



CAMPAIGNING

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Mission

The Joint Advanced Warfighting School produces graduates that can create campaign-quality concepts, plan for the employment of all elements of national power, accelerate transformation, succeed as joint force operational / strategic planners and be creative, conceptual, adaptive and innovative.

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Welcome to another installment of the Joint Advanced Warfighting School's Department of Operational Art and Campaigning quarterly journal, *Campaigning*. Once again, we continue to receive a variety of feedback on previous editions and we encourage ongoing dialogue with our contributing authors.

This quarter, *Campaigning* again features the Naval War College's Dr. Milan Vego with his argument for the importance of considering the employment of an operational reserve. Dr. Keith Dickson, one of the Joint Forces Staff College's own faculty members, offers an engaging article illuminating the importance of applying operational design when planning for operations in today's complex battlespace. A current JAWS student, LCDR Tom Stuhldreier, USCG, details the advantages and applicability of the Joint Interagency Task Force (JIATF) model for contemporary joint and multinational operations. Each of these submissions should substantially contribute to the ongoing dialogue and debate surrounding our profession. We are always searching for more contributors to keep the quality of our journal as high as it has been to date – please consider sending us your article for review and publishing.

The current JAWS class is well immersed in the Operational Art and Campaign Planning portion of their curriculum and the students are laboring in the development of their individual campaign plans. As the academic year approaches the finish, most of the students are receiving joint assignments where they will be able to immediately put their planning competencies to good use. The JAWS faculty remains busy teaching, coaching, writing and developing next year's curriculum for the incoming joint, multinational and interagency JAWS class. All are looking forward to the combined JAWS – Joint and Combined Warfighting School (JCWS) - Advanced Joint Professional Military Education (AJPME) graduation ceremony that will be held at the Joint Forces Staff College on June 15th, 2007.

Finally, our Campaigning editor, Colonel Craig Bollenberg, USA, continues to coordinate and assist with the publication of this journal while serving on the staff of the Multi-National Force – Iraq in Baghdad. COL Bollenberg continues to keep our faculty and staff updated and relevant while performing his “operational sabbatical” as Chief, Security Policy Division, MNF-I, SPA. We all appreciate Craig's superb efforts and look forward to learning much from him on his return early next year.

Frederick R. Kienle
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On Operational Reserves

By
Dr. Milan Vego

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Reserves in general are the principal tools in the hands of operational commanders for exercising and enlarging their freedom to act. The employment of reserves can often spell the difference between victory and defeat. Because of the characteristics of the physical environment, reserves are more commonly used in land warfare than in war at sea and in the air. Yet reserves can be created and employed for amphibious landing operations and major defensive air operations.

Term Defined

In generic terms, a *reserve* is a force of a certain size and combat potential aimed at having a decisive effect or impact on the outcome of a given combat action. It is withheld from combat in the initial phase of an action, and its size and composition and the place and time of its employment are directly controlled by the higher commander. Hence, a reserve should not be confused with reinforcements, replacements, or second-echelon forces. Although related, they are not identical in terms of purpose, force size and composition/mix, location, and timing of employment.¹

Scale

Depending on their purpose, tactical, strategic, and operational reserves are differentiated. A *tactical reserve* is designed to have a decisive effect on the outcome of a battle or engagement or some other tactical action (see Figure 1).

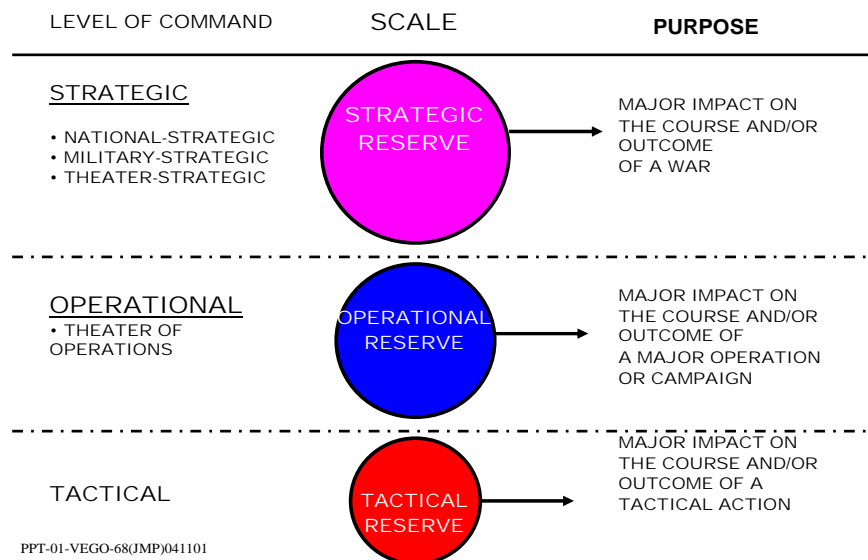


Figure 1: Level of Command



A *strategic reserve* is intended to have a decisive influence on the outcome of a single or several campaigns in a theater of war. A strategic reserve is generally controlled by national-strategic authorities or the supreme command, though in some instances it may be controlled by a subordinate theater commander. Strategic reserve is created from available forces or by reducing national commitments or changing strategic priorities in a given theater (of war).

An *operational reserve* is a force of such size and combat potential as to have a decisive impact on the outcome of a campaign or major operation. In land warfare, it is usually composed of the most mobile and combat-ready combined-arms force, prepared and ready for employment at short notice on the order of the operational commander. An operational reserve is usually a one-time-use force.² It is designed to ensure and also consolidate operational success.³

A commonality of both strategic and operational reserves is that they are created and employed by strategic or operational commanders. Strategic and operational reserves are employed at the operational and tactical levels of war, respectively. The distinction between tactical and operational reserves is more a matter of their ultimate purpose than of their respective sizes and composition.

Theory and Past Practices

The concept of having reserves was reportedly invented by the Lacedaemonians (inhabitants of Sparta) and then adopted by the Carthaginians. Afterward, the ancient Romans embraced it. The Roman military theoretician Flavius Vegetius Renatus in his *The Military Institutions of the Romans (De Re Militari)* in 390 AD wrote that “the method of having bodies of reserves in the rear of the army, composed of choice infantry and cavalry, commanded by the supernumerary lieutenants, generals, counts and tribunes is very judicious and of great consequence toward gaining the battle.” In his view, some reserves should be located in the rear of the wings and some near the center, to be “ready to fly immediately to the assistance of any part of the line which is hard pressed to prevent its being pierced, to supply the vacancies made therein during the action and thereby to keep up the courage of their fellow soldiers and check the impetuosity of the enemy.”⁴

Some of the most successful operational commanders in the modern era believed in the great value of having a sufficient reserve to use at the most critical time and place. Napoleon I (1769–1821) insisted that the commander who last commits his reserve will be the victor.⁵ In contrast, Frederick the Great (1712–1786) did not have any significant reserves in any of his numerous battles because he planned to accomplish everything in the initial encounter.⁶

Archduke Charles (1771–1847) believed that “the reserve must only be drawn into action if its employment is without any doubt decisive or if one is sure that it will be able to hold its own until they have rallied behind and taken the place of the reserve.” In any other case, “the reserve should be used to cover the retreat in order to prevent the dispersion and annihilation of the troops. It should be deployed behind the center or behind that wing which is singled out for the decisive attack. Now and then it may be drawn into action if only a final pressure is needed to complete victory; otherwise its main duty is always assuring and covering retreat.”⁷ True to his



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own teachings, Archduke Charles did not properly use his reserves in the battle of Aspern-Essling on 21 May 1809. Although the Austrians forced Napoleon I to withdraw, Archduke Charles dared not use his reserves and inflict a decisive defeat on the French. This, in turn, allowed Napoleon I to bring in reinforcements and finally defeat the Austrians in the battle of Wagram on 6 July 1809. That battle was won because of the French numerical superiority and Napoleon I's envelopment of the Austrian left wing.⁸

Carl von Clausewitz (1780–1831) in his *On War* wrote that a reserve can be intended either to prolong and renew the action or to counter unforeseen threats. He differentiated between strategic and tactical reserves. The first referred to forces in readiness for emergencies that are planned. Clausewitz's focus was clearly on tactical reserves—those forces that are withheld to meet unforeseen events in a battle. In his view, the employment of a reserve cannot be planned because often “we do not even know the enemy's measures until we see them, where they may be hidden by every wood and every fold of undulating terrain.”⁹

General Antoine Henri de Jomini (1779–1869) pointed out that reserves play an important role in modern warfare. He wrote that “wise government always provides good reserve for its armies, and the general uses them when they come under his command.” In his view, reserves should be organized at the national level; the army should have its own, and every army corps or division “should not fail to provide one.”¹⁰

Jomini differentiated between reserves on the battlefield and those intended to recruit and support the army. Whenever an army is on the offensive, it should always contemplate being forced onto the defensive. By positioning a reserve between the base and what he called the front of operations, the commander would obtain an advantage on the battlefield. He would be able to use the active reserve to intervene at any point of danger without weakening the active army.¹¹ Jomini also advocated a strong reserve because an attacker is highly vulnerable if suddenly hit with a counterattack.¹² Reserves should be employed either offensively or defensively. Jomini believed that reserves should be committed in the sector of main effort. They can then be used either for combat or to replace one's losses. In defense, the commander should have a reserve ready to counterattack when least expected as the means to seize the initiative.¹³ Jomini highlighted that Napoleon I never failed to organize reserves for his campaigns.¹⁴

Field Marshal Helmuth von Moltke, Sr. (1800–1891), was a proponent of tactical but not operational reserves. He wrote that in all battles and under all circumstances one must use everything that is available. One can never have too much strength available to achieve a victory. In his view, it was not advisable to leave behind a part of one's forces in a rallying position for protecting a retreat. Doing so would weaken the forces whose victory would make retreat absolutely unnecessary. At the same time, Moltke, Sr., recognized that a reserve may never be lacking in fighting a major battle. However, such a reserve should be explicitly designated by the disposition for the battle or by an order at the beginning of the major battle.¹⁵ Moltke, Sr., also observed that success remains, as a rule, in the hands of the one who uses his reserves last and in a decisive manner. In fighting a major battle, the commander should never lack reserves. They should be ready for the commander's immediate use. However, the commander must take care that the reserves are not employed against his wishes.¹⁶



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Moltke, Sr., did not make allowances for a reserve force or employing a reserve in any of his three campaigns (in 1864, 1866, and 1870–1871). However, he allowed the higher commanders to hold their forces back while stressing that operational forces must be committed. He was successful in integrating two or three armies in such a way that there was never a need to hold back a reserve. At the strategic level, Moltke, Sr., considered the ability to generate forces and to reconstitute them tantamount to maintaining a reserve. In conducting his campaigns, he used all the forces available.¹⁷

Field Marshal Alfred von Schlieffen (1833–1913), chief of the German general staff (1891–1905), was emphatic in his rejection of the idea of having reserves behind the front.¹⁸ He believed that holding back of any general reserves was ill-advised because they would never reach the decisive place in time. He used the example of the battle of Koeniggraetz on 3 July 1866, in which Moltke, Sr., did hold back reserves in the vicinity of Sadowa but had moved them to the enemy flank right from the outset. Moltke, Sr., also did not have ready reserves in the battles at Gravelotte–St. Privat (near Metz) in August 1870. In contrast, Napoleon I withheld his guards as reserves in the battle at Leipzig in 1813. For Schlieffen, the conclusion was clear: one wins at Koeniggraetz and loses at Leipzig. However, Schlieffen, like Moltke, Sr., was not opposed to having reserves at the tactical level.

Schlieffen's memorandum on the offensive against France and Belgium in 1905 did not provide for a force to be held back and committed to reach a decision. Although his successor as chief of general staff, General Helmuth von Moltke, Jr., made some drastic changes in Schlieffen's plan, he did not make any provision for having an operational reserve. This decision was one of the contributing factors in the Germans' failure to win the battle of the Marne in September 1914.

Schlieffen modified his views on the importance of having reserves in 1909. He then contended that instead of having reserves assembled behind one's front, which, in his view, must remain inactive and will be missed at the decisive place, it would be better to assemble a plentiful supply of ammunition. In Schlieffen's view it is better to employ all the troops available to attack at the enemy flanks than to hold some in reserve. The stronger the forces that can be brought up, the more decisive the attack will be.¹⁹

One of the leading German theoreticians in Schlieffen's era, General Friedrich von Bernhardi (1849–1930), had a more nuanced view of the value of reserves. He wrote that the value of reserves is in prolonging or resuming combat and also in the case of some unexpected change in the situation.²⁰ Bernhardi believed that reserves have a higher value for the defender than for the attacker. The defender is dependent on the actions of the attacker in determining how to deploy his forces and in recognizing the main direction of the attack. The defender should withhold some forces in reserve and employ them at the decisive point. In contrast, the attacker will dictate the terms of combat to the defender. In an attack, one can never be strong enough. Hence, one should not withhold one part of his force even temporarily, because that would weaken the offensive.²¹

German views on the value of having a reserve changed considerably in the aftermath of World War I. General Hans von Seeckt (1866–1936), chief of the Reichswehr, was a firm believer in



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the importance of reserves. This belief was also reflected in the German army's regulations issued in 1921 (F.u.G.—Fuehren und Gefecht 1921). Afterward, the prevalent view was that the commander mastered an uncertain situation best by having strong reserves in readiness. The Germans believed that reserves should be created even in the smallest tactical units.²² In the course of combat, and when a new, unclear situation emerged, the commander should always try to create a reserve. Having reserves provided a certain security, and their existence would facilitate the commander's decision making. However, the Germans also realized that there might be situations in which the last reserve would have been used and it would not be possible to create a new one.²³ There were also some instances where it was better not have a reserve.²⁴

The French Marshal Ferdinand Foch (1851–1929) was also a firm believer in the value and importance of reserves. He wrote that the reserve is a club, prepared, organized, reserved, and carefully maintained with a view to carrying out the one act of battle from which a result is expected—the decisive attack.²⁵ General John F. C. Fuller (1878–1966), one of the early and most vocal proponents of mechanized warfare, emphasized the value of having strong reserves. In his view, the increased mobility on the battlefield carried with it the power of effecting innumerable surprises and the more the unexpected becomes possible, the stronger the reserves must be.²⁶

Like the Germans, the Soviets in the interwar years put great emphasis on having strong reserves, especially in the conduct of offensive operations. One of the early and best Soviet military thinkers, General Aleksandr' A. Svechin differentiated between strategic and operational reserves. In his view, an operational reserve is any division not committed in combat. Such a force is not tied to any particular sector or front, but is aimed to accomplish an operational objective. Svechin wrote that operational reserves play an important role in the strategy of attrition. They can be moved at the decisive moment to the decisive sector of a (major) operation. In contrast, a strategic reserve consists of units that are not yet completely formed or have not achieved full combat readiness, as well as trained replacements and stockpiles. Such a reserve consists of corps deployed in the country's interior, or what he called "observation armies" deployed opposite the border of a neutral country. A strategic reserve is controlled at the national level. Svechin believed that the strategy of annihilation is incapable of acknowledging any strategic reserves that do not take part in accomplishing the mission within the framework of time and space represented by what he called general operation; he also contended that the strategy of attrition could and should use strategic reserves. In Svechin's view, a protracted war cannot be won without strategic reserves. Strategic reserves are particularly important for a coalition against which an enemy can operate on interior lines.²⁷

Soviet theoreticians further developed the concept of operational and strategic reserves in the 1930s. The Red Army field regulations highlighted the importance of reserves in conducting (major) operations. The reserves were one of the central parts of the Soviet concepts of "deep battle" (*glubokiy boy*) and "deep operation" (*glubokaya operatsiya*), developed in the 1930s. The concept of deep operation envisaged the employment of an attack echelon, an echelon to develop success, reserves, aviation forces, and air assault forces. Such an operation would be conducted by a single or several "fronts" (army groups, in Western terms) supported by large aviation



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forces.²⁸ In the 1930s the Soviets also began to emphasize the critical role of strategic reserves in winning a war.

