the tonnages involved in clearing the U.K. depots.[1]

Shipments were frequently made without regard for the capacity of depot or of particular rail lines, with resulting congestions at some points and inefficient utilization of facilities at others. "The essence of movement control," as one member of General Ross' (Chief of Transportation, Supreme Headquarters Allied Expeditionary Force [SHAEF]), staff remarked, "is to limit movements to the capacity of the 'bottlenecks' of the system and to press constantly for the elimination of such bottlenecks."[2]

Prior to the final offenses of the European campaign in 1945, SHAEF overhauled the transportation system. All movements were programmed a month in advance, taking into account the requirements and the capacities of both transportation and depots.

In essence the SHEAF movement plan attempted to accommodate the requirements of the Services to movement capabilities and schedule all forward movements in such a way as to make the most economic use of transport facilities. The Transportation Corps integrated inland transport and depot reception facilities, and allocated shipping to the ports in such a way as to economize on land transportation and prevent wasteful back-hauling.[3]

Movement Control

While the scope of today's MAGTF operations are not as great as the World War II campaign to liberate Europe, the challenge to move personnel, equipment, and supplies remains. Logistics support is vital for a force to maintain its combat capability. Getting the right sustainment to the right place within the battlespace at the right time is crucial to the commander's single-battle and will only occur if movement control has been established within the distribution system. Distribution systems consist of sea, ground, and air distribution modes, terminal operations, and movement control. Movement control is the most critical part of a distribution system. Inadequate movement control results in waste, reduced efficiency, and loss of combat power. Successful military operations, on the other hand, have often ridden on the back of sound and timely deployment and sustainment. The rapid deployment and support for forces depends on an efficient and effective distribution system—a controlled system—established for the movement of troops, equipment, and supplies.

Joint Publication 1-02, *Department of Defense Dictionary of Military and Associated Terms*, defines movement control as "the planning, routing, scheduling, and control of personnel and cargo movements over lines of communication" (LOCs). Movement control involves validating movement requirements,

allocating resources, coordinating movements, and force tracking of personnel and cargo during movement. Effective movement control balances movement requirements against force capabilities and allocates resources based on the commander's priorities.

Principles of Movement Control

The six principles of movement control (see Figure 1) assist the commander and the staff in the planning and execution of movement control operations. These principles—together with the commander's mission, intent, and priorities of movement—help planners design responsive movement control plans and guide the execution of movement control operations.

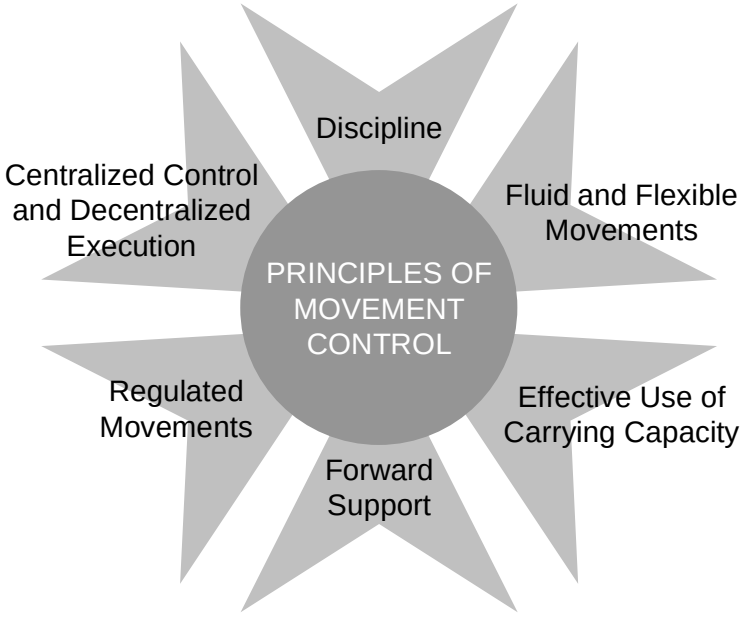

Figure 1. Principles of movement control.

Centralized Planning and Decentralized Execution. Usually the most efficient method to provide movement control is to centralize control of movements at the highest level. Centralization of movement control normally occurs at the same level charged with the integration of logistics support for the force. Decentralized execution of distribution missions means terminal and mode operators remain free to assign and control the specific distribution assets that will meet the requirement. This practice enhances the flexibility to prioritize support and accomplish the mission.

