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## Executive Summary

**Title:** Pursuit to Victory: A Model to Leverage USMC Combined Arms Armor and Aviation Capabilities to Achieve Decisive Results at the Operational Level of War

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**Thesis:** Organizing self-sustaining armor and cavalry to conduct exploitation and pursuit best exploits the advantages of concentrated armor at the operational level and provides the tempo advantage of true maneuver warfare doctrine; thereby maximizing its operational impact. Therefore, developing a task organized Operational Exploitation and Pursuit Force (OEPF) – a combined arms team of rotary wing attack aviation (close air support/armed reconnaissance), cavalry (ground and air), armor, and artillery – is the best use of armor in the modern system of warfare.

**Discussion:** The complexity of modern defense systems (arrayed in depth and requiring the attacker to breakthrough beyond the depth of supporting fires) creates a significant problem when applied to modern conventional offensive operations that the past decade of stability operations has obscured. The essence of the tactical problem associated with A2AD is that modern defense systems rely on depth to defeat attackers through forcing culmination within the heart of the intermediate zone (the area in which the preponderance of firepower is arrayed in order to achieve decisive result, and is contemporarily referred to as the main battle area). Though the weapon systems have improved over time, the fundamental challenge associated with overcoming the inherent supremacy of the defense has not. Breaking through the defense has therefore become a tactical problem with operational impacts. This analysis suggests that the breakthrough of a modern defense in depth will be an absolute requirement of future war, and that exploitation and pursuit beyond that breakthrough is how tactical action is translated into operational success. Exploitation gets to the heart of the concept of attacking in depth, to induce collapse of the enemy system, and contributes directly to employing maneuver warfare doctrine. A task-organized force (designated in this paper the *Operational Exploitation and Pursuit Force*) can provide self-sustaining operational level maneuver that will directly contribute to operational success. This conceptual task organization would provide a method of projecting expeditionary power deep into the enemy's rear, while avoiding culmination.

**Conclusion:** In its current employment of armor in doctrine and practice, the MAGTF fails to capitalize on the shock effect of the armor force to truly achieve an asymmetric, indirect effect. Instead, organizing self-sustaining armor and cavalry into the conceptual OEPF best exploits the advantages of concentrated armor at the operational level and provides the tempo advantage of true maneuver warfare doctrine; thereby maximizing its operational impact. Establishing this framework in training would provide the experience and support relationships necessary to test the concept in practice. Further, it is necessary to break the paradigm of disaggregating armor in order to avoid the pitfalls of applying what works in counterinsurgency operations to full-scale conventional combat. In the latter, only armor employed in mass has been proven to be the most effective method. The OEPF provides a conceptual framework to maximize this fact.

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## *Preface*

Breaking through the modern defense in depth system is under studied in contemporary professional military education, as is the complexity of conducting pursuit operations. This project is inspired by the fact that contemporary experience in Iraq and Afghanistan has obscured the fundamental principles of armor employment. Unfortunately, Heinz Guderian is understudied within the USMC armor community, and therefore the true concept of shock action has been relatively lost within contemporary USMC thinking. Furthermore, though Anti-Access Area Denial (A2AD) is a defense in depth in its most modern form it appears understudied in that regard. Failure to think through the appropriate way to defeat this modern defense system, specifically with respect to exploitation and pursuit post-breakthrough, will create errors in procurement and doctrine development. The purpose of this paper is to introduce a conceptual solution that uses contemporary MAGTF capabilities to leverage the combined arms team in exploitation and pursuit, and redefines how the USMC should employ armor in the future.

I could not have completed this work without the invaluable assistance of Dr. Gordon Rudd and Dr. Bradley Meyer, both from the School of Advanced Warfighting. Their expert knowledge in armor employment and defeating the modern defense in depth was vital in helping address the critical issues that must shape contemporary military thinking regarding operational exploitation and pursuit. Therefore, I am grateful for their guidance and support.

*Klotzen, nicht kleckern!* – “Hit with the fist, don’t feel with the fingers!”<sup>1</sup>

What is the role of armor in the United States Marine Corps in the present and into the future? Exploration of the question unfortunately yields varied and often times conflicting results. Responses typically include “armored protected firepower” and “shock action,” with little reflection on the true definition of the terms and of the impact they have at the operational level of war. A decade of stability operations has bemused the question further, as the tactics of tank-infantry integration dominated training and combat operations. Even within the armor community consensus does not exist regarding the most effective means of employing armor within the MAGTF. There now exists a dependence on armor providing infantry support in urban and stability environments down to the small unit level, with the potential of tactical benefit superseding the requirement for armor to penetrate deep into the enemy rear; thereby attacking the enemy will instead of achieving mere local combat power supremacy. However, if the Marine Corps believes that conventional operations are still within the scope of the MAGTF, serious consideration must be taken to determine the most effective means of employing armor to achieve decisive results.