During their Great Patriotic War (1941–1945), for most of their offensive major operations, the Soviets had second echelons, reserves, and so-called “mobile groups.” The second-echelon forces varied from a combined-arms army in a front to a rifle corps in an army.²⁹ However, in the first phase of the war (June to December 1941), the fronts consisted of single-echelon forces and, initially, two or three rifle divisions in reserve; later, a tank or cavalry corps was in reserve. The armies also consisted of a single echelon with one rifle regiment in reserve. In 1942, the steady increase in the numerical strength of the Red Army allowed fronts to operate in two echelons, with three to four rifle divisions in reserve plus a front mobile group composed of one or two tank corps. Similarly, the armies began to operate in two echelons, with a combined-arms reserve (antitank reserve, divisional artillery group, artillery destruction group, engineer reserve) plus one mobile group composed of one or two tank (or mechanized) corps.³⁰

The Soviets further developed the concept of strategic and operational reserve in the postwar years. By the mid-1960s, they defined operational reserve as a “combined arms formation, and also formation or units of various service branches or forces used to carry out missions who arise suddenly in the course of a (major) operation.”³¹ A strategic reserve was described as “consisting of military-trained contingents and materiel stockpiles controlled by the Ministry of Defense or Supreme High Command (STAVKA) intended for use as supplementary resources both in peacetime and wartime.” Such reserves can also be created in the form of reserve components of the various services.³² In the late 1980s, a front consisted of three army corps and combined-arms armies in the first echelon, one combined-arms army in the second echelon (optional), and an operational maneuver group (OMG) composed of one tank army, plus one airborne division and an air army.³³

Early airpower theoreticians generally neglected the use of air reserves. One of the most influential proponents of airpower, General Giulio Douhet (1869–1930) did not believe in the need for air reserves.³⁴ In contrast, General William (Billy) Mitchell (1879–1936), in his writings on the use of airpower, recognized the need for cooperation with ground forces. He considered airpower a strategic reserve of the commander of a large army.³⁵

Purpose

Obviously, if the course of events in combat could be precisely predicted, there would be no need for a commander to create a reserve. In that case, it would not only be foolish but border on criminality not to employ all available forces initially in the combat. However, the course of any combat action is hard to predict. The enemy can, and most likely will, act in a manner that cannot be fully anticipated. Hence, a prudent commander should have a force held back to react quickly to unforeseen developments and thereby ensure a successful outcome to the actions of friendly forces.

In general, a reserve is mobile and the most effective means at the disposal of the commander.³⁶ It is the commander’s principal means of influencing the outcome of an operation beyond the initial clash of forces.³⁷ The commander should have a reserve to minimize the risks to friendly



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forces. The commander should employ the maximum force available at the decisive place and time. This means that the commander should find a proper balance between the forces committed to the main effort and those assigned to serve as a reserve. At the tactical level, the commander is normally not concerned with sequels to the action in progress. In contrast, the operational commander must plan for sequels to follow the accomplishment of the operational or major tactical objective.³⁸

The existence of a reserve provides flexibility to the commander in situations of ambiguity and uncertainty, chance, and chaos. Napoleon I, said that war is composed of “nothing but accidents.... A general should never lose sight of everything to enable him to profit from these accidents. That is the mark of genius.”³⁹

In general, a reserve enlarges the commander’s freedom to act. If properly sized and timely employed, the reserve can have a decisive influence on the outcome of a major operation or even a campaign. Sometimes just the threat of using one’s reserve can force an enemy commander to counter. One’s failure to have a reserve because of the need to maximize available strength might lead to a disaster if the enemy does not conform to one’s planning assumptions.⁴⁰

The main disadvantage of creating a reserve is that it reduces the combat potential of the forces initially committed in combat. This disadvantage is relatively more serious in an offensive campaign or major operation than it is when one’s forces are on defense. A reserve also requires combat support and combat service support that might be more urgently needed elsewhere. In addition, a reserve requires forces for its protection, which complicates the protection of other forces and installations in a given part of the theater.

Command and Control

Normally, for each phase of a campaign or major operation, an operational reserve should be created and maintained. The Germans believed that reserves are an important—and often the last—means by which the commander can influence the course of combat and bring about a decision.⁴¹ Without readily available reserves, one’s command and control is paralyzed. Even a small reserve can decide the outcome in combat. After using the reserve, the utmost concern should be to create a new one.⁴² Only then can the commander regain the freedom to act.⁴³

The operational commander should have adequate authority to create and, when necessary, re-create operational reserve and to determine its size and composition, its location, and the timing of its employment. He should have freedom of action in committing the operational reserve; otherwise, his ability to influence a major operation will be greatly reduced, and this might result in the failure of the major operation or even the campaign. However, this is not always the case. For example, on the eve of the Allied invasion of Normandy on 6 June 1944, the German Commander in Chief (CINC) of the West, Field Marshal Gerd von Rundstedt, did not have control over the operational reserve deployed in his theater. Hitler and, nominally, the Supreme Command of the Wehrmacht (OKW) had a reserve composed of the Panzer Group West with the I SS-Panzerkorps, consisting of two SS-Panzer divisions and one SS-Panzer Grenadier division plus one excellent panzer training division (*Panzerlehr* Division).



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The purpose of reserves should not be too general.⁴⁴ Normally, the reserve should not be given a single mission; instead, several options for their eventual use should be anticipated. These options should be prioritized.⁴⁵ The operational commander should not create a reserve at the expense of the battle. If the operational commander does not have the forces to create a reserve, then he should weigh the risks of pulling out his forces from less-threatened sectors.⁴⁶

In an offensive, an operational reserve can be used in the sector of main effort to consolidate and exploit combat success, maintain one's operational momentum, counter enemy counterattacks, provide additional security and force protection, complete destruction of the enemy's forces, and secure objectives deep in the enemy's rear.⁴⁷

The defender cannot concentrate his forces before he recognizes the attacker's main direction of attack. Therefore, he needs to keep certain forces on hand to engage the enemy at the decisive point. The main role of an operational reserve in defense is to reinforce the fighting line where the main attack is made, a location that may not be known in advance; to protect one's flanks against envelopment; and to be able to assume the offensive at the appropriate moment.⁴⁸

In conducting a prepared defense, a reserve can serve to slow the enemy's advance. In defense, the role of an operational reserve is to ensure the commander's flexibility in the employment of his forces, counter enemy attacks, exploit the enemy's vulnerabilities, reinforce one's forward troops, block penetrations by the enemy's forces, slow the enemy's advance, and counter the enemy's threats to his rear area. If the enemy penetrates through the gaps, any opportunity should be seized to carry out counterattacks. Then one's reserve could be used to attack the enemy gaps or flanks.⁴⁹

Creating Reserve

Once the operational reserve is committed, the operational commander should make every effort to regenerate its combat potential or, if necessary, to reconstitute it.⁵⁰ A prudent operational commander should do everything possible to create reserves and thereby considerably enlarge his freedom to act; otherwise, his chances of success may be considerably reduced. The operational commander can create an operational reserve from the forces allocated or assigned in the basic or modified plan of a campaign. He can create a reserve by redeploying his forces from one part of the theater to another, or by scaling down or abandoning original objectives and thereby generating additional forces. A reserve can also be created by changing or abandoning hitherto-held positions or areas (trading space for force), reducing the forces assigned for operational protection, withdrawing forces from less endangered sectors, and abolishing tactical reserves and thereby obtaining forces to create an operational reserve. In the latter case, the operational commander would in effect reduce his subordinate commanders' freedom to act.⁵¹

Size

The size of a reserve is difficult to determine because of the contrary requirement of having the largest forces available in the initial phase of the campaign or major operations and also having forces to hold back. This gives the commander the most important tool for influencing the course of action and its outcome.⁵²



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Among other things, the size of the operational reserve depends on whether forces are on the attack or on defense, and on the commander's intent, the operational situation, the number and quality of the enemy forces, and the availability of forces. In general, an operational reserve must be sufficient to achieve the commander's intent. The size of the reserve may depend on one's ability to draw forces from elsewhere to deal with emergencies or fleeting opportunities.⁵³

In general, the reserve should be large enough to have a major impact on the combat power ratio between friendly and enemy forces when committed to combat. Because forces are always limited, the commander must find the right balance between the combat forces committed initially in the campaign or major operation and the forces to be withheld from combat. Obviously, the more forces held in reserve, the fewer the commander can commit to the operation initially. If the reserve is too large, then its requirement becomes a self-fulfilling prophecy: expressed differently, by assigning insufficient combat potential initially, the operational commander makes it almost inevitable that the reserve will be used.⁵⁴

In general, a commander should have a larger reserve when facing a much stronger and more agile enemy. However, once the operational commander obtains the initiative and begins to dictate the terms of the battle, the reserve's size should be reduced. Then the commander should assign larger forces to the sector of main effort. In some cases, the commander might not have a need for the reserves at all. In a delaying defense, the commander should have either a small reserve or none at all, because the aim is not to achieve a decisive victory but to trade space for time.⁵⁵

A larger force generally has a larger impact on the factors of space and time. However, the movement of a large force is more complicated than the movement of a small force. The larger force requires multiple lines of communications, greater logistical support and sustainment, and more complex measures for its concealed approach to its assigned area.⁵⁶

Another factor in determining the reserve's size is the commander's knowledge and understanding of the operational situation. The less the operational commander knows about the situation, the larger should be the size of his forces held back in reserve. And the greater the enemy's ability to exercise the initiative and impose his will, the larger one's reserve should be.⁵⁷

In the past, an operational reserve varied from several to a dozen or more divisions. The reserves were organized at the high command, army group, individual army, and also army corps levels. For example, in the invasion of Poland in September 1939 (Case Weiss), the Germans divided their ground forces into two army groups: Army Group North (10 infantry, 1 panzer, and 2 motorized infantry divisions) and Army Group South (14 infantry divisions, 4 panzer, 4 motorized infantry, 2 light motorized infantry, and one mountain division). Army Group North had under its direct control three infantry divisions and one panzer division in reserve; its 3rd Army had one infantry division, and the 4th Army had two infantry divisions in reserve. Army Group South directly controlled one army corps with two infantry divisions, plus three other infantry divisions as a reserve. The 8th Army had only one infantry division in reserve; the 10th



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Army had one light motorized division in reserve, while the 14th Army had only one infantry division in reserve.⁵⁸

At the start of their campaign in the west on 10 May 1940, the Germans had a total of 141²/₃ divisions plus three brigades. This number included 28 divisions and three brigades, plus one air division, directly under the control of the army general staff (OKH). By the end of June, 23 reserve divisions were actually employed.⁵⁹

Sometimes for a major operation on land, a single division, or even a regiment or brigade, can serve as the operational reserve. For example, in December 1942, General Hermann Balck and his 11th Panzer Division were used as reserve for the LXVIII Panzer Corps during the ill-fated attempt by Field Marshal Erich von Manstein's Army Group Don to save the Sixth Army, then encircled at Stalingrad. The 11th Panzer Division fought numerous battles with the much-superior forces on the Chir River. In the fighting, which continued for most of December, Balck destroyed the Soviet Fifth Tank Army.⁶⁰

The operational idea for a major amphibious landing might contemplate using part of the landing force as a reserve after the first-wave troops have landed. Such a reserve can be committed to battle ashore in case of unexpectedly strong enemy resistance or the appearance of other enemy forces in the area. It can also be used for conducting a feint or demonstration to distract the enemy's attention or tie down his forces along a certain part of the coast. The size of the reserve would vary, but it is generally much smaller than an operational reserve for a major land operation. However, it is not the size but the potential impact on the outcome of the landing operation that determines the force's size. In some Allied landings in World War II, reserves were the size of one reinforced division. Some forces were embarked on the ships in the proximity of the landing beaches, and some were on-call reserves assembled at some distance from the landing objective area.

In the Allied invasion of Sicily in July 1943 (Operation Husky), both the British Eighth Army and the U.S. Seventh Army had what would be considered in land warfare a tactical reserve. The U.S. Seventh Army's reserve consisted of four distinct and widely separated parts: the 2nd Armored Division (minus Combat Command A), reinforced by the 18th Regimental Combat Team (RCT) of the 1st Division and deployed with amphibious forces; the 82nd Airborne Division, on call after H-Hour; the 39th RCT of the 9th Division, plus the 9th Division Artillery in North Africa, ready to move at any time after D-Day; and the remainder of the 9th Division.⁶¹

The Allied plan for the invasion of Leyte (Operation King-II) on 20 October, 1944 (A-Day), envisaged simultaneous landings by the X Corps (1st CavDiv and 40th ID) and the XIV Corps (24th and 37th ID) in the Dulag area. One RCT of the 25th ID would make preliminary landings on A-2 Day to secure the islands at the entrance to Leyte Gulf. The 25th ID would serve as a floating reserve, ready to reinforce either corps with one RCT by A+2 Day and with the remaining RCT by A+4 Day.⁶²



Force Composition

The composition of an operational reserve depends on many factors. The most important factor is what the operational commander expects to achieve by having an operational reserve. In general, the operational reserve should not be organized as a reaction force but rather as a force planned from the outset to achieve certain results.⁶³

In land warfare, the operational reserve should satisfy several requirements. It should be highly mobile, capable of independent operations, and able to quickly reach the employment area. It should be composed of diverse combat arms and capable of carrying out diverse tasks. It should have a high staying and striking power and a high degree of interoperability.⁶⁴ Generally, armored and mechanized forces are the best suited as operational reserve in land combat. Such a force would require separate artillery support and close air support. In some cases, airborne forces can be optimally suited for the role of operational reserve because of their high state of combat readiness, short time needed for deployment, and high mobility. However, such forces might not have sufficient combat potential once they are committed to battle. They are also generally very vulnerable to enemy AA fires.⁶⁵

Location

The positioning of the operational reserve is one of the most critical decisions for the operational commander. Generally, an operational reserve should be positioned so that it can enter combat in a timely fashion. Its location would depend on several factors but chiefly on whether the forces would be on the offensive or defense, the anticipated enemy resistance, and the characteristics of the terrain. In general, holding back the reserve enhances its protection from the enemy's attack. It also allows the operational commander a wider range of options because the reserve can be committed in several directions. On the other hand, by deploying the reserve forward, the operational commander can considerably speed up its commitment to combat when needed.⁶⁶ Forces already committed in combat should not be used for protecting the reserve; this would increase the chances of a piecemeal defeat.⁶⁷

In an attack, operational reserves normally should be deployed in a sector of main effort—that is, where the enemy's forces are weakest—as the Germans deployed the operational reserve in their invasion of France in May 1940.⁶⁸ However, forces assigned as reinforcements by the general staff or supreme command are usually deployed at some distance from the front line. Prior to the invasion of France in May 1940, the German army general staff (OKH) assigned staff of the 2nd Army and the staffs of four army corps, plus 43 divisions (including 19 divisions in the process of being formed), to be deployed at various locations in Germany as “OKH reserve” (in fact, reinforcements). Shortly after the start of the invasion, eight divisions were released and sent into combat.

In defense, an operational reserve is usually deployed in a central location so that it can react quickly in any direction.⁶⁹ This is especially the case in defense of a large island or of a peninsular position. For example, the Germans in their plans for the defense of Sicily created a two-part operational reserve, each part composed of what they called an “intervening group” (*Eingreifendegruppe*). One group was deployed in the western part of the island and was composed of the German 15th Panzer Division and two Italian divisions (26th Assietta and 28th



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Aosta). In the eastern part of the island were deployed the German Hermann Goering Panzer Division and two Italian divisions (4th Livorno and 54th Napoli).⁷⁰

In general, an operational reserve should be deployed, at least initially, in one's operational depth but within striking distance of the enemy force. Such a location enhances the reserve's concealment and minimizes the chances of premature engagement with enemy forces.⁷¹ (For example, one of the factors of the Prussian defeat in the battle of Jena-Auerstadt in October 1806 was that their "strategic" (actually "operational") reserve of 20,000 men under Prince Eugen von Wuerttemberg was under cantonment while the decision was made on the Saale River (near Gera).⁷² The Prussian main force under the king numbered 55,000 men).