Regulated Movements. Movement control authorities regulate moves to prevent distribution terminal and main supply route (MSR) congestion and scheduling conflicts among commands. Proper management of distribution assets and the distribution network is critical. The regulation of movements has two applications. One deals with the apportionment of cargo carrying capabilities to movement requirements, while the second deals with the regulation of traffic along MSRs. Regulation of movements requires a comprehensive movement control plan as well as the assets needed to enforce the plan.

Fluid and Flexible Movements. Distribution systems must provide the uninterrupted movement of personnel, supplies, and services. This means the system must be capable of rerouting and diverting traffic. Maintaining flexibility is one of the biggest challenges facing distribution planners and operators in a changing battlespace while operational conditions and priorities continually shift. To successfully react to this fluid and changing environment, the distribution system must be linked into the force's command and control nodes and be able to communicate with various movement control agencies

(MCAs) throughout the commander's area of operations and area of interest. Distribution planners and operators can improve response time and flexibility by using the right modes for the right cargo. This entails research and forward planning. They should anticipate the need for alternate modes and routes and begin identifying and validating them.

Effective Use of Carrying Capacity. Distribution assets are normally limited. Planners must understand when to use a specific mode of transport and when to optimize the use of each mode's unique capabilities. This principle involves more than loading each transport vehicle to its maximum carrying capacity. It also means using all available transport capability in the most effective manner. To the extent that the operational and tactical situation permits, distribution asset operators should keep distribution assets loaded and moving, while allowing for adequate equipment maintenance and personnel rest.

Discipline. Discipline is the prompt return of distribution assets that ensures their availability for subsequent operations. The timely return of committed distribution assets from destination back into the system is an integral part of movement control. The end user plays an important part in this by not holding on to the forces distribution assets. Transportation modes need to be off-loaded quickly and returned to the system to maintain the transport capability for follow on operations.

Forward Support. Forward-oriented distribution support is a combat multiplier. It enables the commander to concentrate the preponderance of his forces on the enemy. The principle of forward support includes fast, reliable distribution to provide support as far forward as possible. The key to forward support is the reception and clearance capabilities at the destination units. These units may require equipment and personnel augmentation to enhance their reception and clearance capabilities. Forward support may entail the provisioning of operational level distribution assets to support tactical level units. However, any requirement for forward support that relinquishes centralized control for an extended time must be balanced against the effectiveness of the overall distribution system.

Movement Control Planning

Movement control planning, like all Marine Corps planning, depends on input from the commander throughout the planning process. A clear articulation of priorities by the commander is essential. These priorities provide the foundation for the regulation of all movements.

Planning for distribution management is the same regardless of mode, distance, or locale. The commander provides his requirements and establishes priorities based on his concept of operations.

A movement program is developed to satisfy both known and anticipated distribution requirements. During the planning process, movement planners allocate available distribution resources to support requirements based on the commander's priorities. The movement program supports the commander's priorities by establishing what requirements can be resourced given available distribution assets, units, and infrastructure. It also relies heavily on the accuracy of data provided by supported units. Movement planners must be flexible because requirements often change based on changes in priority, unit locations, asset availability, and conditions of the LOCs. The six basic steps used to develop a movement program include:

- Assess the situation.
- Determine the requirements.
- Determine the capabilities.
- Balance requirements against capabilities.
- Determine shortfalls, critical points, and solutions.
- Plan transition.[4]

Movement Control Agencies within the MEF

Distribution management and movement control should reside in the same organization, such as the force movement control center (FMCC) at the MEF G-4, logistics movement control center (LMCC) at the force service support group (FSSG) or unit movement control center (UMCC) at the unit level. These are collectively referred to as MCAs. Their peacetime functioning should mirror their wartime functioning. Some agencies, such as the FMCC and LMCC, are permanent organizations. Other MCAs, such as the UMCC, formed by individual moving units, are temporary and may consist of no more than one or two individuals from a unit's S-4 section. The primary staff officers, particularly the G-3 and G-4, play a significant role in coordinating the movement control plan.

The G-3 should ensure that the movement control plan is integrated with the MEFs scheme of maneuver. The G-3 plans and directs the positioning and maneuver of combat and combat service support units within the MEF area of operations. This may require rapidly projecting these forces over extended distances on MSRs. The G-3, coordinating with the G-4, should establish priorities for using MSRs for movement and maneuver. Maneuver will normally have priority over movement. However, maneuver must be well coordinated with movement to prevent route congestion, enforce movement priorities, and ensure continuous logistic support.