Contemporarily speaking, armor employment in the Marine Corps is conducted piecemeal in a manner that prohibits concentration, and to ensure equal distribution across each infantry division. Unfortunately, this prohibits the concentration of armor necessary to achieve decisive results. At the outset of armor doctrine development, Generaloberst Heinz Guderian identified this parochial proclivity of maximizing support to infantry at the detriment of operational impacts. Guderian argued that “[c]oncentration of the available armoured forces will always be more effective than dispersing them, irrespective of whether we are talking about a

defensive or offensive posture, a breakthrough or an envelopment, a pursuit or a counter-attack.”<sup>2</sup>

The complexity of modern defense systems (arrayed in depth and requiring the attacker to breakthrough beyond the depth of supporting fires) creates a significant problem when applied to modern conventional offensive operations that the past decade of stability operations focus has obscured. Historic antecedents suggest that the most complex problem attacking units will have to face is penetrating the labyrinth of these defenses. As Anti-Access/Area Denial (A2AD) technologies proliferate, the depth of defenses will extend beyond the coast to disrupt combat power projection in the littorals. As expeditionary operations remain a principal focus of the USMC, intellectual rigor must be applied to determine how best to employ the contemporary and future capabilities of the MAGTF to achieve a breakthrough and subsequent exploitation.

The main distinction between ship-to-shore movements of previous generations and the contemporary concept of ship-to-objective maneuver (STOM) is the avoidance of the task to establish a beachhead in order to achieve a lodgment ashore. Conceptually, bypassing defenses expected in the vicinity of the beachhead enables attacking forces to leverage the surprise gained by using the sea as maneuver space to rapidly attack to the ultimate objective of the operation without having to address the tactical problem of breaking through defenses established along the Force Beachhead Line (FBHL) or at the shoreline itself. Though convenient, current amphibious lift capability shortfalls preclude the realization of the concept. Further, even if adequate Over the Horizon (OTH) lift capability existed, the shortfalls of operational reach would necessitate an operational pause within the modern defense in depth of the enemy ashore. Bypassing this defensive scheme with vertical envelopment, though conceptually appealing,

would fail to provide the combat power and subsequent mobility necessary to truly exploit the initial surprise achieved.

The growing desire to shift MAGTF warfighting focus to an ACE-centric model (as implied in *Expeditionary Force 21*<sup>3</sup>) with a heavy emphasis on lightening the MAGTF to enhance Operational Maneuver from the Sea (OMFTS), runs the risk of eliminating or reducing other required combat capabilities. Though an ACE-centric MAGTF might enable the realization of OTH maneuver, the inherently light nature of such a future expeditionary force will not provide a deep exploitation maneuver capability with adequate combat power to face a conventional foe. Although heavy armor and light armored reconnaissance capabilities pose difficulties for ship-to-shore movement and operational reach beyond the coastline, a task-organized force of air, cavalry, artillery and armor could directly contribute to decisive success in exploitation and pursuit operations. Further, historical precedent suggests that this form of combined arms team is highly successful in achieving asymmetric results – turning tactical victories into operational successes.

The phases of an amphibious operation of the future will still require the fundamental requirements of penetration of the defense in depth and exploitation of that penetration, followed by the achievement of the ultimate objective. Despite the difficulties of ship-to-shore movement (which undoubtedly slows the establishment of armored combat power ashore), retaining armor and cavalry as an exploitation force in reserve directly enables pursuit operations deep beyond the FBHL without requiring an operational pause after the breakthrough. Further, this task-organized team (designated in this paper the *Operational Exploitation and Pursuit Force*) can provide self-sustaining operational level maneuver that will directly contribute to tempo generation – complementing the ACE-centric capability with armored protected firepower. A

task organized force developed with a tank battalion as its base, with a ground reconnaissance capability, a mobile artillery capability, an engineer capability to provide mobility for the maintenance of speed, and an air cavalry capability to identify the enemy and pursue him until decisive victory is achieved.

To have a decisive operational impact, pursuit of the enemy force to its defeat should be seen as the best way of exploiting the advantages of surprise achieved by using the sea as maneuver space. *Organizing self-sustaining armor and cavalry to conduct exploitation and pursuit best exploits the advantages of concentrated armor and maximizes its operational impact. Therefore, developing a task organized Operational Exploitation and Pursuit Force – a combined arms air and ground team – is the best use of armor in the modern system of warfare.* However, in order to achieve this potential gain, disaggregating armor for the benefit of local combat power supremacy must be abandoned and true concentration must be preserved.

### **Breaking Through the Modern Defense in Depth**

*“The defense in depth must be attacked in depth”<sup>4</sup>*

The essence of the tactical problem associated with A2AD is that modern defenses rely on depth to defeat attackers through forcing culmination within the heart of the intermediate zone (the area in which the preponderance of firepower is arrayed in order to achieve decisive result, and is contemporarily referred to as the main battle area). Though the weapon systems have improved over time, the fundamental challenge associated with overcoming the inherent supremacy of the defense has not. Breaking through the defense has therefore become a tactical problem with operational impacts. A “breakthrough” attack, in a contemporary sense, is best defined doctrinally as a penetration, which is: “a form of maneuver in which an attacking force seeks to rupture defenses on a narrow front to disrupt the defensive system.”<sup>5</sup>

History is replete with examples associated with this challenge dating back to the First World War. Fear of failing to achieve a breakthrough had consequences for the organization of forces, specifically with respect to armor. The experiences of WWI seemed to indicate that achieving breakthrough by the use of armor, specifically employed in piecemeal fashion across the front, failed to achieve a decisive breakthrough at Cambrai in 1917. Where penetration was achieved, subsequent exploitation was impossible due to attacker culmination. Breaking through the defense in depth is a race, in which the attacker must project combat power into the rear of the enemy defense system through the gap created in order to maximize the advantage of the penetration. Without a highly mobile, self-sustaining force to exploit these local breakthroughs in WWI, Guderian argued, “the defenders always had the time to seal off the locations of the breakthroughs before the attacking troops, advancing step by step, could exploit their initial successes.”<sup>6</sup>