In their war with Turkey in 1877–1878, the Russians made a big error in declaring war before the mobilization of their troops was completed. They mobilized an army of about 300,000 men in the European theater. However, the Russians started their campaign on the Danube River with a force of only 135,000 men and left the Coastal Army of 50,000 men as "strategic" reserve deployed between Romania's border and the Crimea. The remainder of the mobilized troops was held back in Russia proper. The consequences of the Russian decision to hold back large forces far away from the main theater are well known.⁷³

Generally, the larger the operational reserve, the greater its distance should be from the flanks. An operational reserve should be held well back as long as its commitment is not required. However, the more certain the commander is about the reserve's commitment and the more imminent it becomes, the further forward the operational reserve should be deployed.⁷⁴

The tendency to deploy an operational reserve in a relatively small physical area should be avoided whenever possible; such a reserve can be too vulnerable to enemy attack from the air. To prevent the enemy from simultaneously engaging the entire operational reserve, sometimes it is advisable to divide the reserve into a number of smaller but highly mobile and lethal elements. This would give the enemy more problems in delaying the employment of the reserve. In addition, using multiple routes to the concentration area reduces the chances of possible congestion during the reserve's movement. It would also allow the forces to reach the area simultaneously. Hence, it is critical to have a good communication network, consisting of many longitudinal and lateral communications, in one's operational depth. Dispersing the operational reserve also enhances the chance of deceiving the enemy as to the reserve's intended use. In addition, it may delay the enemy's ability to organize a force to counter the reserve's employment.⁷⁵

Air units assigned to support the operational reserve can be positioned well in the rear because they can reach their intended target quickly. If the operational commander intends to use the reserves for counterattacking an enemy force that has penetrated his defenses, then the operational reserve should be positioned so that it can strike into the enemy flanks and rear.⁷⁶

Sometimes the higher commander assigns as an operational reserve forces that clearly cannot be timely employed because they are positioned too far away from the theater in which the major operation or campaign is being conducted. For instance, in the Leyte operation, the General



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Headquarters, Southwest Pacific Area (GHQ, SWPA) allocated the 32nd ID and 77th ID to the Sixth Army as reserves. However, because of the lack of shipping, neither of these divisions could reach Leyte from their staging areas until mid-November 1944. On 29 October 1944, GHQ, SWPA directed the 77th ID to move from Guam to the Solomons for rest and rehabilitation. The seriousness of the situation on Leyte led GHQ to release the 11th A/B Division and the 112th RCT to the Sixth Army. All these units reached Leyte between 14 and 23 November.⁷⁷

Employment

Broadly speaking, a reserve can be used to either exploit unforeseen opportunities or master crises. It can be used to redeem failure or to prevent a failure from happening. Initial actions rarely accomplish decisive results. Such successes are more likely to result from exploiting opportunities that can be created or are identified in the course of a campaign or major operation. The reserve can also be used to overcome the consequences of a crisis that has occurred in the course of a major operation or campaign. In such a case, the reserve should be used not only defensively but offensively as well. In using the reserve to maintain his freedom of action, the commander also preserves the opportunity to deliver a decisive blow against the enemy. At the same time, he also reduces the enemy operational commander's freedom to act. The enemy commander should be put into a situation where he will be uncertain of his foe's real intentions. This is especially critical for success at the operational and strategic levels of war.⁷⁸

In general, an operational reserve can be used for reinforcements, blocking, counterattack, and counterstrike. The employment of an operational reserve as echeloned reinforcements to bolster weakened forces at the front would not generally result in gaining the initiative or decisively defeating the enemy, because actions would lag behind the enemy's actions. At the operational level, the use of a reserve as reinforcements would most likely lead to the loss of the initiative and ultimately might well end in failure. In contrast, the use of an operational reserve to block the enemy's penetration can only prevent further loss of the initiative. This in itself would not lead to the enemy's defeat; it can only be the first step toward going onto the offensive. The use of the operational reserve for a counterattack is aimed to annihilate or destroy the enemy forces and regain the space lost. Generally, it would lead to regaining the initiative and bringing about the decision.⁷⁹

In conducting a delaying defense, the commander might create a reserve to counterattack or block enemy penetrations. If the momentum of the enemy attack has been halted or sufficiently slowed, then the reserve can be used to attack the enemy flank, either to deliver a decisive blow or to retrieve the situation. Otherwise, the reserve should be used to block the enemy penetration and provide an opportunity to counterattack.⁸⁰ In a delaying defense, reserves should be used not to achieve a decisive blow but to trade space for time. Then the reserve can be employed to retrieve deteriorating situations and forestall a decision—for example, to disengage a decisively engaged unit, or to contain a penetration until one can restore the cohesion of the operation.⁸¹

Normally, the reserve should not be used in a piecemeal fashion; the exception to this is when the commander aims to maintain his freedom of action.⁸² Dispersing units assigned to a reserve should also be avoided.⁸³ For example, the German experience on the eastern front in World War



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It showed that the reserve should be employed in smaller rather than larger units.⁸⁴ Using smaller forces as part of larger operational reserves was easier and more effective, at least for the Germans; units moving on multiple routes were more difficult to interdict than those moving on a single route. By using smaller forces, the commander retained flexibility and initiative. The small units moving over multiple routes to a point of concentration allowed German commanders to mass maximum combat potential forward. The use of smaller units also allowed specific objectives to be assigned to each unit. This forced the Soviets to fight several simultaneous battles on their flanks.⁸⁵

Timing is one of the most critical decisions facing the operational commander. Napoleon I wrote, “In war there is but one favorable movement; the great art is to seize it.”⁸⁶ The commitment of the reserve into combat should be timed to seize the initiative from the enemy or to maintain the initiative.⁸⁷ The timing of introducing the reserve into combat should demonstrate the operational commander’s sound appreciation of the factors of space and time. He should determine in advance what circumstances would call for the commitment of the reserve, so that when such a situation arises, he can make the decision quickly.⁸⁸ For example, in the battle of Borodino in September 1812, Napoleon I hesitated about when to commit his last reserve to the battle. He thereby probably failed to inflict a decisive defeat upon the Russians, and that might have cost him a campaign.⁸⁹

Generally, the commander who commits his reserve last achieves a certain advantage. Committing the reserve too soon is often a sign of a commander’s weakness or, even worse, cowardice. Sometimes the commander fails to timely commit his reserves or does not use them at all. At the Battle of Antietam on 17 September 1862, the Union general George B. McClellan held his VI Corps of some 20,000 men in reserve throughout the battle and suffered a tactical defeat at the hands of a Confederate force half as large.⁹⁰ During the same battle the Confederate general Robert E. Lee committed and reconstituted his reserves several times by skillfully shifting forces and by the timely arrival of reinforcements from Harper’s Ferry (located at the confluence of the Potomac and Shenandoah rivers, some 65 miles northwest of Washington, DC).⁹¹

In committing his reserve the commander essentially plays his last card. Hence, he should not commit his reserve too early. At the same time, he should not hesitate to do it if it means achieving a decision or if the combat situation requires it.⁹²

Lack of Reserves

Sometimes a campaign or major operations are conducted without having a reserve. This situation can exist because of doctrinal views that a reserve is unnecessary or because high losses and an inability to replace them have made it difficult or impossible to create reserves to be held back. For example, the initial major operations on the western front in August 1914 started reasonably well for the Germans. They advanced fast on their left flank. However, a wide gap opened between the German 1st and 2nd armies, and the British Expeditionary Forces (BEF) exploited the situation. The German army High Command (OHL) ordered the advance canceled, and the war on the western front turned into a positional war. The Germans did not have any operational reserve for a counterattack. Their offensive prematurely reached the point of



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culmination on the right flank. There was no reserve to employ against the BEF and close the gap between the two German armies. General Helmuth von Moltke, Jr., the German chief of general staff, made another mistake against the principle of concentration by detaching two army corps to the eastern front although nobody had asked for them.⁹³

The U.S.-led invasion of Iraq (Operation Iraqi Freedom) had a much smaller force than required, not only for the post-hostilities phase but also for the major combat phase. Perhaps the main reason for that situation was the uncritical acceptance by many that somehow network-centric warfare allows for much faster and simultaneous operations, allows any enemy to be defeated quickly and decisively, and eliminates any need for a reserve or even reinforcements. The proponents of network-centric warfare also dogmatically believe that advanced information technologies will allow U.S. forces to obtain what they call “information dominance.” The result of the inadequate force level for Operation Iraqi Freedom was that the planners could not provide for an operational reserve or large-scale reinforcements in the initial phase of the campaign in case something went wrong with the plan. This was perhaps one of the most serious flaws in the CENTCOM’s plan.

The original plan for the invasion envisaged the advance of the 4th ID (Mechanized) from across Turkey’s territory to Baghdad. However, that plan was canceled because Turkey’s Parliament voted against the 4th ID (Mechanized) using Turkish territory. Hence, that division became theoretically available for employment from Kuwaiti territory. However, some 35 ships laden with 4th ID (Mechanized) heavy armor and equipment could not reach Kuwait until early April. To further complicate the matter, the CENTCOM did not issue orders for the movement of these ships until 27 March. On standby were 15,000 men and 230 tanks from the 1st Armored Division, based in Wiesbaden, Germany; the 17,000-man 1st Cavalry Division at Fort Hood, Texas; and the 4,700-man 3rd Armored Cavalry Regiment (ACR) at Colorado Springs, Colorado.⁹⁴

By 25 March, three coalition divisions had advanced some 300 miles deep into Iraqi territory, and the follow-on division was about three weeks away from being phased into the theater.⁹⁵ All hopes were on the air forces’ ability to help forces on the ground in case of any difficulties.⁹⁶ Because of unexpected attacks by the Iraqi paramilitary forces (Fedayeens) in the rear of the coalition line, the 101st Airborne Division, initially slated to lead the charge to Baghdad, was instead used to secure Najaf, Hillah, Karbala, and other towns along the route. The Marines spent a week of hard fighting to secure Nasiriyah. In addition, one brigade of the 3rd ID was sent back to secure the lines of communications.⁹⁷ The consequences for U.S. forces of not having any reserve or readily available reinforcements would have been much more serious if the enemy had been more competent and determined than the Iraqis were.

Insufficient vs. Sufficient Reserves

In some cases, a campaign or major operation was planned and executed with inadequate forces assigned as operational reserve, either because the operational commander mistakenly assigned insufficient forces for such a task or because the overall ration of forces in a given theater did not allow sufficient forces to be assigned as an operational or strategic reserve. For example, in the German offensive in the spring of 1918, the German forces were composed of four army groups



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totaling 126 divisions (including 52 assault divisions), or one-third of their Westheer (Western Army). These forces were employed in three echelons. To ensure operational success, the Germans required a strong operational reserve. Yet the army's high command assigned only three divisions as a reserve—far less than required.⁹⁸ In contrast, the Allies had 181 divisions. This included an army group reserve composed of seven divisions (the 3rd Army with five divisions, plus one U.S. infantry division and one cavalry division). The French organized their forces in two army groups with 42 and 56 divisions respectively. Each army group had three armies. The British forces totaled 63 divisions, and the Belgians had 13 divisions.⁹⁹

In March 1944, the Allied force that landed at Anzio was under heavy German pressure and unable to expand the beachhead. The only option for relieving the German pressure was to mount attacks in other sectors of the front. However, the Allies did not have any reserve left on the Italian front. Some twenty Allied divisions were engaged with the Germans along the main front. The Germans, in contrast, had 12 divisions deployed along the Gustav Line and five divisions at Anzio, while eight divisions were in operational reserve.¹⁰⁰

The Germans started their ill-fated invasion of Soviet Russia in June 1941 without sufficient forces overall, and this severely limited their ability to hold back forces in operational reserve. This was one of the major contributing factors for the failure of the invasion. Initially the Germans had 112 divisions available for the invasion. These forces were divided into three army groups: Army Group North, 26 divisions (20 infantry, 3 panzer, 3 motorized-infantry divisions); Army Group Center, 48 divisions (31 infantry, 9 panzer, 7 motorized infantry, 1 cavalry division); and Army Group South—38 divisions (30 infantry, 5 panzer, and 3 motorized infantry divisions). The most serious problem was the lack of reserves and, therefore, the insufficient depth from which the campaign could be nourished. The army general staff's reserve consisted of 21 infantry divisions, two panzer divisions, and one motorized infantry division. This force was too small for the offensive.¹⁰¹ The plan envisaged bringing these reserves to the initial area of concentration in the vicinity of Reichshof and eastward of Warsaw, while the smaller forces would be deployed in the areas of Zamose, Suvalki, and Eydtkau.¹⁰²

By mid-August 1941, the army general staff's reserve of 21 divisions was divided among three army groups as follows: Army Group South, nine infantry divisions and one infantry motorized division; Army Group Center, eight infantry divisions; Army Group North, three infantry divisions. Only one infantry and two panzer divisions were directly controlled by the army general staff. In other words, the army general staff lacked the means to influence the course of major operations on the eastern front.¹⁰³

Because of Hitler, the German Wehrmacht essentially fought the war on the eastern front increasingly without operational or tactical reserves. At the same time, the forces' combat power was steadily reduced, the front lines were overextended, and the supply situation was catastrophic because of the actions of the Soviet partisans in the Germans' rear area.¹⁰⁴ In contrast, the Soviet strength steadily increased, despite horrendous losses, especially in the first few months after the start of the German invasions. The Germans estimated in the winter of 1941–1942 that the Soviets had 546 large formations of which 487 were deployed opposite the



front of Army Group Center. The German Army Group South then faced 168 large Soviet formations, including 50 divisions in operational reserve.¹⁰⁵

The so-called battle of Kursk (Operation Zitadelle) took place in an area 310 miles wide and 250 miles deep. According to the Germans, the operation lasted from 5 to 18 July 1943. The Germans failed primarily because the forces committed to the operation were grossly inadequate. Army Group Center had to cover the 125-mile front at Kursk Salient in the west with only nine weak divisions. They did not have a single tank, and had only 100 assault guns and self-propelled antitank guns. The Germans concentrated all their available forces in the sector of main effort, and did not have any forces left to serve as an operational reserve.¹⁰⁶

Air Reserves

In air warfare, reserves are used in a more piecemeal fashion to reinforce forces operating in a sector of main effort, either in an offensive or on defense. Air reserves are also used to counter unforeseen threats; when the air situation is ambiguous; or when one is outnumbered or outclassed by the enemy in technology, training, or combat readiness. The longer the war, the greater the need for air reserves. The greater the numerical inferiority, the greater the need for air reserves. They can be used for counterattacks and to seize the initiative.¹⁰⁷

The British used their air reserves in 1940 to wrest the initiative from the Germans. Commander of the Fighter Command Air Marshal Hugh Dowding used air reserves to deny the Luftwaffe's air superiority, thereby contributing greatly to Britain's ultimate victory. He divided fighter aircraft into two groups: No. 11 Group was deployed in southeastern England, and No. 12 was deployed north of London. The latter group had essentially the role of an air reserve. It initially guarded the sectors against possible enemy attacks. Additionally, 200 fighters were kept in "squadron reserve," ready for combat if needed.¹⁰⁸

After large initial losses in the first phase of the German invasion in 1941, the Soviets reorganized their air force. For the first time, air reserves were created as part of the air armies but under the control of the High Command (Stavka). These units had great mobility and maneuverability. They were organized at the strategic level but were employed at the operational level. Stavka had the sole authority to allocate air reserves to frontal air armies for the duration of ground and air operations. The first test of using these air reserves was the Kuban operation in the spring and summer of 1943. They were instrumental in achieving air superiority for the Soviet forces in that operation. Subsequently, Stavka used air reserves in support of the ground forces in the Kursk, Byelorussian, Vistula-Oder, Koenigsberg, and Berlin operations.¹⁰⁹

Conclusion

The concept of operational reserves is as viable today as it was in the past. Because of the characteristics of the physical environment, reserves are much more important in land warfare than in war at sea or in the air. Current and projected advances in technology can mitigate but not significantly reduce the fog of war and the effects of friction. War will always be full of uncertainties, and no one can realistically hope to obtain so-called information dominance. To meet unforeseen opportunities and overcome crises in the course of a campaign or major



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operation, the commander should withhold some forces from the initial combat. The operational commander also must make sound decisions as to the size, force composition/mix, and positioning of the reserves he creates. To be useful, the operational reserve must have a significant impact on the course of a campaign or major operation. Hence, the size of the operational reserve is not as important as its combat power.

The operational commander should properly determine the size of the forces for initial employment in combat and of the forces required for protection elsewhere in the theater. Perhaps the most critical decision for the operational commander is the timing of the use of the operational reserve. This is the “art” part of operational leadership. As uncertainty is reduced, the commander should reduce or even eliminate the forces withheld from combat. However, it is highly imprudent to believe, as the proponents of network-centric warfare apparently do, that somehow new information technologies invalidate the need to have reserves or reinforcements. An often-overlooked result of the emphasis on having steadily smaller forces, especially in land warfare, is the inability of commanders to create a reserve. This cannot but have highly negative consequences for the operational commander’s ability to successfully plan and execute a campaign or major operation.