The G-4 should develop logistic support plans and implements logistic support priorities for movement. The G-4 assists the G-3 in establishing priorities for use of MSRs. The G-4 plans and directs the support of the logistics units to support the command's movement control and distribution effort.

The FMCC, operating under the cognizance of the G-4, should coordinate with the G-3 during unit movement, force tracking, and maneuver planning. It should assess the impact for distribution requirements and highway regulation in the MEF area of operations. The FMCC advises the G-4 of logistics and unit movement requirements, which may include support of reception, staging, and onward movement of forces, replacement operations, and reconstitution. The FMCC should assess the overall effectiveness of the movement programs and recommends the type of distribution units and assets required to accomplish the MEF's mission. It coordinates with external elements for distribution support in excess of MEF capabilities. It normally includes both operations and logistics representation. The size and complexity of the MAGTF deployments determine the actual structure of the FMCC.

The LMCC is the MEF's MCA and is activated by the FSSG when directed by the MEF commander. The LMCC reports directly to the FMCC for matters concerning movement control. It provides centralized movement control and highway regulation for moving personnel and materiel into, within, and out of the MEF area of operations. It should ensure effective and efficient use of available distribution capability. It plans, programs, coordinates, manages, and analyzes distribution and movement requirements and implements MEF priorities. The LMCC should perform distribution planning and highway regulation. It should also control, allocate, and supervise the operation of attached or assigned movement control teams (MCTs).

Every deploying unit down to battalion, squadron, and separate company level activates a UMCC when needed. The UMCC should ensure that units are prepared for embarkation, directs marshaling, coordinates assets, identifies additional support requirements, and, as directed by the LMCC, coordinates the movement of forces to aerial and/or seaports of embarkation.

MCTs are task organized on the basis of mission, enemy, terrain and weather, troops and support available, time available (METT-T). MCTs should expedite, coordinate, and support movement control and distribution operations. They are normally located at sites such as ports and airfields, beaches, key combat service support nodes and are often assigned geographic areas. MCTs are responsible for scheduling, controlling, and coordinating movements within their assigned area or site. These teams,

when properly resourced, may also be tasked with providing sustainment, messing, and maintenance support for units conducting movement.

Joint Movement Control

In a joint environment, regulation of distribution assets and LOCs will prevent congestion and enforce priorities. Regulation of LOC movements is critical. This is always important when U.S. forces must share available airfields, roads, rail lines, water terminals, and inland waterways with allied forces and the host nation. To ensure a fully integrated and responsive distribution system, the combatant commander normally assigns responsibility for theater distribution movement control to a single joint agency. The combatant commander's logistics staff may form the nucleus of a movement control organization, but to properly execute a theater movement control mission, an additional, fully trained joint organization is usually required. Ideally, such an organization would be identified as a force deployment option in an operations plan or operation order and be established early in the theater to coordinate arrival, theater expansion, and operational movement planning and execution. The geographic combatant commander has a wide range of options for performing movement control. He may direct subordinate joint force and Service component commanders to perform their own movement control or may establish a Joint Transportation Board and/or a joint movement center.

Conclusion

Effective movement control can mean the difference between victory and defeat. Failure to adequately govern the movements of various Confederate corps and divisions under General Joseph Johnston cost the Confederates an opportunity to defeat General George McClellan's Army of the Potomac at the Battle of Seven Pines in 1862. Johnston's failure to ensure that his movement plan was fully understood by his subordinate corps and division commanders resulted in a disjointed and ineffectual attack that allowed an exposed Union corps to escape destruction.

Conversely, the skilled application of movement control by U. S. Central Command personnel during the Persian Gulf War allowed the rapid movement of multiple corps-sized units and their logistic support from positions hundreds of miles away into attack positions along the Kuwaiti and Iraqi borders. Once across the line of departure, disciplined theater and subordinate command movement control resulted in the successful exploitation of limited LOCs to move and support coalition forces during offensive combat operations and the following retrograde back into Saudi Arabia.

Movement control coordinates the available distribution resources to enhance the combat effectiveness of the force and meet the priorities of the commander. Does your unit add to the congestion and confusion or does it effectively use movement control to enhance combat effectiveness?

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[1] Ruppenthal, Roland G., *Logistical Support of the Armies, Vol. II, September 1944-May 1945*, (Washington DC: Center of Military History, United States Army, 1995), pp. 86 and 360.
[2] Ibid, p. 391.
[3] Ibid, pp. 390-391.
[4] For more information on the steps to developing a movement program see MSTP Pamphlet 4-0.1, *Movement Control.*