Guderian gleaned a valuable lesson from this historical analysis. Employing armor in “penny packets” to achieve a breakthrough was not in keeping with the inherent advantages of the weapon system. In order to defeat the defense in depth, the system had to be attacked in depth – with a ready force capable of flowing through the gap created to achieve an asymmetric advantage. Stated succinctly by Stephen Biddle, a leading military historian and senior fellow in Defense Policy at the Council on Foreign Relations: “Breakthrough and exploitation is designed to induce systemic collapse of a defense while fighting through only a fraction of it directly.”<sup>7</sup> Flashing forward to the resounding German success at the Battle of Sedan in May 1940, Guderian would later explain: “the essence of the success at Sedan was not to be found in the ‘breakthrough action’ as such but rather the immediate exploitation of the breakthrough by the thrust of the Panzer Force deep into enemy territory.”<sup>8</sup> In this example, primarily due to the

challenges associated with crossing the Meuse River, the breakthrough itself was conducted by the infantry – which freed the armor to conduct an exploitation of unparalleled success.<sup>9</sup>

### **Exploitation into Victory**

*“The exploitation of success is the key to victory.”*<sup>10</sup>

Exploitation gets to the heart of the concept of attacking in depth. According to US Army ADP 3-90 *Offense and Defense (2012)*, exploitation is: “a type of offensive operation that usually follows a successful attack and is designed to disorganize the enemy in depth.”<sup>11</sup> The previous version of this manual, *Field Manual 3-90 Tactics (2001)*, went further to state: “Exploitation is the *primary means of translating tactical success into operational advantage*” [emphasis added].<sup>12</sup> Upon completion of the breakthrough, attacking forces must quickly transition to the exploitation and subsequent pursuit if the combat power generation race is to be won, and systemic collapse is to be achieved.

Success in exploitation is predicated on task organization. Culmination is the Achilles Heel of the attack, whether in exploitation or otherwise. Operational reach can negate the expenditures associated with conducting a breakthrough if culmination occurs in the inopportune time when the enemy defense can recover. By task organizing forces to be reserved for the sole purpose of the exploitation, tempo can be achieved. As the mobile counterattack is the defeat mechanism for the modern defense in depth, exploitation forces must be weighted with enough force to destroy the inevitable counterattack and to continue the attack deep into the enemy’s rear.

Exploitation traditionally transitions to pursuit if in fact the exploitation accomplishes the desired operational success it is aimed to achieve. Pursuit is: “an offensive task designed to catch or cut off a hostile force attempting to escape, with the aim of destroying it [...] Bold action,

calculated initiative, and accounting for the associated risks are required in the conduct of a pursuit.”<sup>13</sup> The very tenants of USMC maneuver warfare doctrine seek to achieve the asymmetric results associated with the collapse of the enemy system by targeting his will to resist.

At the field army level this designation of mobile exploitation and pursuit forces may not be a bridge too far due to the scale of the forces available for tasking. However, the Marine Expeditionary Force (MEF) may find itself in a unique position where it requires this capability but traditional concepts of employment prohibits execution. During the conduct of amphibious operations, the MEF conducts tactical actions that endeavor to achieve operational impacts. Traditionally, USMC forces have task organized in such a manner that establishment of the FBHL was the primary and initial task to combat power build-up – with an inevitable operational pause required in order to reorganize forces to continue the attack inland. In essence, the FBHL enables the defender to reorganize his defenses, and necessitates a breakthrough if operational objectives are to be achieved. Despite the fact that STOM seeks to leap the FBHL in stride without the requirement for additional breakthroughs, technological limitations prohibit the realization of this concept. Therefore, if the MAGTF is to breakthrough a modern defense in depth, it should be task organized in such a manner that the breakthrough can be achieved by those forces historically proven to be best postured to do so – the infantry-aviation team; while motorized and mechanized forces are poised for rapid exploitation and pursuit without the requirement to pause at the FBHL. As FM 3-90 suggests: “the use of an operational pause generally results in the abandonment of the pursuit because the enemy is able to use that time to organize a coherent defense.”<sup>14</sup> Therefore, it is incumbent on the attacking force to task organize and plan in advance of the attack for this critical phase in the enemy’s defeat. Eliminating the operational pause will directly lead to operational success.

## **The Role of Armor in Breakthrough, Exploitation, and Pursuit**

To this point the central theme of the argument presented is that certain forces are predisposed to success in conducting the breakthrough. Breakthrough is an infantry and artillery task. Though a decade of counterinsurgency operations may have obscured perspective, breaking through a modern defense in depth against a near-peer competitor will require local air superiority and concentration of fires at the decisive point in order to set conditions for subsequent exploitation. Without breakthrough there is no exploitation. However, disagreement exists as to where the limited USMC armor should be placed in order to achieve success, especially in light of the logistics requirements inherent to heavy forces. In sum, what is the current role of armor in the USMC, and is this the most effective use of the resource? The answer revolves around the subject of mass versus decentralized armor support to infantry. After a decade of penny packeting armor to support the infantry division in extended battlespace, a look back into history is illustrative.