To be sure, there are some situations in which a commander would not want to create or re-create reserves. Yet it is clearly wrong to adopt the view that the future war will be fought without the need for reserves. The mission and the situation should be the sole determining factor for any commander in deciding whether or not to create reserves. The existence of a reserve enlarges the commander’s freedom of action and reduces that of his opponent’s. The reserve provides a commander with a wider range of courses of action and creates for the enemy the dilemma of how and when it will be used. Moreover, it ensures that the commander can master the situation in case events do not proceed as planned—as they usually do not. Reserves have proven their great value for commanders in exploiting unforeseen opportunities and thereby winning victories.

A sound doctrine should neither overemphasize reserves or, worse, directly or indirectly state that a reserve should not be created and employed. There will always be situations where the commander will determine that the best course of action is to commit all available forces at the outset of a major operation or campaign. At the same time, there will also be many cases where the commander will be well advised to hold back some forces in reserve and thereby retain and enlarge his freedom of action.

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¹ *Reinforcements* are, in contrast, intended to replace one's losses and prevent the enemy from gaining more space. They cannot result in obtaining the initiative against the enemy on the attack. Reinforcements are also committed piecemeal. The commander cannot plan at what time or place reinforcements will have to be sent. They are brought in incrementally for the purpose of reinforcing certain parts of the front line. *Replacements* are intended to replace units destroyed or withdrawn from the front line to be reconstituted. Both reinforcements and replacements are not necessarily composed of one's most trained, mobile, and equipped forces. *Second-echelon* forces are intended to convert the tactical success achieved by the first-echelon forces into operational success. They are usually deployed in the sector of main effort. The prerequisite for creating second-echelon forces is a rather large numerical superiority.

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- ⁵⁸ Klaus Meier, et al., *Das Deutsche Reich und der Zweite Weltkrieg*, vol 2, *Die Errichtung der Hegemonie auf dem Europaeischen Kontinent* (Stuttgart: Deutsche Verlags-Anstalt, 1979), p. 103.
- ⁵⁹ *Ibid.*, p. 254.



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- ⁶¹ Albert N. Garland and Howard M. Smyth, *Sicily and the Surrender of Italy, History of U.S. Army in World War II* (Washington, DC: Office of the Chief of Military History, U.S. Army, 1970), pp. 97–98.
- ⁶² Wesley F. Craven and James L. Cate, *The Army Air Forces in World War II*, vol 5, *The Pacific: Matterhorn to Nagasaki, June 1944 to August 1944* (Washington, DC: Office of Air Force History, reprint, 1983), p. 348; Sixth Army HQ, Sixth United States Army, *Report of the Leyte Operation, 17 October 1944–25 December 1944* (28 November 1945), p. 17.
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- ⁶⁴ Ibid., pp. 15-16; Michael Buck, Anforderungen an operative Reservisten in the 90er Jahren–Strukturen, Zuordnung zu operativen Fuehrungsebenen, Zusammenwirken fuer die Entscheidung in der Schlacht (Hamburg: Fuehrungsakademie der Bundeswehr, 13 January 1991), p. 7.
- ⁶⁵ Schmitt, “The Use of the Reserve in Combat,” p. 66.
- ⁶⁶ Condell and Zabecki, editors, *On the German Art of War: Truppenfuehrung*, p. 26.
- ⁶⁷ Ibid., p. 26.
- ⁶⁸ Karl-Heinz Frieser, *Blitzkrieg-Legende. Der Westfeldzug 1940* (Munich: R. Oldenbourg Verlag, 1995), p. 419.
- ⁶⁹ Stohry, *Airpower in Your Hip Pocket: Under What Conditions Should an Operational Commander Constitute an Air Reserve?* p. 7.
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- ⁷¹ Turner, *The Operational Reserve: What Should It Be Used For?* p. 19.
- ⁷² Friedrich von Bernhardi, *Vom Heutigen Kriege*, Vol II: *Kampf und Kriegfuehrung* (Berlin: E.S. Mittler & Sohn, 1912), p. 310.
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- ⁷⁴ Condell and Zabecki, *On the German Art of War: Truppenfuehrung*, p. 26.
- ⁷⁵ Bullington, Considerations for the Organization and Employment of an Operational Reserve, pp. 20–21.
- ⁷⁶ Ibid., p. 21.
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- ⁸⁹ Bernhardi, *Vom Heutigen Kriege*, Vol II: *Kampf und Kriegfuehrung*, p. 306.
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- ⁹¹ Ibid., p. 67.
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- ⁹³ Guenter Roth, “Operatives Denken bei Schlieffen und Manstein,” in Hans-Martin Ottmer and Heiger Ostertag, editors, *Ausgewaehlte Operationen und ihre militaerhistorischen Grundlagen*, Operatives Denken und Handeln in deutschen Streitkraefte, published under the auspices of Militarergeschichtlichen Forschungsamt (Bonn/Herford: Verlag E. S. Mittler & Sohn, 1993 pp. 282, 284–85.
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Operational Design: A Methodology for Planners

By

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Current thinking on the operational planning process has attempted to bridge the gap between mission analysis (defining objectives and endstate) and course of action (COA) development (task description and development) by integrating effects into the Joint Planning Process, sometimes called an effects-based thinking approach to planning. This involves identifying measures of effectiveness (MOE) in the mission analysis process and using a systems approach to the operational environment to identify a set of nodes and links that are to serve as the focus of action within the COA. Actions against key nodes are arranged to attain the desired effects. These effects in turn are intended to achieve named objectives that support the endstate.¹

JP 5-0, *Joint Operation Planning*, describes the essential purpose of the various elements of operational design is “to help commanders and staff visualize the arrangement of joint capabilities in time, space, and purpose to accomplish the mission.”² Although the essential purpose of operational design is clear, the intellectual process that allows the commander and staff to apply the elements within a “framework that underpins a joint operational plan and its subsequent execution” is not clearly outlined in doctrine.³ JP 5-0 lays out definitions of 17 elements of operational design, but planners often encounter ambiguity in these definitions, because some terms are often applied interchangeably. Second, the only link between mission analysis and COA development are effects and measures of effectiveness. Nodes and links are supposed to contribute to COA development, but it is not clear how efforts are to be focused. Planners can spend valuable time making lists of measures of effectiveness, objectives, nodes and links, and effects and never have any idea how they are to use these lists to develop a coherent plan that covers all six phases of a campaign or how these items assist in taking a mission statement and endstate and translating it into a comprehensive operational plan that clearly articulates overall purpose and direction.

¹ For an example of how broadly this effects-based approach to planning can be applied, see General (Retired) Gary Luck, “Insights on Joint Operations: The Art and Science, Best Practices: the Move Toward Coherently Integrated Joint, Interagency, and Multinational Operations,” Norfolk, Virginia, Joint Warfighting Center, U.S. Joint Forces Command, September 2006, pp. 23-24. Luck describes MOE (Methods of Effectiveness) that are to be developed during mission analysis and Methods of Performance (MOP) developed concurrently with the course of action (COA) development and selection, then formalized. The Joint Intelligence Preparation of the Battlefield will identify the nodes and links which are to be the focus of action. Arranging actions against these key nodes will attain effects. There is no explanation describing how planners are to use nodes and links, effects, and MOP to develop a COA or how the MOE fit into mission analysis. His approach has little relation to the operational design concept outlined in either JP 5-0 or JP 3-0, and interchanges terms without linking any of them to a process or structure.

² Office of the Chairman, Joint Chiefs of Staff, Joint Publication 5-0, *Joint Operation Planning*, (Signature Draft, 23 October 2006), Washington, DC: Joint Staff, p. IV-2.

³ *Ibid.*, p. III-1.



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This paper offers an approach to operational design intended to serve as the analytical bridge between the outcomes of the mission analysis process and the development of courses of action. The operational design is the concept and framework that provides a more complete understanding of the overall execution of the campaign. It applies the operational art as the means by which a commander and staff use a combination of imagination and intellect to develop an operational design that assists in visualizing the arrangement of component capabilities in time, space, purpose, and effect in order to support development of complete and comprehensive courses of action to achieve the mission.

The process of operational design is outlined in the following steps:

1. Define the endstate (in terms of desired strategic political-military outcomes).
2. Define the objectives that describe the conditions necessary to meet the endstate.
3. Define the desired effects that support the defined objectives.
4. Identify friendly and enemy center(s) of gravity (COG) using a systems approach.
5. Identify decisive points that allow the joint force to affect the enemy's COG and look for decisive points necessary to protect friendly COGs.
6. Identify lines of operation that describe how decisive points are to be achieved and linked together in such a way as to overwhelm or disrupt the enemy's COG. This is done by descriptors that are derived by a logical or a functional approach.
7. Identify how decisive points relate to phases to identify how operations are arranged in time, space, and effect, and to identify changes in phases, especially the critical transition from Phase III (Dominate) to Phase IV (Stabilize).
8. Complete the detailed synchronization and integration of forces and functions, tasks, targets, and effects centered on decisive points and phases to achieve unity of effort.

Step 1: Define the Endstate (in terms of desired strategic political-military outcomes).

Operational design begins with a thorough and rigorous mission analysis. Three of the outcomes of mission analysis related to operational design are a defined endstate, clearly stated objectives, and the identification of enemy and friendly center(s) of gravity. These outcomes are essential and must be thoroughly understood because they provide the focus of all subsequent planning efforts. Time must be taken to accomplish this analysis. Operational planners must understand both the national strategic and military outcomes desired. These are derived from a variety of sources, such as the National Security Strategy, the Regional Combatant Command's Theater Strategy, the Security Cooperation Plan regional objectives, The Department of State Strategic



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Plan, Contingency Planning Guidance, and guidance received from higher authorities. Planners should not necessarily wait for guidance from higher authorities to define the endstate. The operational planner must have a strategic focus and an appreciation for the larger strategic goals defined in the national and theater level strategic documents mentioned above. By being able to articulate these goals, the planner assists in shaping and clarifying the endstate.

Step 2: Define the objectives that describe the conditions necessary to meet the endstate.

A clear and concise endstate allows planners to examine objectives that support the endstate. Objectives describe what must be achieved to reach the endstate. These are usually expressed in military, political, economic, and informational terms and help define and clarify what military planners must do to support the achievement of the national strategic endstate. Objectives are written as concise descriptive statements: *Country Red is no longer a threat to regional peace. Country Blue's IRBM capability is eliminated.*

Sometimes military and political objectives become decisive points in the operational design because they are essential not only to reach the endstate, but critical to affecting the enemy's center(s) of gravity or protecting friendly center(s) of gravity. Above all, keep in mind that while objectives can be rephrased as decisive points, decisive points are not synonymous with objectives. Objectives always refer to endstate. Decisive points always refer to operational level center(s) of gravity.

Step 3: Define the desired effects that support the defined objectives.

From the objectives, a list of effects is produced that relate to achieving each of the objectives (“an effect is a physical and/or behavioral state of a system that results from an action, a set of actions, or another effect”) Effects define conditions that must exist in order to accomplish the desired objectives.⁴ Effects are phrased as a complete thought expressed by the simple construct of subject-verb-object: *Country Red renounces the use of WMD. Country Blue supports the introduction of UN peacekeeping forces.* Effects exist at two levels: Effects related to strategic objectives and effects related to decisive points in the operational design.

⁴ The definition of an effect is from Joint Publication 5-0, *Joint Operation Planning*, p. III-11. Joint Publication 5-0 refers to planning joint operations “based on analysis of national strategic objectives and development of theater strategic objectives supported by measurable strategic and operational desired effects. . . . Joint operation planning uses measurable desired effects to relate higher-level objectives and effects to component missions and tasks.” (*Ibid.*, p. xv). It concludes this section with the statement, “Like end state and objective, joint doctrine includes effects as an element of operational design.” Doctrine is unclear on differentiating how effects that relate to endstate are different from effects that relate to operational tasks. “The use of effects during planning is reflected in the steps of JOPP [Joint Operational Planning Process] as a way to clarify the relationship between objectives and tasks and help the JFC and staff determine conditions for achieving objectives. (*Ibid.*, p. III-11). Rather than clarifying, doctrine adds another layer of confusion when it relates objectives, effects, and tasks without clarifying the relationship or how the operational design supports these elements.



Step 4: Identify friendly and enemy center(s) of gravity (COG) using a systems approach.

The process of deriving centers of gravity has been thoroughly discussed and analyzed in numerous articles and will not be revisited here. Joint doctrine approaches analyzing centers of gravity in terms of critical factors: critical capabilities, critical requirements, and critical vulnerabilities. In conventional operations there exists one operational center of gravity and usually one strategic center of gravity. The operational center of gravity will most likely shift during the transition from Phase III to Phase IV, creating a number of new centers of gravity that must be addressed in the operational design. In unconventional operations or stability operations that do not have a conventional combat operation involved, there may be a number of centers of gravity identified at the onset of mission analysis. By determining the critical vulnerabilities of the enemy center(s) of gravity, planners have a means to determine decisive points related to attacking those critical vulnerabilities.⁵

Step 5: Identify decisive points that allow the joint force to affect the enemy's COG and look for decisive points necessary to protect friendly COGs.

Decisive points emerge from an analysis of endstate, objectives, and center(s) of gravity. Broadly defined, decisive points are usually something the joint force will have to fight for to achieve. Sometimes decisive points are related to specified or essential tasks from the mission analysis. This makes sense because essential tasks describe what must be done to define mission success. Specified tasks may also become a decisive point.

Operational designs will often have common decisive points because joint operations often share the same basic elements: air superiority, sea superiority, APODs/SPODs (air ports of debarkation/ sea ports of debarkation) secured, friendly lines of communication secure, sufficient attrition of enemy forces, enemy command and control neutralized, information superiority achieved, sufficient forces for decisive offensive action, reorganization and establishment of local control, borders secured. In addition to common decisive points, planners must identify those decisive points unique to their circumstances by examining both enemy and friendly centers of gravity and understanding what must be done in time and place to affect an enemy center of gravity and to protect a friendly center of gravity. Decisive points are not objectives, but objectives can become decisive points in certain phases of the operational design.

⁵ See Office of the Chairman, Joint Chiefs of Staff, Joint Publication 3-0, *Joint Operations*, (17 September 2006), Washington, DC: Joint Staff, 2006, p. IV-10, and Joint Publication 5-0, *Joint Operation Planning*, pp. IV-8 to IV-15. For the academic discussion involved in analyzing center(s) of gravity within the professional community, the following are useful: LTC Christopher W. Fowler, "Center of Gravity: Still relevant After All These Years," Carlisle, Pa.: US Army War College Strategy Research Project, 9 April 2002. Antulio J. Echevarra II, *Clausewitz's Center of Gravity: Changing Our Warfighting Doctrine--Again!*, Carlisle, Pa.: Strategic Studies Institute, September 2002. Joseph L. Strange and Richard Iron, "Center of Gravity: What Clausewitz Really Meant," *Joint Forces Quarterly*, Issue 35, (October 2004), 20-27.



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Step 6: Identify lines of operation that describe logically, functionally, or by a combination of the two, approaches that describes how decisive points are to be achieved and linked together in such a way as to overwhelm or disrupt the enemy's COG.

Lines of operation must be derived from decisive points. The kinds of decisive points related to a line of operation define the description of the line of operation. This is why decisive points must be determined first before defining lines of operation. Lines of operation are the least understood portion of operational design and, therefore, tend to be misapplied. The importance of well-defined and understood lines of operation is basic to linking decisive points, center(s) of gravity, objectives, and endstate. Properly defined, lines of operation provide clarity and distinction and provide the rationale for everything that the joint force does. Therefore, poorly defined lines of operation weaken the plan and lead to confusion. Joint doctrine's description of lines of operation is only minimally helpful, but it does describe lines of operation falling into two categories—physical and logical—both related to a positional reference to the enemy.⁶ Lines of operation should be broadly defined to encompass a more flexible way of thinking. Logical lines are descriptive and collective in nature and refer to conditions. Physical lines of operation should also be seen as relating to functions or functional components of the joint force.

To understand how lines of operation should be defined, a review of CENTCOM's approach to lines of operation for the campaign in Afghanistan is useful. CENTCOM defined four lines of operation: "Direct Attack of the Leadership of al Qaida and the Taliban," "Humanitarian Aid," "Destroying the Taliban Military," and "Operational Fires."⁷

Note that the line of operation termed direct attack on al Qaida and the Taliban is logical and descriptive. An analysis of the decisive points required to reach the center(s) of gravity help define the line of operation. The line of operation should be derived from examining a number of required decisive points that lead to reaching and affecting the center(s) of gravity—the elimination of the Taliban (and al Qaida) military capability and the neutralization of the Taliban and al Qaida as a threat. By identifying decisive points first, planners will begin to see logical connections between certain decisive points that can then be collectively described logically or functionally. Once defined, this line of operation allows planners to integrate forces and capabilities. It also promotes synchronization defined by a series of decisive points that, in turn,

⁶ Joint Publication 5-0, *Joint Operation Planning*, pp. IV-20-21. "Commanders use physical LOOs [lines of operation] to connect the force with its base of operations and objectives when positional reference to the enemy is a factor. . . . JFCs use logical LOOs to visualize and describe the operation when positional reference to an enemy or adversary has less relevance."

⁷ In his address to a Joint Session of Congress on 20 September 2001, President George W. Bush described the objectives in OEF as the destruction of terrorist training camps and infrastructure within Afghanistan, the capture of al Qaida leaders, and the cessation of terrorist activities in Afghanistan. During a news briefing on 7 October 2001, Secretary of Defense Donald Rumsfeld related several objectives for military operations in Afghanistan. Military operations were intended to make clear to Taliban leaders that the harboring of terrorists is unacceptable, to acquire intelligence on al Qaida and Taliban resources, to develop relations with groups opposed to the Taliban, to prevent the use of Afghanistan as a safe haven for terrorists, to destroy the Taliban military allowing opposition forces to succeed in their struggle, and to facilitate the delivery of humanitarian supplies to the Afghan people.



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are directed at affecting a center of gravity, or in the case of the Taliban, achieving a set of objectives.

Humanitarian aid is also a valid line of operation, but not descriptive. It is also logical in that it is derived from a requirement that supports the political military endstate (eliminate state sponsorship of terrorism and restoration of a stable, functioning state of Afghanistan that can be reintegrated into the international community) and is linked to the enemy center(s) of gravity. Providing humanitarian aid and assistance to the people of Afghanistan not only assists in relieving immediate suffering, but also contributes to moving the population away from support of the Taliban. Specific decisive points should have been derived that seek to achieve the endstate and attack the enemy's center(s) of gravity, but in this case, may also be linked to creating an effect or achieving an objective. This line of operation also supports the integration of military and non-military elements. This line of operation will determine both responsibilities and requirements and serves as a means for coordination. Most importantly this line of operation will lay out specifically what the military can and cannot do. Thus, this descriptive line of operation helps military and non-military elements understand roles and functions within a campaign focusing effort on decisive points (which allows a means to measure effectiveness and level of accomplishment) focused on the proper endstate in support of the military's attack on the enemy centers) of gravity.⁸

Destroying the Taliban Military is a poor choice for a line of operation. It is descriptive, but clearly has no decisive points connected to it, and therefore cannot support an attack on the enemy's center(s) of gravity. When planners use these broadly focused descriptors for lines of operation, it reveals a lack of understanding of the connection between endstate (supported by a list of objectives and effects that define the endstate), center(s) of gravity, and decisive points. Destroying the Taliban military force is certainly an objective (with its accompanying set of effects) that supports the endstate. Because objectives and effects have been determined during mission analysis, this objective then must become a decisive point within the operational design because it is an event or condition that must be met in order to affect the center(s) of gravity. Using this as a line of operation instead of a decisive point will serve to confuse and fragment unity of effort and prevent the synchronization of forces and effects because it does not provide a logical path to the enemy center(s) of gravity.

⁸ One of the best references for planners developing an operational design for Phase IV-V is found in Conrad Crane and W. Andrew Terrill, "Reconstructing Iraq: Insights, Challenges, and Missions for the Military Forces in a Post-Conflict Scenario," Carlisle, Pa., Strategic Studies Institute, February 2003, Appendix A, pp. 63-72. What Crane and Terrill describe as Categories could be used as logical lines of operation. Some critical tasks could be used as decisive points. Important and essential tasks could be tasks that support the decisive points. Note that Category 1 and category 8 activities are primarily military tasks, the rest are non-military tasks. In the operational design, the majority of the critical tasks described in those two categories must be accomplished before other non-military tasks can be begun. This supports phasing as well as understanding the link between security activities and responsibilities and non-military responsibilities. The decisive points in themselves then can be used as a means to measure progress and synchronize and integrate military and non-military efforts.



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The other misidentified line of operation is operational fires. Operational fires here is intended to be a functional line of operation, but it is too broadly defined and does not contribute to focusing efforts on the enemy center(s) of gravity. Operational fires are integrated and synchronized in connection with every decisive point in the operational design and cannot stand alone as a line of operation. To be useful, operational lines must be tied to decisive points. Operational fires, both lethal and non-lethal, can be applied to the two valid lines of operation: humanitarian aid and direct attack on Al Qaida and Taliban leadership. For every decisive point along these two lines of operation, operational fires targeters and IO effects planners should lay out a sequence of targets and effects that support the achievement of each of the decisive points. This allows planners to allocate tasks to components and to begin the process of integration and synchronization of efforts to gain that decisive point. Decisive points along the numerous lines of operation are then synchronized in time, space, and effect, so that a dynamic model of focused actions is created that gives commanders and staff a more complete understanding of how, why, when, and how certain actions are taking place in the battlespace. Operational fires, therefore, support achievement of decisive points and cannot be a line of operations.

Planners should always consider including Information Operations as a functional line of operations. First, it highlights the importance of IO in operational planning and assists IO planners in defining specific IO-unique decisive points related to center(s) of gravity (information superiority achieved, for example).

Step 7: Identify how decisive points relate to phases to identify how operations are arranged in time, space, and effect, and to identify changes in phases, especially the critical transition from Phase III (Dominate) to Phase IV (Stabilize).

Having determined in order—endstate, objectives and effects, center(s) of gravity, decisive points, and lines of operation—planners then can link lines of operation to decisive points and examine the how and where certain decisive points support multiple lines of operation. Phasing is not an end in itself, but a means to an end. Phasing helps in sequencing events in time, space, and effect both as a means of examining key events related to decisive points and as a means to understand the sequence of actions. This sequencing of decisive points assists in laying out the phases. Phasing is always the last step in operational design because it assists in defining precisely where one phase ends and another begins. This also provides a clear commander's intent by phase in terms of what must happen when and where to achieve a specific set of outcomes related to the achievement of decisive points. Once achieved, a new phase begins. Phases can be concurrent, but clearly defined phases related to the sequencing of decisive points eliminates any ambiguity on the progress of the operation or where the force is at any one time in the operation. Although Phase 0 is included as part of operational planning, it is not included in the operational design because it is related to peacetime activities where the United States and its allies and partners have not committed to the use of military force. This is not to say that planners must not be fully aware of Phase 0 activities in the region as part of a larger understanding of strategic goals, but for the purpose of deploying forces with the intent to use the



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military element of national power to further national objectives, Phase I marks the starting point for the operational design.⁹

Planners must appreciate the requirement for preparing for transition from Phase III to Phase IV. Arranging decisive points and understanding the requirements for transition allows the commander and components to move quickly from combat operations to stability operations. The most critical piece of phasing an operation is recognizing when and how the transition from Phase III to Phase IV begins. Operational design allows planners to examine the factors and conditions involved that lead to the transition occurring. The key factor in understanding when the transition from Phase III to Phase IV begins is when the enemy's operational center of gravity is influenced. Once effected, the scope, scale, and purpose of all actions related to attacking the center of gravity shift immediately into a new set of lines of operation with new decisive points directed at a series of centers of gravity (or better described as the objectives that relate to achieving the endstate) that, when accomplished or influenced, lead to the desired endstate, which leads into Phase V. Planners must visualize this transition and examine how forces and functions flow from one state to another once the enemy's operational center of gravity has been affected. In fact, some decisive points related to stability operations in support of the transition from Phase III to Phase IV may need to be established and accomplished before the transition to Phase IV can be initiated. These new lines of operation and decisive points are redefined but are still focused on centers of gravity (or objectives) and achieving the desired endstate.

If stability operations also include counterinsurgency (COIN), most often planners will have to develop a separate but complimentary operational design that will have its own centers of gravity, lines of operation, and decisive points. Both operational designs then may share certain common decisive points and share the same IO line of operations.

Stability operations in Phase IV require new lines of operation that will be political-military and logical. Decisive points will be specific conditions related to a hybrid of political-military, military-economic, and military-psychological conditions. The IO line of operations that ran through Phases I-III, will certainly continue through Phases IV-V, although new decisive points will be added or original decisive points will be modified. The focus of operational design for Phase IV is influencing the centers of gravity (or objectives) related to the desired endstate. Military tasks are clearly defined to assist in understanding what is necessary to accomplish decisive points in Phase IV. The targets and effects related to these decisive points will include more non-military tasks than military tasks, especially as the operation design moves closer to achieving the endstate. This analysis of military and non-military tasks will illustrate the limits of the military's role and the conditions necessary to allow non-military agencies, NGOs, and others to play their role in achieving that decisive point. As objectives are met, the transition to Phase V can be defined. As the endstate is reached, military forces are able to redeploy.

Operational design for Unconventional (COIN) and Stability and Support Operations is similar to Phase IV operations. Planners will find in stability and support operations situations where

⁹ See Joint Publication 5-0, *Joint Operation Planning*, p. IV-36.



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there is no significant warfighting required, the operational design supports planning and phasing of activities to reach an operational endstate. The focus remains on endstate, objectives, and effects related to endstate, decisive points, and lines of operation. Insurgencies have in common decisive points and common lines of operation, and multiple centers of gravity. Endstate for COIN can be determined from historical examples as well as from an assessment of the situation. Insurgencies require the same basic means to survive: leadership, ideology, sanctuary, support, and a functioning combat force. The decisive points in an operational design for COIN, as in a stability and support operational design, will be a combination of political-military, political-economic, political-psychological, and sociological, with their concurrent military and non-military tasks, targets, and desired effects. Lines of operation will tend to be logical rather than functional, although a functional SOF line of operations could make sense in certain cases.

The following are examples of operational design.

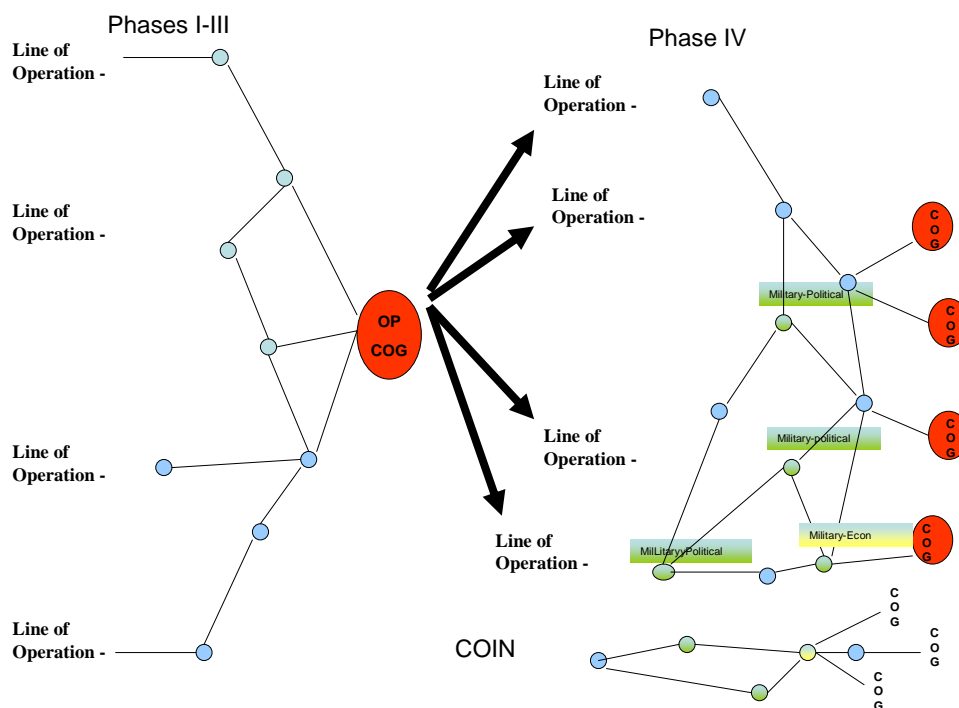


Figure 1: Operational Design—Phases I to IV

This is a general schematic of the operational design framework (see Figure 1). In this example of a conventional operation, four lines of operation are directed at a single enemy operational center of gravity. Note where decisive points (small circles) are linked to illustrate where efforts along different lines of operation must converge to achieve the specific decisive point. The lines of operation converge on the enemy COG, thus ending Phase III (Dominate) and marking the transition to Phase IV (Stabilize). Four new COGs (or very possibly the objectives identified as supporting the endstate) emerge related to stability, and three new COGs (or objectives) emerge



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related to a parallel COIN operation. Note that new lines of operation must be defined related to these new COGs. Stability and COIN operations may require two separate operational designs and a related information operations line of operation that continues through from Phases I-III. Decisive points in stabilization and COIN decisive points are political, economic, psychological as well as military, and should be defined in some cases as hybrids. A complete operational design flows through Phases I through V. Planners can outline basic portions of Phases IV-V, identifying preliminary COG or objectives, decisive points, and lines of operation to assist in identifying what must shift during the transition from Phase III to Phase IV.

From this outline, planners and the commander visualize what must happen when and allows for the detailed sequencing, integration, and synchronization of forces and functions to accomplish this design.

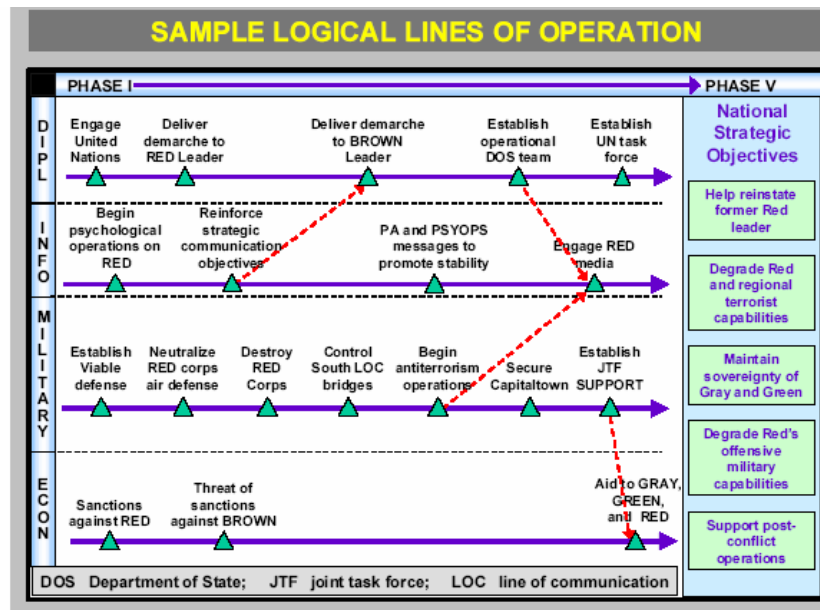


Figure 2: Sample Logical Lines of Operations

This example from JP 5-0 is logical and functional, organized along elements of national power (see Figure 2). The publication notes that these lines of operation are intended to assist “the combatant command and component planners maintain visibility of actions or events along those lines, which could affect current or future military actions. The most significant of these at this point is the diplomatic effort to dissuade Country Brown from supporting Country Red.” From this design alone, none of this information is obvious. It is unclear how commanders at any level can maintain any visibility except in the most generic sense. If the operational design’s most important factor is diplomatic, what role do military decisive points (DPs) play in supporting the achievement of a diplomatic DP?