Guderian is seen by many as the father of armor employment. To him, the mission of armored forces was to provide surprise through concentrated strength, with the sole view of gaining the decision.<sup>15</sup> From the inception of the tank, two schools of thought emerged as armor employment concept developed. First, that the tank should be employed purely in support of infantry, and secondly, that armor (with mechanized/motorized infantry) should be used to attack deep into the enemy rear, maximizing shock action to achieve the decision.<sup>16</sup> Both schools developed doctrine and organization to support either end of the spectrum, with the French largely subsuming the former, and the Germans employing the later.

The results of these two doctrines clashing in conflict are telling. The French, adopting to the positional warfare theories of the First World War, could not cope with the revolutionary

employment of Blitzkrieg by the Panzer divisions during the outset of World War II in Operation SICKLE CUT, May 1940 (the Battle of Sedan highlighted above). From this Guderian concluded: “Modern tank forces must not be developed merely with the object of using them in direct support of the slow, laborious attack of the infantry. On the contrary, there should be tests to see whether it is possible to utilize the characteristics of the tank more fully, so that its effect may be more beneficial to operations as a whole.” Further, he stated that in order to maintain speed, “the auxiliary weapons of tank units must be as fast as the tank themselves.”<sup>17</sup> Finally, Guderian concluded that employing tanks merely as support to infantry provides merely “limited tactical utility” with no operational impact whatsoever.<sup>18</sup>

Though armor at the point of penetration may be conventional wisdom (the proverbial “lead with armor, not with flesh”) historically speaking this does not hold true. *Stosstrupaktik*, as applied to modern breakthrough operations, suggest the viability of massing artillery, infantry, and aviation at the point of penetration without armor in order to free armor forces for exploitation and pursuit, where their shock action can be maximized to achieve the true decision. Guderian concluded that to maximize the potential of the speed that armor provides, tanks should be concentrated in formations designed to exploit that maneuver capability – formations that are suited for exploitation.<sup>19</sup> On the other hand, “slaving” armor to infantry in a purely support role in the breakthrough itself denies the benefit of the post-breakthrough exploitation and pursuit, and operational pause becomes unavoidable. Trying to be strong everywhere by disaggregating armor to the infantry division results in being exceptionally strong nowhere, and removes opportunities for exploitation thereafter. Mass is the key, and must be levied at the decisive point. As Guderian warned: *Klotzen, nicht kleckern!* – “Hit with the fist, don’t feel with the fingers!”<sup>20</sup> Mass in exploitation is the best contribution of an armored force.

Transitioning to pursuit, armor again can deny the operational pause the opponent requires to avoid absolute destruction. Therefore, it is incumbent on the attacking force to task organize for this critical phase in the enemy's defeat. Complete destruction of an enemy is perhaps the single most difficult task of military operations, and has eluded many great captains in history. Carl Von Clausewitz, in deep reflection of this complexity, suggested three "various degrees of immediate pursuit" in an attempt to provide insight towards solving the problem. Those "degrees" are: 1) Cavalry Pure, 2) "A strong vanguard of all arms," and 3) "Whole victorious army."<sup>21</sup> With strengths and weaknesses inherent to each form, this analysis suggests that by task organizing the OEPPF, the MEF can develop "a strong vanguard of all arms" that could achieve this daunting task.

### **The Proposed Operational Exploitation and Pursuit Force**

The OEPPF is the proposed solution for how current elements of the MAGTF could be employed to create a combined arms team capable of exploitation and pursuit, while avoiding the common pitfalls of culmination. Though heavily weighted, this could be a commander's operational bid for success, and therefore risk may have to be accepted elsewhere to form the mass required to deal the decisive blow. However, to mitigate this risk, separate structure can be added to the USMC to support two independent OEPPFs (one for each MEF) that is directly under the operational control (OPCON) of each MEF Commander.

This independent unit reporting directly to a corps headquarters is similar in both structure and purpose to Task Force Butler operated under Major General Truscott Jr. during Operation DRAGOON (the amphibious invasion of Southern France) in August 1944. TF Butler was a task organized, corps level exploitation force that was held in reserve specifically for the purpose of launching forward post-breakthrough. Consisting of much of the same capabilities

advocated in this paper for the OEPF, TF Butler can be viewed as a historical antecedent for a successfully organized exploitation force conducting amphibious operations and working directly for a corps commander.

Adding structure to support the task organization of the OEPF avoids the pitfalls common to the establishment of ad hoc organizations, though would require modifications across Doctrine, Organization, Training, Materiel, Leadership & Education, Personnel, and Facilities (DOTMLPF). Figure 1 shows the task organization recommended to fulfill this independent task force requirement. As all MAGTFs are scalable to suit commanders' needs, the OEPF is no exception and therefore two additional models are suggested though the common elements of the force do not change with scale. However, although a smaller scale OEPF can be established using current Marine Corps structure, reducing the scope of the capabilities required impacts the task force's ability to accomplish the deep penetration advocated here. The OEPF is a force that should compliment the infantry division, not rob from it. Still, see figures 2 and 3 as example alternatives to the independent model, supplemented with the justification below.

The common elements to each OEPF model presented are: armor (as the backbone of the exploitation and pursuit), engineers, armored cavalry, air cavalry and close air support, mechanized infantry, a combat logistics element, and mobile HIMARS. First, a model of the OEPF with an independent 0-6 level command element will be explored as a foundational base (figure 1), followed by a brigade size OEPF with a MAG command element (figure 2), and the smallest scale OEPF with a tank battalion (-) as the base element (figure 3).