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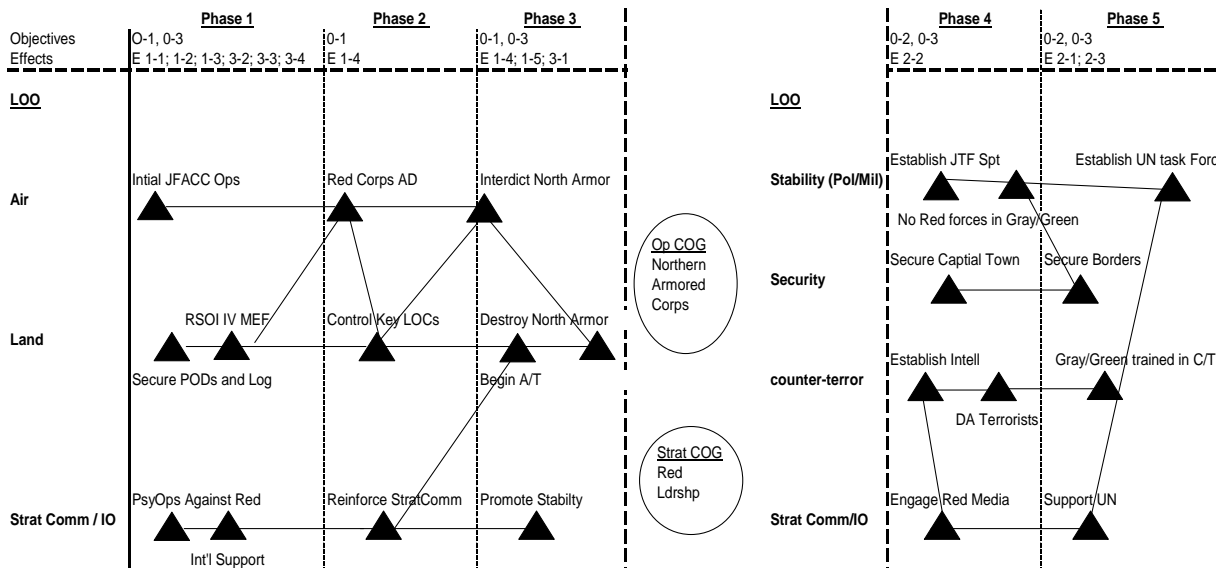
This operational design defines some interrelationships between decisive points, but the lines of operation appear to be largely independent and far too general to have relevancy to detailed planning. Although there is no center of gravity defined, it is possible that the national strategic objectives may be serving in place of a COG. The endstate is not defined. The decisive points identified here are adequate, but very broadly defined and somewhat simplistic. For example, the decisive point in the military line of operation identified as “Destroy RED Corps” will need a detailed breakdown of targets, components(s), effects, that define the level of destruction required and how, in turn, the achievement of this DP supports the achievement of other DPs in other lines of operation. The design has no phasing identified, so there is no determination of what should happen when and to what purpose the achievement of each DP is related to achieving the objectives defined.

This is a case where planners defined lines of operation first, then thought of decisive points related to the lines of operation. As a result, it may be argued that the diplomatic and economic lines of operation as defined here do not achieve much on their own. By examining the decisive points identified, the lines of operation could be redefined so that they are more descriptive in showing the relationship between the decisive points and the objectives.

The following diagram (see Figure 3) takes all the elements from the operational design example in Joint Publication 5-0, pp. IV-13 to IV-22 and provides an example of an operational design structured according to the steps outlined in this paper. Immediately, the military functions become clear, focused on a center of gravity. The lines of operation are both functional and logical and relate to military decisive points in Phases I-III. Once the enemy operational center of gravity is influenced then new lines of operation emerge, which are more logical and deal with political-military functions. This operational design provides the outline for clear direction to commanders and provides an outline for more detailed planning. Military actions, especially in Phase I can be easily related to any diplomatic initiatives that occur. The IO line of operations strongly compliments and interfaces with diplomatic efforts.



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Op COG
Northern
Armored
Corps

Strat COG
Red
Ldrshp

Nat'l Strategic End State
A stable, secure region able to defend itself, terrorism degraded, national sovereignty in tact, and a representative govt in Country of Red

Military End State
A stable, secure region with Red's military defeated (if req'd), and US forces in support to achieve national strategic objectives.

Nat'l Stat Objectives

- 1) Maintain sovereignty of Gray and Green
- 2) Defend Gray and Green from Red atk
- 3) Defeat or Eject Red from Gray if required
- 4) Degrade Reds offensive military capability
- 5) Support internal disaffected Red groups return to representative govt
- 6) ID and degrade terrorists w/in the region
- 7) Help reinstate former Red leader (if able)
- 8) Spt Post conflict ops in Red and Gray
- 9) Strengthen regional nations self-defense capability

Notes:

- 1) This example is drawn from the vignette in JP 5-0, pp. IV-13 to IV-22. This example is not a complete operational design, but is complete to the extent of the information provided in the example.
- 2) JP 5-0 does not include clearly written endstate in this example. The endstates listed have been developed from the objectives as published in JP 5-0, pp. III-6 to III-13.
- 3) In this example the strategic-operational military objectives and effects were placed in the phases in which related action will be taken relative to corresponding decisive points.
- 4) The effects (E 1-1 through 3-4) are listed in JP 5-0, p. III-13. They are not pertinent because each decisive point will have its own operational level effects listed.
- 5) Lines of operation and decisive points in Phases I-III are focused on the strategic and operational COGs; in Phases IV-V, new lines of operation will be designated to achieve objectives that support the endstate. The operational design has two components each with the proper focus.
- 6) Phase 0 is not included since activities planned for this phase are included in the Security Cooperation Plan. Planners should be familiar with current Phase 0 activities, but they are not part of the operational design.
- 7) Diplomatic and Economic lines of operation are NOT included here because the operational design is focused on center of gravity. Diplomatic initiatives are tied to the IO line of operations, but because there are no military DPs attached, a diplomatic line of operations is unnecessary. Nevertheless, joint force planning is integrated and synchronized with DoD and other US Govt agencies. With SecDef approval interagency planners can be enjoined to develop an overall interagency plan, but DoD does not tasking authority over other agencies to ensure actions are completed. The operational design for Phases IV-V clearly demonstrates the diplomatic, economic, and political aspects within a military plan to assist reaching the desired endstate

Figure 3: Modified Operational Design from JP 5-0



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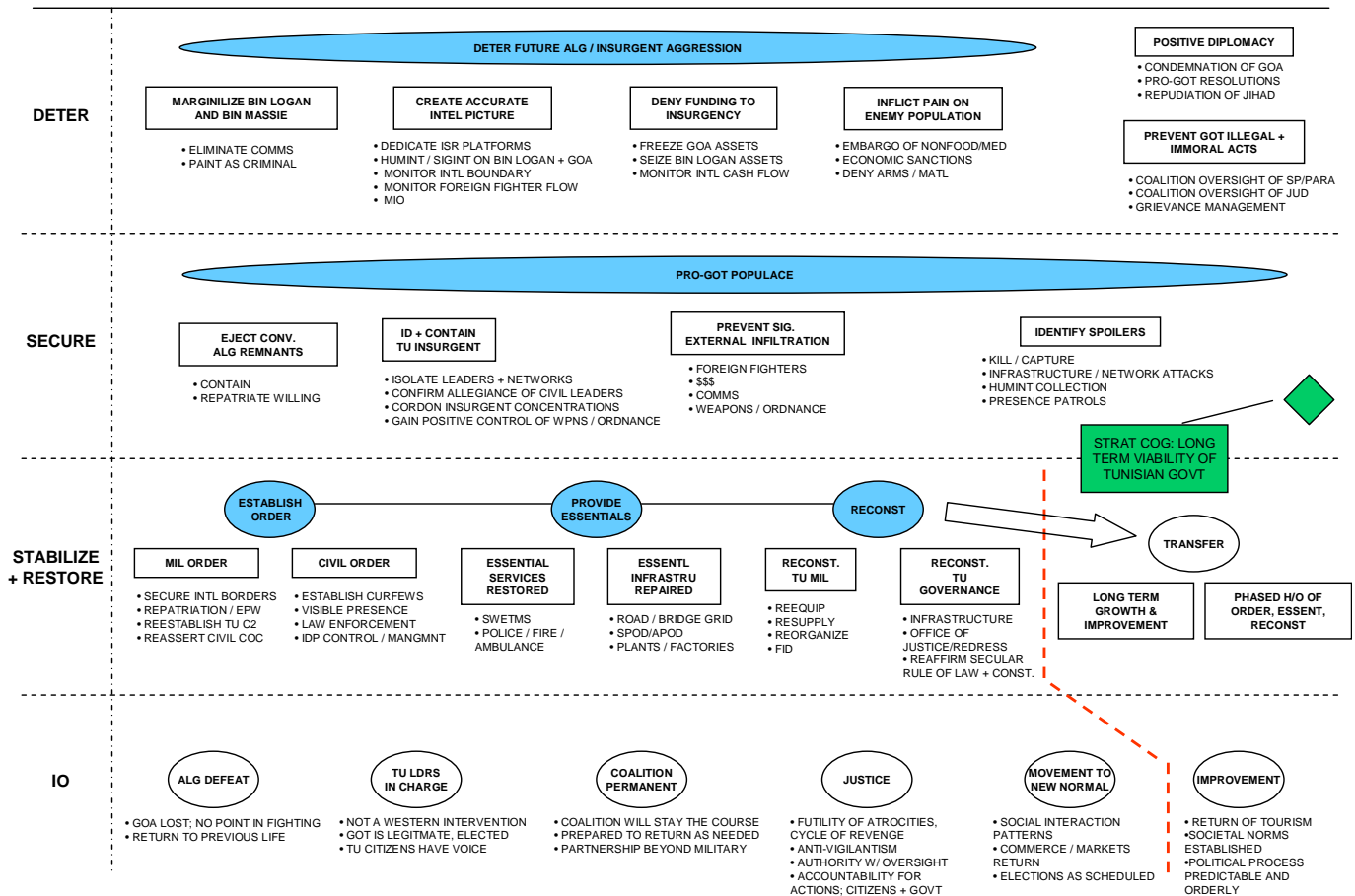


Figure 4: Phases IV-V

This example is a detailed breakout of Phases IV-V (see Figure 4). The information line of operation has been carried over intact from Phases I-III, but three new lines of operation have been defined along logical lines related to functions. The approach is to deter further conventional aggression, while conducting stability and support operations to support objectives (the large ovals) related to meeting the friendly strategic center of gravity.

The decisive points are in the rectangular boxes and the subheadings under the decisive points are tasks related to achieving those decisive points. The IO line of operations has defined a series of key themes that support all of the other decisive points. It is important to remember that operational design is a product to assist planners in visualizing the interrelationships that must exist within the operation in order to achieve success. Details can be added, along with a matrix of related effects, targets (lethal and non-lethal), and additional tasks supporting the achievement of the decisive points.



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The next step in this outline is linking decisive points and arranging and synchronizing the decisive points in such a way that both military and non-military tasks are identified to define responsibilities. The tasks and decisive points can also serve as a means of assessing progress and identifying what coordination between military and non-military elements.

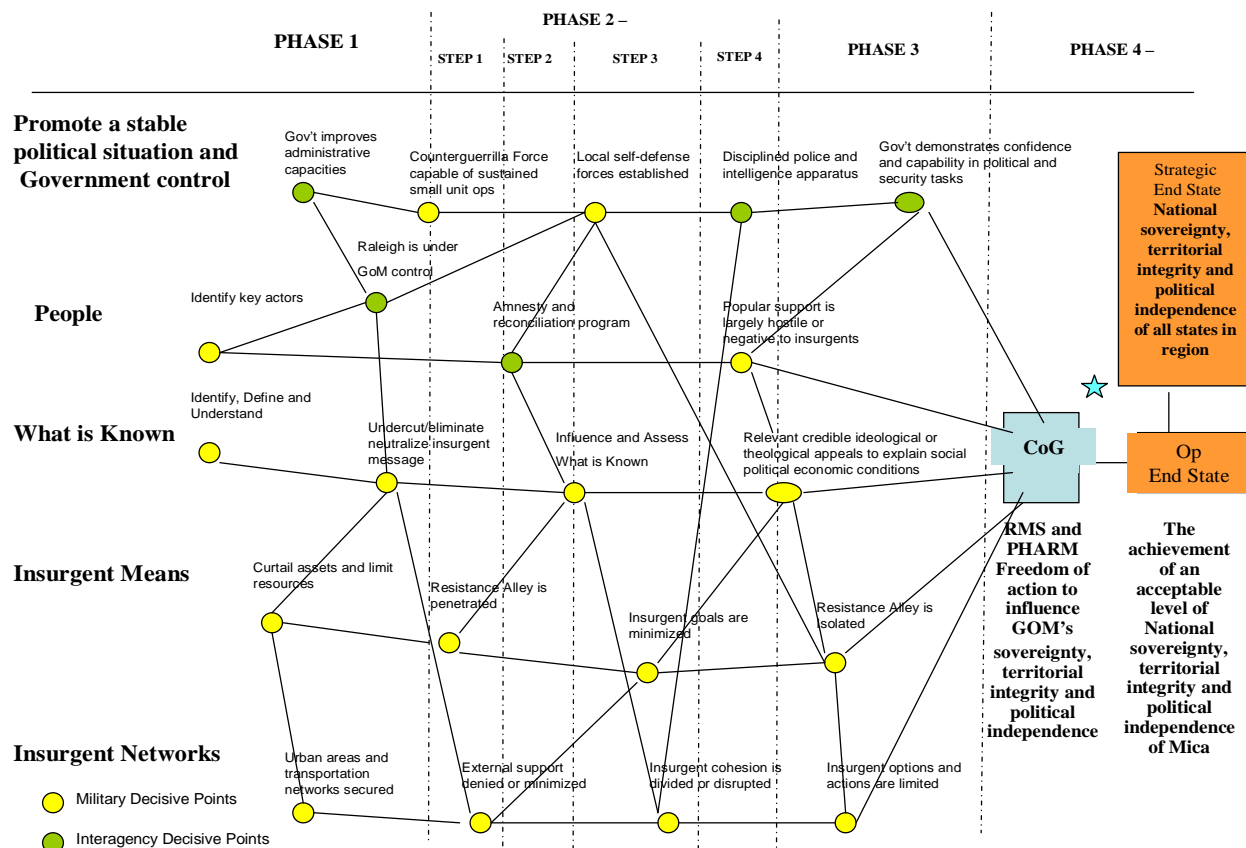


Figure 5: MICA COIN Operational Design

This example is of an operational design for COIN (see Figure 5). Although there is nothing in doctrine that describes how to develop an operational design for COIN, the basic principles involved in the conduct of COIN should be applied to the specific situation. Insurgencies are exceptionally complex and, therefore, require a thorough analysis and understanding before developing the operational design. Nevertheless, insurgencies share common requirements for survival and can be attacked in a number of related ways as illustrated here. The lines of operation are defined both functionally and logically. There are decisive points identified for military and non-military components. The decisive points are heavily interlinked, showing the relationship between information as perceived by various elements of the population (What is Known), isolating the insurgents, and stability. Although there is one COG identified here, it is quite easy to define a COG or objective related to each line of operation. It is important to remember that insurgencies may have multiple centers of gravity (or objectives supporting the achievement of the endstate). Decisive points are broadly defined, but define clearly what must be accomplished, when to advance the campaign toward the endstate or objectives.



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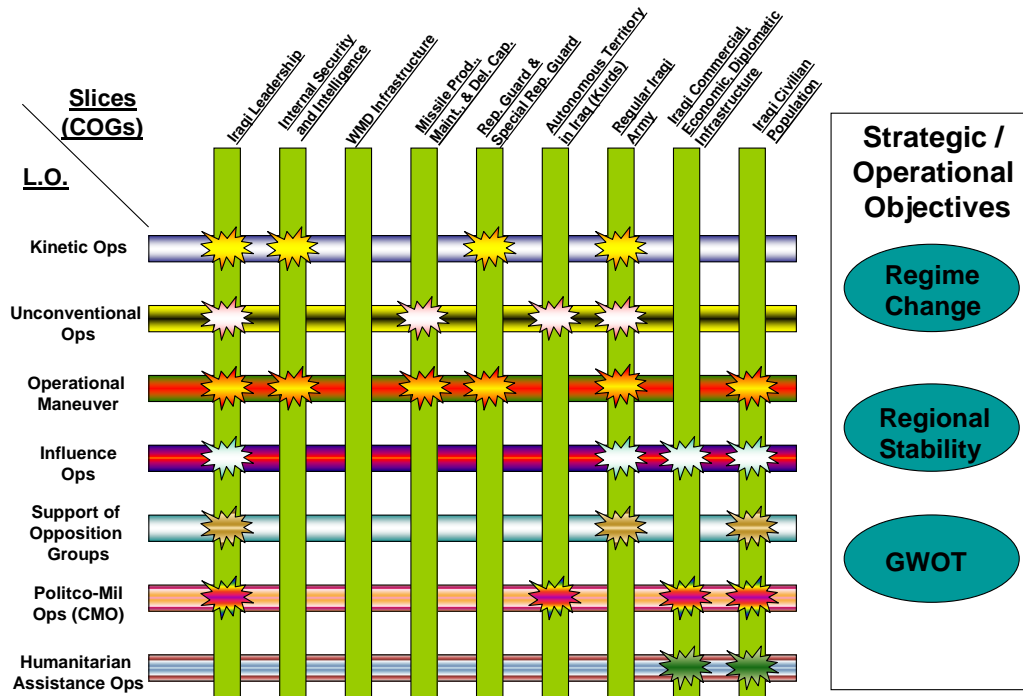


Figure 6: Initial Cut (Dec 01) of Lines of Operation and "Slices" for OIF

This slide from the early planning for OIF shows the pitfalls of misidentifying COGs, objectives, decisive points, and lines of operation (see Figure 6). There is no endstate, and therefore no focus of the operational design. Nine centers of gravity are identified; most of them (the Kurds, Iraqi economic/diplomatic/commercial infrastructure, WMD infrastructure, missile production, etc.) are clearly not COGs. Instead they are important decisive points that should be related to the true center(s) of gravity: the Iraqi civilian population. An operational design that focuses on eliminating or isolating specifically defined decisive points (Iraqi leadership, Iraqi security and intelligence, Republican Guard, Special Republican Guard, WMD infrastructure, the Regular Iraqi Army, economic/diplomatic/commercial infrastructure, for example) in time, space, and effect has an immediate effect on the real COG and achieves two of the operational objectives (GWOT is ill-defined and may or not be applicable, or may be a line of operation, rather than an objective).

The lines of operation here are better defined as tasks related to achieving certain decisive points. The weaving of lines accomplishes nothing in visualizing the operation and ensuring synchronization and integration of capabilities to achieve unity of effort. There is a valid line of operations described as politico-military ops (showing an appreciation for the importance of this activity in reaching the objectives described), but this model cannot describe who, how, when, and why. A good operational design answers each of those questions and provides the framework to address the complexity of modern combat operations.



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Step 8: Detailed synchronization and integration of forces and functions, tasks, targets, and effects to achieve unity of effort.

Decisive points must be examined individually and in detail to understand what is required. Planners must identify what targets (lethal and non-lethal) are related to the decisive point and what effects on those targets are required to achieve that decisive point. Targets are prioritized and assigned to components based on a time or priority sequence. The components must coordinate actions in support of achieving each of the decisive points. Each decisive point is then related to all other decisive points to incorporate a complete picture of what is happening across the battlespace during a space of time. Once this is done, it is relatively easy to identify changes between phases and define what is required within one phase before moving to the next phase. This allows coordination between military and non-military elements and definition of responsibilities. Once a phase is defined in terms of decisive points, the commander's intent by phase can be completed, outlining clearly what is to happen, defining supported and supporting relationships, and describing priority of effort. Likewise, the critical tasks related to decisive points tied to the Phase III to Phase IV transition can be identified early and provide a base of understanding from which the commander can adjust to meet actual conditions. Having an operational design for Phase IV-V allows the planners to describe the sequence of military activities and identify the required support from non-military components that can be coordinated prior to hostilities. It serves as a point of departure for integration of military and non-military elements into Phase IV-V.

Developing an operational design for conventional operations, stability operations, or counterinsurgency operations requires thinking in different ways and understanding the dynamics of the battlespace. The operational design provides planners a means to apply intellect and imagination to addressing the complexities of the battlespace. This methodology compliments current doctrine's description of the elements of operational design to provide the framework necessary for understanding the relationship between endstate, objectives, effects, center of gravity analysis, decisive points, lines of operation and phasing to allow planners to develop an operational design that serves as a bridge between mission analysis and course of action development. It also serves as an overarching guide to the operation and assists the commander in defining his strategic concept. It addresses both conventional and unconventional operations and assists in defining the transition between combat operations and stability operations. Once the operational design is complete, commanders and staffs can develop courses of action that apply forces and functions in different ways but share the common understanding of endstate, center(s) of gravity, decisive points, and lines of operation.

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The JIATF Organization Model: Bringing the Interagency to Bear in Maritime Homeland Defense and Security

**By
LCDR Tom Stuhreyer**

It has almost become a truism that today's national security challenges require solutions that draw on all elements of national power. In maritime homeland defense (MHL D) and maritime homeland security (MHLS), as in so many other aspects of defense and national security in the post 9/11 era, military cooperation is not enough. All elements of national power and those of allied nations or coalition partners need to be coordinated for success. Leveraging all the resources and capabilities of the interagency community is, however, easier said than done. One template for doing so utilizes the joint interagency task force (JIATF) organizational model best illustrated by JIATF South in Key West, Florida. This article aims to present a model for leveraging the JIATF organization model to provide for the maritime security of the American homeland under the aegis of the North American Aerospace Defense Command (NORAD) and their new maritime warning mission.

The Current MHLS/MHL D Situation

Many organizations across multiple jurisdictions have roles in MHLS and MHL D. In the U.S. these include the Navy and the Coast Guard, the other military services, Customs and Border Protection, the FBI, and state and local authorities. In the full North American context, these partners also include Canadian Forces, the Royal Canadian Mounted Police, Public Safety and Emergency Preparedness Canada, Canada Border Services Agency, and provincial authorities. No service or agency with responsibility for MHLS and MHL D missions has all the information or the full range capabilities and authority needed to get the job done successfully.

Everyday cooperation and assistance between military services and civilian law enforcement agencies is coordinated and provided in the maritime domain. In the U.S., local police boats, Coast Guard aircraft and boarding teams, Customs and Border Protection inspectors and fast interceptor vessels, and Department of Defense forces are all working together to secure the maritime domain. This largely works because at the tactical level partnerships between federal, state, and local authorities and private industry existed before 9/11. This cooperation has been greatly expanded in the past six years through initiatives like area maritime security committees, bringing industry and government together, and joint harbor operations centers that create a single command and control node for multiple agencies in a port.¹

¹ Stephen L. Caldwell, "Maritime Security: Information Sharing Efforts are Improving," Testimony to U.S. Congress, House of Representatives, Committee on Government Reform, Subcommittee on Government Management, Finance, and Accountability, (U.S. Government Accountability Office, GAO-06-933T, 10 July 2006), 7-10.



If a situation escalates from a routine security event to an MHL D threat, MHLS players may find themselves in the midst of a homeland defense operation where U.S. Northern Command (NORTHCOM) has command and control authority. The plans, chiefly the Maritime Operational Threat Response (MOTR) plan, and memoranda of agreement that currently exist for mutual support and transitioning responsibility from MHLS authorities to MHL D are appropriately non-specific.² The organizations and agencies responsible for MHLS and MHL D need to be brought together before a threat manifests itself to ensure efficiency, effectiveness, and successful coordination.

NORAD Can Answer the Maritime Call

In May 2006 when the renewed NORAD agreement was announced by the U.S. and Canada, a new maritime warning mission was included. NORAD has provided situational awareness and homeland defense coordination for the aerospace environment since 1958. Now a similar warning mechanism was to be established and organized for the maritime domain. While the stage was set for the new maritime warning mission at NORAD, the renewed agreement was not specific and left key questions unanswered, namely, how should this new element be organized and function, and what resources, if any, would be made available for its implementation? Just as important, how should Maritime NORAD interact and partner with the services and agencies already engaged in MHLS and MHL D activities? Also, notable in the agreement are the very limited parameters of the initial maritime efforts at NORAD. As outlined, this is not yet a comprehensive program, but the start of the maritime mission at NORAD provides the U.S. and Canada a unique opportunity to address a number of critical security gaps in the maritime domain and truly contribute to the security and prosperity of both nations.

The current planning process and initial stand-up of the new maritime warning component at NORAD in Colorado Springs, Colorado, is essentially resource neutral and includes only U.S. and Canadian military personnel.³ The Canadian half of the required billets is being carved from the existing NORAD staff, while U.S. positions are being taken from existing NORTHCOM billets.⁴ Both U.S. and Canadian officials and commentators, including Assistant Secretary of Defense McHale and Canadian Chief of the Defence Staff General Rick Hillier, hailed the development of a capability and structure that would be even greater than its aerospace antecedent.⁵ The NORAD agreement as renewed in 2006, clearly provided language to support broader MHLS/MHL D efforts in outlining the requirement to, “monitor, control, and respond to threats so that [U.S. and Canadian] security is ensured.” The renewed agreement also permits, if

² The White House, *Maritime Operational Threat Response For The National Strategy for Maritime Security* (October 2005). A variety of MOUs and this plan outline in broad terms how the Navy, Coast Guard and other responsible departments and agencies will coordinate when maritime threats to the homeland are detected.

³ When the NORAD agreement was renewed by Canada and the U.S. in May 2006, a new mandate for a maritime warning component was added to the existing NORAD aerospace defense mission.

⁴ Robert L. Hogan, CAPT, U.S. Navy, NORAD/NORTHCOM J-5, Chief, Maritime Division, Interview by author, (1 November 2006, author’s holdings).

⁵ Aarti Shah, “McHale: ‘Maritime NORAD’ Should Be More Than Equivalent of Air Model,” *Inside the Navy*, (Volume 18, Number 23, 13 June 2005); and Barry Cooper, “New NORAD Pact Will Serve Us Well.” *The Calgary Herald*, (10 May 2006, Final Edition, Pg. A 18. <http://web.lexis-nexis.com> accessed 9 August 2006).



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not mandates, interagency coordination for both MHLS and MHL D when it recommends, “utilizing mutual support arrangements with other commands and agencies, to enable identification, validation, and response by national commands and agencies responsible for maritime defense and security.”⁶ The rather tentative first steps in implementing Maritime NORAD would make it seem that the U.S. and Canada risk falling short of the intent of the renewed NORAD agreement and missing the great opportunity it provides.

The reality is that the U.S. and Canada are working in resource constrained times, but this does not preclude using innovative organizational models or breaking existing military command and control paradigms. In the globalized, interconnected world of the 21st century, military capabilities and organizations alone are not enough to protect U.S. and Canadian interests. The implementation of a joint, interagency, bi-national Maritime NORAD organization can be achieved short of full physical establishment of what would amount to a permanent Bi-National Joint Interagency Maritime Task Force. The JIATF organization provides a proven model that, coupled with regionalized MHLS/MHL D command and control, will secure the maritime domain for the U.S. and Canada. Though this article will describe a fuller organization, like that currently in place to combat drug trafficking at Joint Interagency Task Force (JIATF) South, the proposed joint, interagency, bi-national organization is scalable and can rely to a greater or lesser extent on virtual presence and cooperation.

The JIATF South Organizational Model

Established in 1989, JIATF South, first called Joint Task Force-Four and then JIATF East, was charged with the coordination of numerous U.S. government organizations and their effort to stop illegal drug trafficking in the Caribbean and Latin America. A subordinate command of U.S. Southern Command located in Key West, Florida, JIATF South focuses on intelligence fusion and detection and monitoring of drug smugglers in the air and sea lanes of the Caribbean, Central and South America, and the Eastern Pacific. It also coordinates patrols and logistics for forces deployed in support of the counter-drug mission. When smugglers are located and interdiction is possible, JIATF South shifts tactical control of forces to services and agencies with law enforcement authority, such as the Coast Guard and Drug Enforcement Administration, for interdiction and arrest. The official JIATF South mission statement reads:

Joint Interagency Task Force South conducts counter illicit trafficking operations, intelligence fusion and multi-sensor correlation to detect, monitor, and handoff suspected illicit trafficking targets; promotes security cooperation and coordinates country team and partner nation initiatives in order to defeat the flow of illicit traffic.⁷

⁶ Government of the United States of America and Government of Canada, Agreement Between the Government of the United States of America and the Government of Canada on the North American Aerospace Defense Command, (28 April 2006).

⁷ Joint Interagency Task Force (JIATF) South, Mission Statement, (<http://www.jiatfs.southcom.mil/> accessed 8 Nov 2006).



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While counter-drug operations are a very specific mission, the general concepts behind JIATF South lend themselves very well to translation to MHLS and MHL D.

JIATF South has a fully integrated, interagency command structure. Currently, the director is a Coast Guard rear admiral and the deputy director is a Navy captain. The rest of the command cadre positions and directorate leaders are a mixture of officers from the Air Force, Marines, Army, Navy and Coast Guard, as well as civilians from Customs and Border Protection, the Department of Defense, and other federal law enforcement and intelligence agencies. If you call the JIATF South watch and talk to the command duty officer you will talk to an O-4 or O-5 level person who could be from any of the five services, or Customs and Border Protection. Other key partners such as the Drug Enforcement Administration, FBI, and U.S. intelligence agencies are represented by permanently assigned liaison officers. The key point is this organization has been successfully working for nearly twenty years and brings interagency partners together in a unified command structure, rather than the typical military command with just a few interagency liaison officers. This interagency command integration fosters trust and facilitates information sharing and coordination of operational assets rarely seen in the U.S. government, and could be leveraged for missions beyond stopping the illicit drug trade.⁸

JIATF South is not a traditional command with normal military authorities and prerogatives. Rather, it is a U.S. Department of Defense organization with voluntary participation from interagency partners who share the common goal of stopping illegal drug trafficking. Assigned U.S. military personnel are subject to normal military order and discipline, but interagency partners are only obligated to remain invested in JIATF South as long as the command assists them in achieving individual agency goals. As such, JIATF is a kind of interagency “coalition of the willing” whose effectiveness is inextricably tied to the alignment of participating organizations in working toward success in a fairly narrow mission area. In the U.S., this type of arrangement does not lend itself to interagency cooperation in many mission areas without specific direction or a mandate from the President or Congress. The good news for maritime NORAD is the myriad services and agencies concerned with MHLS and MHL D have goal alignment – they are all working to secure the maritime domain of the U.S. and Canada. While an official mandate from the U.S. and Canadian governments requiring the participation of key agencies is desirable, there is good reason to believe this model will work, even voluntarily, in bringing all these dedicated partners together under the aegis of NORAD.

JIATF South, while strictly a U.S. command, also serves as an outstanding model for international operations coordination and information sharing. The command’s counter-drug operations include the participation of forces from key Western allies with interests in the region including the United Kingdom, France, and the Netherlands.⁹ U.S. and allied forces work together in combined force packages, covering an extensive area of responsibility and seizing far

⁸ James Jay Carafano, “A Better Way to Fight Terrorism,” Washington, DC: The Heritage Foundation (17 May 2005, www.heritage.org/Press/Commentary/ed05705b.cfm accessed 05 September 2006); and Richard W. Yeatman, “JIATF-South: Blueprint for Success,” *Joint Forces Quarterly* (Issue 42, 3rd Quarter 2006), 26-27.

⁹ Recently Canada has agreed to join the JIATF South team by providing maritime patrol aircraft to assist in monitoring and detection efforts.



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more drugs together than they could individually. A typical operation might feature a U.S. Customs and Border Protection patrol aircraft, supporting a British warship with a U.S. Coast Guard boarding team onboard, working inside the territorial sea of a regional partner nation to stop, board, and seize a vessel smuggling cocaine. The Office of National Drug Control Policy reports growing mission success with this approach.

Transit zone interdiction has been one of the bright spots in the national effort to stop drugs before they enter the U.S. For the third straight year, JIATF-South seized and/or disrupted a record amount of cocaine. Transit zone seizures and disruptions in 2005 amounted to 254 metric tons, compared to 219 metric tons in 2004 and 176 metric tons in 2003.¹⁰

It is notable that these JIATF South cocaine seizure records were being broken at a time when fewer U.S. naval and air assets were available due to the high operations tempo associated with the Global War on Terror. These results point to the efficacy and force-multiplying aspect of the joint, interagency, and multi-national approach to operations at JIATF South.