In order to provide adequate command and control necessary for the independent nature of deep exploitation and pursuit operations, a separate 0-6 level headquarters is necessary. In Task Force Butler, Brigadier General Butler (commander of TF Butler) experienced considerable

friction establishing this type of organization in an ad hoc manner. Additionally, the VI Corps would have to operate without its Assistant Corps Commander, as Brigadier General Butler was forced to vacate his current assignment to execute command. Instead, a separate headquarters should be established to avoid the pitfalls of ad hoc organizations in combat, especially if the OEPPF is considered the MEF commander's bid for success.

The Marine tank battalion provides the robust shock action capability that is lost when armor is disaggregated to support other formations in the division. To achieve these effects of mass while balancing the needs of armor support to the division, two additional tank battalions (one for each MEF OEPPF) should be added to USMC structure to allow the infantry division to retain its armor capability. The tank battalion, however, can form the base of the OEPPF, providing the ground force's primary striking capability. Additional tank companies can be augmented by reserve or joint forces, if additional armor capacity is desired to weight this effort.

Engineers form the second essential requirement of the OEPPF. A Mobile Assault Company (MAC) of the Combat Engineer Battalion, augmented with bridging capacity from the Engineer Support Battalion (not currently organic to the GCE), would provide mobility to the OEPPF and enable river crossing and in-stride breaching to facilitate the maintenance of tempo essential to this concept.

Tactical ground reconnaissance is an essential element of the pursuit, in both finding the enemy and protecting the greatly exposed flanks of the OEPPF. An LAR battalion is used in this concept to screen the front of the OEPPF in a reconnaissance pull, enabling the rapid encirclement and destruction of withdrawing forces. All logistics requirements of the above mobile forces could be internally provided by a Combat Logistics Battalion (CLB) OPCON to the OEPPF,

except where scalability reduces the requirement to the extent in which logistics requirements can be sourced by the armor and/or LAR capability.

Much like ground cavalry but with extended range for employment and observation, air cavalry provides a unique opportunity that perhaps has been lost since the formation and employment of the Air Cavalry Regiment (ACR) by the US Army in Vietnam. Adding depth to the attack in depth, air cavalry can be employed in a reconnaissance pull (see figure 5), further directing rapidly maneuvering ground forces deep into the enemy's rear. By using a small force of heliborne infantry to seize key terrain (bridges, observation posts, etc), tempo can be maintained by the maneuvering forces on the ground. The use of an HMLA in direct support (DS) of the OEPPF could provide the close air support capability to shape deep, in close complement with the ground forces, while enabling the air cavalry component as suggested. Though this may require the establishment of Forward Arming and Refuel Points (FARPs) dependent on the depth of the exploitation, this requirement would be fulfilled by close coordination with the MAG headquarters (though the use of the MAG as the command element, as explained further below, provides a potential solution). In the end, this essential element of the OEPPF provides the capability to seize vital points in the rear of the hostile front in order to enable mobility once ground assets arrive,<sup>22</sup> protects the flanks of deeply penetrating ground forces that are relatively blind, identifies routes for encirclement for the penultimate defeat of the enemy force being pursued,<sup>23</sup> and perhaps most importantly locates and shapes the enemy operational reserve attempting to counterattack to meet the exploitation force.

Mechanized infantry is another manner in which the OEPPF can expand in size as required. Mechanized Infantry is used by the OEPPF to seize infantry objectives, as required, and

provides flexibility to the force. Though reinforcements can be vertically enveloped to the OEPPF as required, maintaining internal ground mobility is essential.

Mobile artillery is vital to completing this combined arms pursuit. However, as contemporary USMC artillery is not self-propelled, HIMARS is suggested to provide the speed of employment and range necessary to fully realize the potential of the OEPPF. However, cannon artillery may be used as a substitute for HIMARS if the enemy threat is predominantly dismounted, entrenched infantry. ADA systems, though limited in number and not organic to the GCE, could be used to protect this deeply penetrating force that is sure to threaten the enemy so completely as to warrant a significant aviation response that must be defended against. Additionally, defensive Counter Air (DCA) is recommended as tasked through the standard Air Tasking Order (ATO) process.

Though the above is presented as an independent, ground-centric element, it is easily scalable to meet the conceptual framework of the OEPPF. Though atypical in thought, the use of the MAG as the command element for a ground based force reinvigorates the concept of the ACR, while complementing the inherent strengths of the MAGTF. Used in this manner, the OEPPF would receive an O-6 commander, and can grow considerably to a regimental or brigade sized task force. All other components of the OEPPF remain unchanged except in potential size (see figure 2). If a choice must be made between the two alternatives of a completely independent OEPPF with added Marine Corps structure, the MAG model is preferred over the smaller, less decisive tank battalion model. Finally, if span of control is an anticipated strain on the independent model, the OEPPF can be organized into a MAGTF, with either the tank or LAR battalion headquarters serving as the GCE commander (see figure 4). However, the headquarters of two battalions operating within the ground scheme with only one as the overall commander

may cause internal friction. Still, this option should be considered in that it facilitates overall command and control.

### **Employment of the OEPP in OMFTS**

This organization can be used in amphibious operations to achieve the desired effects conceptually outlined in Expeditionary Force 21. The main distinction between ship-to-shore movements of previous generations and the emerging concept of STOM is the bypass of a beachhead. Conceptually, this bypass enables attacking forces to leverage the surprise gained by using the sea as maneuver space to rapidly close onto the ultimate objective without having to address the tactical problem of breaking through defenses established along the FBHL.

Bypassing this defensive scheme with vertical envelopment, though conceptually appealing, would fail to provide the combat power and subsequent mobility necessary to truly exploit the initial surprise achieved. Operation MARKET GARDEN, the unsuccessful Allied attempt to envelop the Siegfried Line and force a crossing of the Rhine into Germany, remains a historic case of the shortfalls of airborne units in deep penetrations.<sup>24</sup> Furthermore, vertical envelopment within an area of operations where air superiority is contested is simply not viable.

Just as the rigid defense in depth of the western front of World War I evolved to that which used elasticity to mitigate the overwhelming effect of pre-assault artillery barrages, coastal defense systems of the future will likely demonstrate elasticity to prevent against the heavy naval gun fire and aerial shaping expected in the pre-assault phase. As the defenses of the Pacific Theater in World War II evolved from a contested defense at the beach to those arrayed in depth, it should be expected that area denial threats will be layered to mitigate attrition at the coast. To those defending a coastline, common sense dictates that ADA should remain hidden until the assault phase commences. With the vertical envelopment threat thereby neutralized the enemy

could focus on arraying defenses deep of the suspected FBHL, ceding the beach to the attacker while maneuvering the operational reserve to an area that could defeat subsequent breakthroughs. In this instance, the threat of surprise is neutralized, and the attacker can be pushed back into the sea by counterattack. Such is the character of the modern defense in depth. An ACE-centric MAGTF will not fundamentally change that, especially against a near-peer foe. As a result, the phases of an amphibious operation of the future will still require the fundamental requirements of penetration of the defense in depth, exploitation of that penetration, followed by the achievement of the ultimate objective.

### **Conclusion**

*“There will always be men eager to voice misgivings, but only he who dares to reach into the unknown will be successful.”<sup>25</sup>*

Though this analysis has been deeply rooted in history, the intention is to look forward regarding the likelihood of the modern MAGTF to face a defense in depth, and the required revisions in organization and employment necessary to achieve operational results. Therefore, this analysis suggests that the breakthrough of a modern defense in depth will be a requirement of future war, and that exploitation and pursuit beyond that breakthrough is how one transitions tactical action into operational success. In its current employment of armor in doctrine and practice, the MAGTF fails to capitalize on the shock effect of the armor force to truly achieve an asymmetric, indirect effect. Instead, organizing self-sustaining armor and cavalry into the conceptual OEPF best exploits the advantages of concentrated armor at the operational level and provides the tempo advantage of true maneuver warfare doctrine; thereby maximizing its operational impact. Establishing this framework in training would provide the experience and support relationships necessary to test the concept in practice. Furthermore it is necessary to break the paradigm of disaggregating armor in order to avoid the pitfalls associated with

applying what works in counterinsurgency operations to conventional combat. In the latter, only armor employed in mass has been proven to be the most effective method. The OEPF provides a conceptual framework to maximize this fact.

<sup>1</sup> Karl-Heinz Frieser, *The Blitzkrieg Legend: The 1940 Campaign in the West* (Annapolis, MD: Naval Institute Press, 2005), 157. Quoting Heinz Guderian.

<sup>2</sup> Guderian, *Achtung Panzer!*, 15.

<sup>3</sup> U.S. Department of the Navy, *Expeditionary Force 21*, 4 March 2014.

<sup>4</sup> Bradley J. Meyer, "The Breakthrough Battle," (unpublished paper, Aug 2008), found in School of Advanced Warfighting Lesson Card 7151-OA-15: Defense in Depth and Breakthrough Battle, 10 June 2014.

<sup>5</sup> U.S. Department of the Army, *Tactics FM 3-90*, July 2001, 3-25.

<sup>6</sup> Guderian, *Achtung-Panzer!*, 43.

<sup>7</sup> Stephen Biddle, *Military Power: Explaining Victory and Defeat in Modern Battle*, forward by Jerry D. Morelock (Princeton, NJ: Princeton University Press, 2004), 40.

<sup>8</sup> Frieser, 194.

<sup>9</sup> In describing the radical German success at Sedan, Meyer concludes: "Once through, the German exploitation was dramatic. A Panzer Group under Guderian drove from southwest of Sedan to the Swiss border, cutting behind the Maginot Line to trap the three French armies and 500,00 men"<sup>9</sup>

<sup>10</sup> Guderian, *Achtung-Panzer!*, 198.

<sup>11</sup> U.S. Department of the Army, *Offense and Defense ADP 3-90*, 9.

<sup>12</sup> U.S. Department of the Army, *Tactics FM 3-90*, 9-1.

<sup>13</sup> U.S. Department of the Army, *Offense and Defense ADP 3-90*, 9.

<sup>14</sup> U.S. Department of the Army, *Tactics FM 3-90*, 7-7.

<sup>15</sup> Guderian, Heinz. FMFRP 12-35, *Armored Forces*, 9 Nov 1989. Originally printed in *Infantry Journal* (Sep/Oct 1937). Hereafter, Guderian, *Armored Forces*.