In addition to operational cooperation, JIATF South facilitates a robust international liaison program that results in a strong information sharing effort with various partner nations in Latin America and the Caribbean. Recognizing varying levels of cooperation, participation, and closeness with these regional partners, JIATF South has developed a unique, compartmentalized information sharing regimen. Liaison officers, from almost all regional nations attached to JIATF South, help smooth the coordination of operations and enactment of bi-lateral agreements. The command even has a secure, but unclassified, communications link to share operational information in real time called the Cooperating Nations Information Exchange System.¹¹ This system links the command centers of a host of Latin American navies, air forces, and coast guards to JIATF South in Key West, and to the Coast Guard commanders in Miami, Florida, and Alameda, California, who are responsible for interdiction operations in their area of responsibility.

The JIATF South organizational framework could be effectively utilized by NORAD in establishing a joint, interagency and bi-national command to coordinate MHLS and MHL D information sharing, analysis, and command and control. NORAD has already mastered bi-national integration. The JIATF South model would bring key partners from Canadian and U.S. non-military agencies, like Royal Canadian Mounted Police and U.S. Customs and Border Protection, into the command structure. This undoubtedly will help build the trust and interagency ownership required for real information fusion and unity of effort. The information sharing and intelligence fusion model, in particular, should be looked to for guidance in establishing the maritime warning mission and a broader, comprehensive maritime NORAD.

¹⁰ Office of National Drug Control Policy, Transit Zone Interdiction Operations Fact Sheet (http://www.whitehousedrugpolicy.gov/publications/international/factsht/transit_zone_interdic_op.html accessed 10 Nov 2006).

¹¹ CNIES, as the system is known, includes e-mail, chat, a means to share vessel and aircraft track data packaged with a remarkably useful Spanish-English translation function to foster international information sharing.



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For the U.S., interagency integration at NORAD would help fill the void between agency headquarters in Washington and field level operations. For instance, Customs and Border Protection has twenty field offices overseeing 317 U.S. ports of entry.¹² The FBI has 56 field offices and more than 400 satellite offices.¹³ Integrating Customs and Border Protection, FBI personnel, and other agencies into the maritime NORAD structure, could also help provide operational level coordination in the maritime realm between the agency headquarters and tactical level field operations.¹⁴

Perhaps the most important advantage of the JIATF model for Maritime NORAD is that it would help close the seam between MHLS and MHLA by bringing together the lead agencies and partners under one organizational roof. Rather than rely on ad hoc arrangements during times of crisis, these stakeholders will be working together all the time. As intelligence and indicators point toward various threats, meaningful planning and coordination can take place before a critical event occurs. When an unforeseen event rapidly begins moving from a routine security situation to a defense threat, all the appropriate services and agencies would be represented to ensure a seamless hand-off from MHLS authorities to a NORTHCOM led defense homeland operation. Just as important, if MHLS/MHLA officials are presented with a terrorist attack *fait accompli*, the bi-national, joint, interagency NORAD organization would be able to coordinate initial response and mitigation efforts, and provide a smooth transition to NORTHCOM for its continued support to the Department of Homeland Security within the framework of the National Response Plan.

Applying the JIATF concept to bi-national homeland defense and security is not new or completely novel. In its March 2006 report, the Bi-National Planning Group introduced several organizational concepts for improving North American defense and security. One of these, as shown in figure 1, was a Continental Joint Interagency Task Force fusing bi-national defense and security.¹⁵ The organization model proposed in this article is really the maritime subset of the comprehensive defense and security model proposed by the Bi-National Planning Group. Though desirable, establishing the Continental Joint Interagency Task Force may not be realistic in the short term because of fiscal, policy, and organizational culture barriers.¹⁶ The Bi-National Joint Interagency Maritime Task Force could serve as an excellent starting point for building the Bi-National Planning Group's all domain joint interagency task force.

¹² Customs and Border Protection, Field Operations Offices (<http://www.cbp.gov/xp/cgov/toolbox/contacts/cmcs/> accessed 10 November 2006).

¹³ Federal Bureau of Investigation, About Us - Quick Facts (<http://www.fbi.gov/quickfacts.htm> accessed 10 November 2006).

¹⁴ The lack of operational level leadership is a key gap in homeland security. Before Secretary of Homeland Security Tom Ridge announced his resignation in late 2004, DHS was moving toward regionalization that would have provided unified, operational level command and control for the department's agencies. When Michael Chertoff succeeded Ridge, the plans were shelved and are no longer being actively considered.

¹⁵ Bi-National Planning Group, The Final Report on Canada and the United States Enhanced Military Cooperation (Peterson AFB, CO, 13 March 2006), 40.

¹⁶ Bi-National Planning Group, 41.

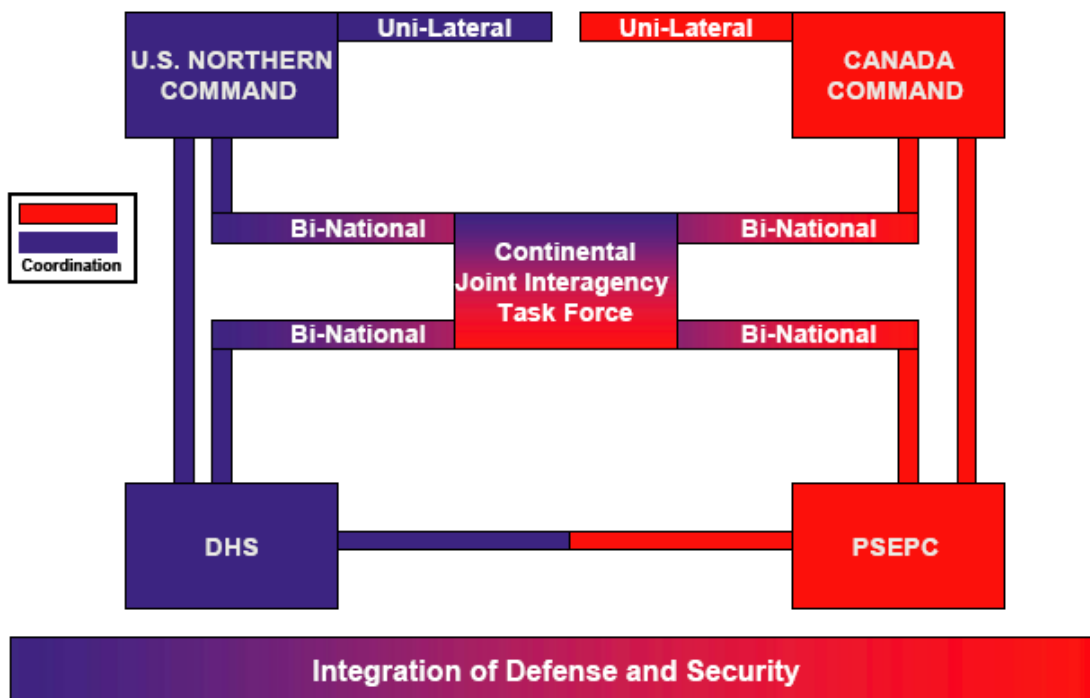


Figure 1: Bi-National Planning Group's Continental Joint Interagency Task Force Concept¹⁷

Finally, this organization could ultimately provide a structure for bringing our other North American neighbor, Mexico, into the maritime warning and command and control effort. With an inter-dependent economy, trade agreements like the North American Free Trade Agreement, growing container ports on the Pacific coast, a large commercial fishing fleet, a significant passenger cruise business, and major petroleum operations in the Gulf of Mexico, efforts to establish North American MDA and a maritime shield, really cannot be complete until Mexico is brought into the U.S-Canadian partnership. Like the Continental Joint Interagency Task Force, this too may seem far-fetched today, but the JIATF South model has a solid international information sharing regimen that could bring Mexico, specifically the Mexican Navy, aboard the maritime NORAD effort in graduated stages.

Command and Control Organization and Regionalization

Successful MHLS and MHL D is such a daunting task in scope and complexity that it cannot be centrally managed in a single location. One of the key lessons learned from NORAD's air defense history is the value of command and control regionalization in providing for the defense of North America. This regionalization allows NORAD to provide the appropriate level of air domain situational awareness and scrutiny of specific events. As necessary, incidents are

¹⁷ PSEPC stands for Public Safety and Emergency Preparedness Canada, the Canadian counterpart to the U.S. Department of Homeland Security. Bi-National Planning Group, 40.



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elevated or delegated to the appropriate level for monitoring and action. This same type of command and control structure and regionalization is needed in the maritime domain.

Much of the joint and interagency framework for the regionalization of Maritime NORAD already exists and only requires coordination and synchronization. In fact, Canada has already directed significant effort toward command and control regionalization in the maritime domain. Canada is establishing three Maritime Security Operations Centers using their Joint Task Force – Pacific (Athena) and Joint Task Force – Atlantic (Trinity) maritime operations centers as foundations on the West Coast and East Coast, while establishing a new operations center for the Great Lakes. These centers will fuse operations and intelligence with the Canadian military and key government agencies including the Canadian Coast Guard, Transport Canada, Canadian Security Intelligence Service, Royal Canadian Mounted Police, and other law enforcement agencies.¹⁸

Regional maritime command centers in the U.S. should piggy-back on existing maritime command and control nodes, with the relationship between the U.S. Navy and U.S. Coast Guard serving as the foundation. As previously noted, these two services already work closely together across the full spectrum of maritime operations at home and overseas. They bring the right mix of capabilities and authorities and provide key linkages between military and civilian forces and between the Department of Defense and Department of Homeland Security. At the tactical level, they already operate joint harbor operations centers with other key partners in places like Norfolk and San Diego. In other key military ports, local Navy and Coast Guard commands share information and jointly tackle security issues ranging from the escort of high value assets, maintenance of security zones, and security for military out loads and in loads.

Currently, the most important U.S. MHLS/MHLD coordination occurs on the East and West Coasts between the numbered Navy fleets and the Coast Guard area commands. While Second Fleet in Norfolk and neighboring Coast Guard Atlantic Area in Portsmouth, Virginia, do not share a collocated command center, they do have significant command and control ties, communications compatibility, and information sharing protocols. Similarly, Third Fleet in San Diego is closely connected with Coast Guard Pacific Area in Alameda, California, even conducting weekly joint operations and intelligence briefings via secure video teleconference. These partnerships are familiar, tested, and already work with the NORTHCOM Joint Operations Center and the Joint Forces Maritime Component Commander at U.S. Navy Fleet Forces Command on a daily basis. As shown in figure 2, the chain of command could go directly from NORAD to regional command centers, or from NORAD through Canada Command and NORTHCOM to regional command centers.

¹⁸ Wayne R. Krause, LCol Canadian Forces, NORAD Maritime Initial Planning Team, Interview by author, (23 October 2006, via e-mail, author's holdings).

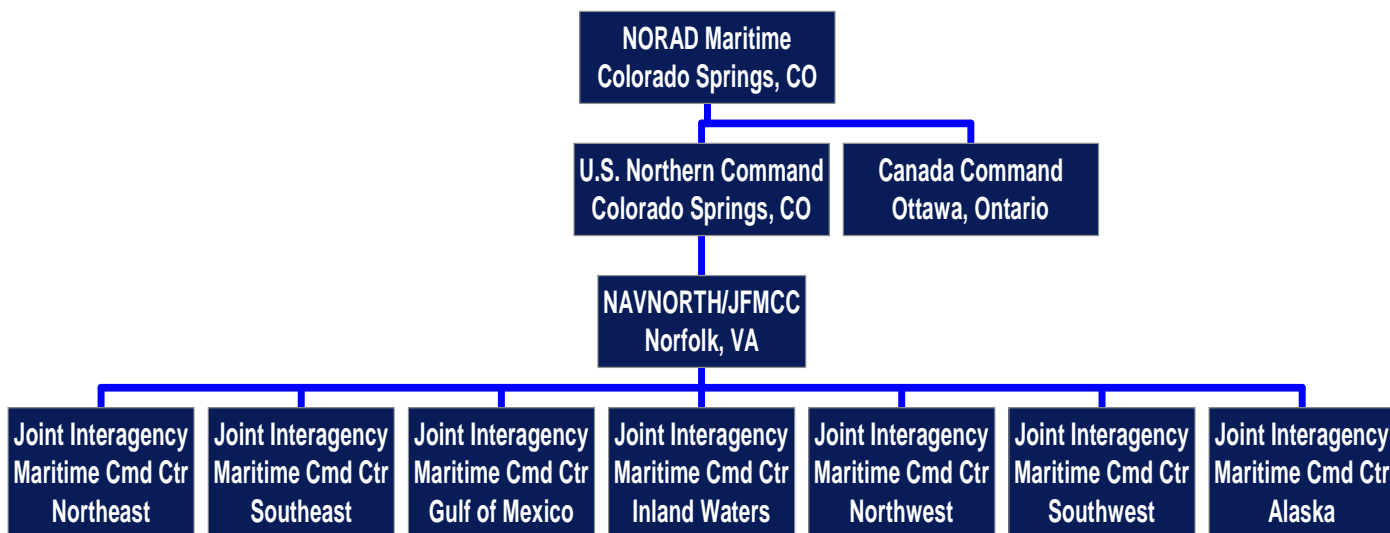


Figure 2: Possible Model for U.S. Regionalization of Maritime NORAD

Ideally, regional maritime command centers would bring the Navy and Coast Guard together physically with other key players like CBP and FBI, as well as state agencies, represented by watchstanders and liaison officers. Practically, the current virtual connectivity between the Navy's Second and Third Fleets and the two Coast Guard Areas is an acceptable starting place. However, the lack of representation from other services and agencies is a significant shortfall. Serious work needs to be undertaken to get at least Customs and Border Protection and FBI representation into this arrangement. One or more additional regional command center should also be considered to adequately cover the coast of the Gulf of Mexico, Western Rivers, and Great Lakes. As long as the NORAD command and control ties remain strong, these regional centers might have proportionally less Navy representation since they are largely internal waterways. Like other multi-tasked and multi-mission military commands, the NORAD regional maritime command centers would normally be transparent, doing the regular work the Navy and Coast Guard already does each day. Each service would work its issues with its inherent authorities and through the normal chains of command.

Conclusion

The safety and security of the North American maritime domain is essential to the wellbeing and economic prosperity of the U.S., Canada, and the rest of the world. The extraordinary size, scope, and complexity of this environment, coupled with the traditional divisions between defense and law enforcement make the task of providing effective North American MHLS and MHL D daunting. Through use of the JIATF organization model and regionalized command and control, all the capabilities of both the U.S. and Canadian interagency community would be at the disposal of MHLS and MHL D commanders. Most importantly, when something extraordinary requiring broad multi-agency or bi-national coordination did occur, all the



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command and control apparatus and relationships outlined in the Maritime Operational Threat Response (MOTR) plan would be in place, available, and well-practiced.

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Upcoming Events

- **30 April-3 May: Western Combatant Command Trip**
- **7-8 May: Homeland Security Planners Course**
- **22-23 May: Joint, Interagency and Multinational Planners Course**
- **15 June: JAWS Graduation**
- **19-20 April: Joint Senior Leaders Course**
- **23 July: JAWS Class of 2008 begins**



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The following campaign planning publications are available from the Joint Advanced Warfighting Schools, Department of Operational Art and Campaigning.

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[Joint Operation Planning Primer](#) [pdf] **NEW**

Case Studies

- [Horatio Nelson and the 1798 Mediterranean Campaign](#) [pdf]
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War Plans

The following collection of war plans are from the Joint Forces Staff College Library. These are original World War II campaign plans have been scanned electronically to enable easy accessibility. Each campaign plan consists of a back ground introduction followed by the original plan in electronic format.

[Introduction Reno IV Outline Plan](#) [doc]

- [RENO IV Outline Plan 6 March 1944](#) [pdf]

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- [Operations Instruction NO. 74 MINDORO 13 October 1944](#) [pdf]

[Introduction to Tarakan Island Operations Instruction NO. 99](#) [doc]

- [Operations Instruction NO. 99 Tarakan Island 21 March 1945](#) [pdf]

[Introduction to Operation "ECLIPSE"](#) [doc]

- [Operation "ECLIPSE" Appreciation and Outline Plan 24 November 1944](#) [pdf]

[Introduction Operation Blacklist](#) [doc] **NEW**

- [Operation Blacklist Basic Online Plan](#) [pdf] **NEW**



Intent

The Joint Advanced Warfighting School (JAWS) is envisioned to populate the Joint Staff and combatant commands with a cadre of officers expert in the joint planning processes and capable of critical analysis in the application of all aspects of national power across the full range of military operations. Graduates will be capable of synergistically combining existing and emerging capabilities in time, space and purpose to accomplish a range of operational or strategic objectives.



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