<sup>16</sup> Ibid.

<sup>17</sup> Ibid.

<sup>18</sup> Guderian, *Achtung Panzer!*, 12.

<sup>19</sup> Ibid., 15.

<sup>20</sup> Frieser, 157.

<sup>21</sup> Carl von Clausewitz, *On War*, ed. Michael Howard and Peter Paret, trans. Michael Howard and Peter Paret (New York, NY: Everyman's Library, 1993), 313-314.

<sup>22</sup> This idea was advocated by Guderian in *Armored Forces* to be used by "parachute troops," perhaps on a grander scale. However, the same role can be used by rotary wing cavalry elements on a smaller scale. Though this assumes a certain level of risk dependant on the enemy situation, but when used in conjunction with persistent rotary wing close air support, this organization would provide a flexible, "boundable" capability that would greatly enhance speed and mobility of ground components pursuing enemy forces attempting to delay.

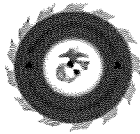
<sup>23</sup> As suggested by U.S. Department of the Army, *Tactics FM 3-90*, 7-4.

<sup>24</sup> Operation MARKET GARDEN was a failed Allied attempt to bypass the Siegfried Line with airborne troops of four divisions of the First Allied Airborne Army, and to keep the retreating German army under pressure in pursuit. Though the initial landings were successful, failure was largely attributed to the speed of the German advance against slow moving, light infantry of the Allied airborne divisions. This operations is mentioned here to highlight that though airborne troops have been used effectively as a supporting effort to major operations, airborne troops are ill-suited for exploitation and pursuit due primarily to mobility and striking power. Therefore, the viability of vertical envelopment as the decisive

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operation in contemporary deep penetrating exploitation and pursuit is questionable. For more on Operation MARKET GARDEN, see John C. McManus, *September Hope: The American Side of a Bridge Too Far* (New York, NY: NAL Caliber, 2012).

<sup>25</sup> Guderian, *Armored Forces*.



## The Operational Exploitation and Pursuit Force: Independent Model

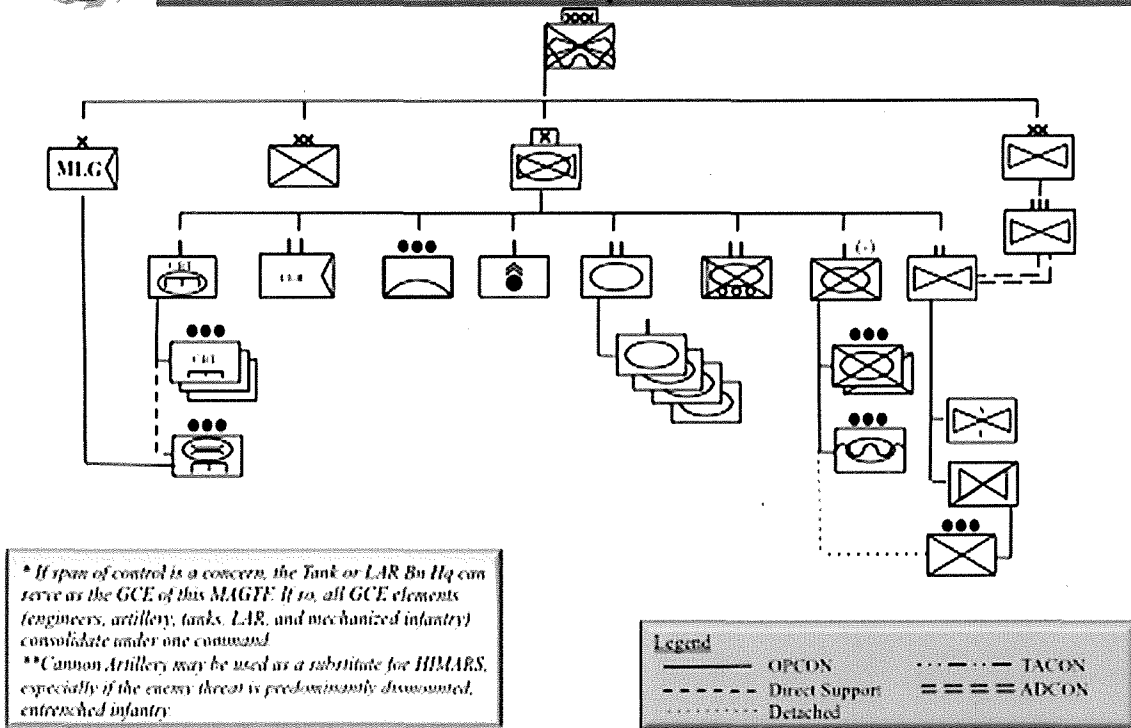
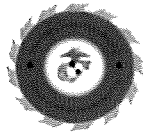


Figure 1



## The Operational Exploitation and Pursuit Force: MAG Model (ACR-Like)

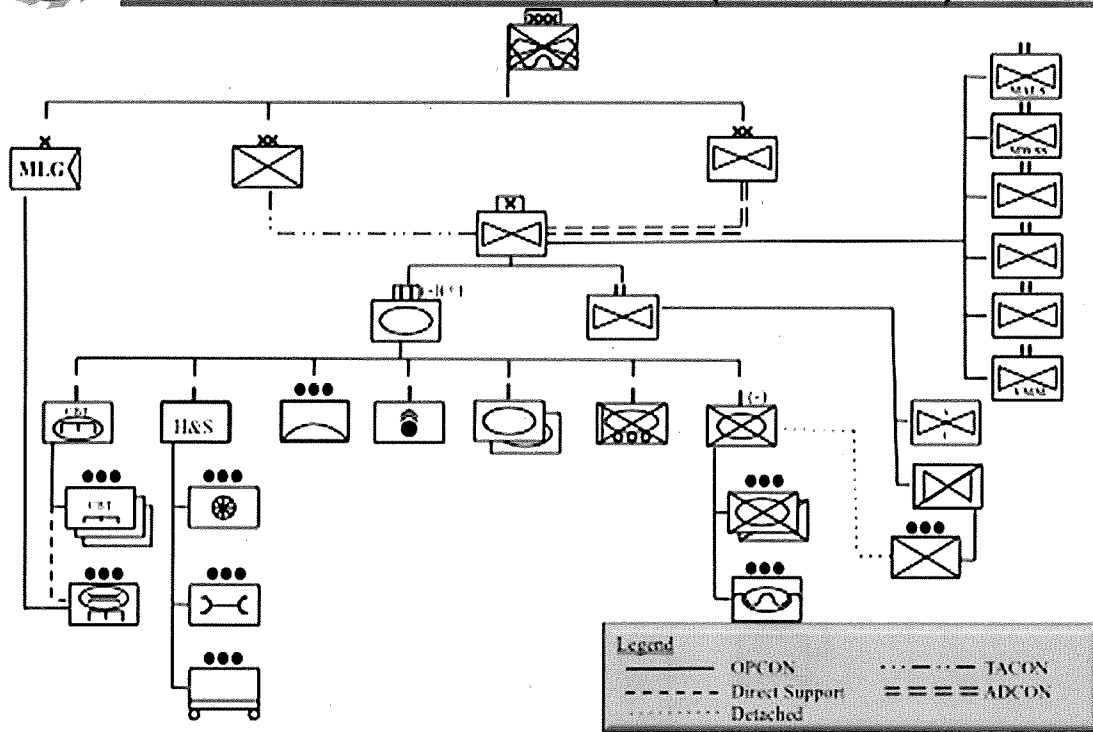
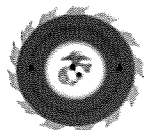


Figure 2



# The Operational Exploitation and Pursuit Force: Tank Battalion Model

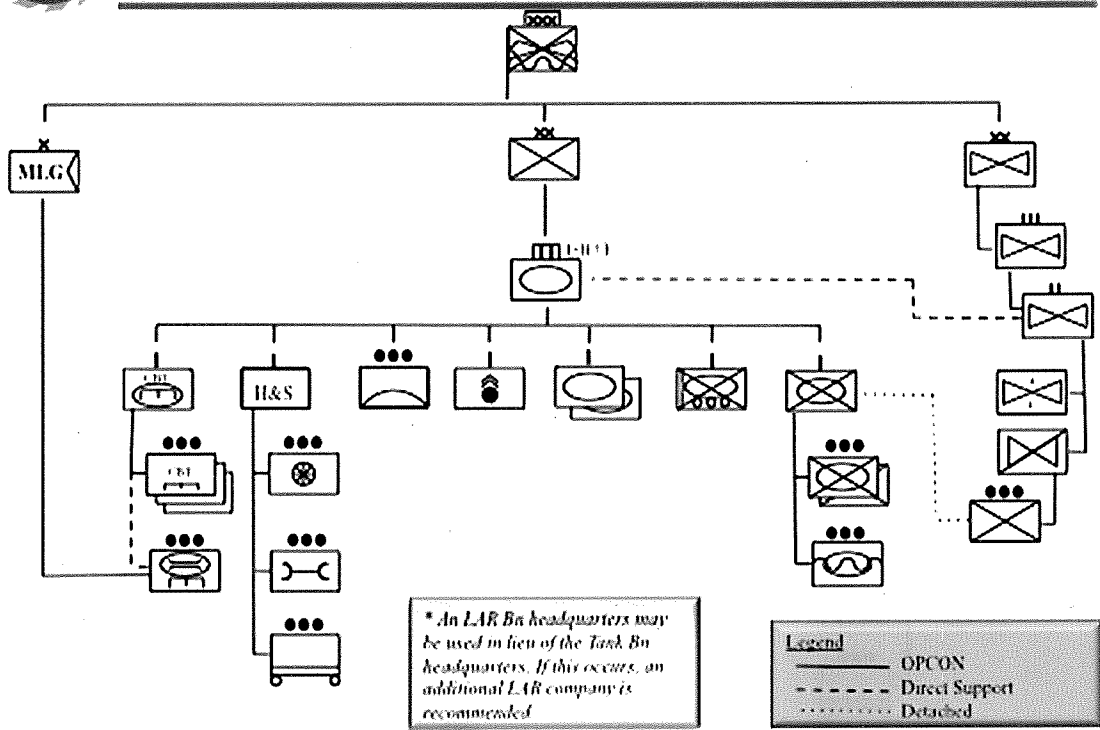
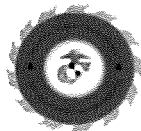


Figure 3



# The Operational Exploitation and Pursuit Force: Independent MAGTF Model

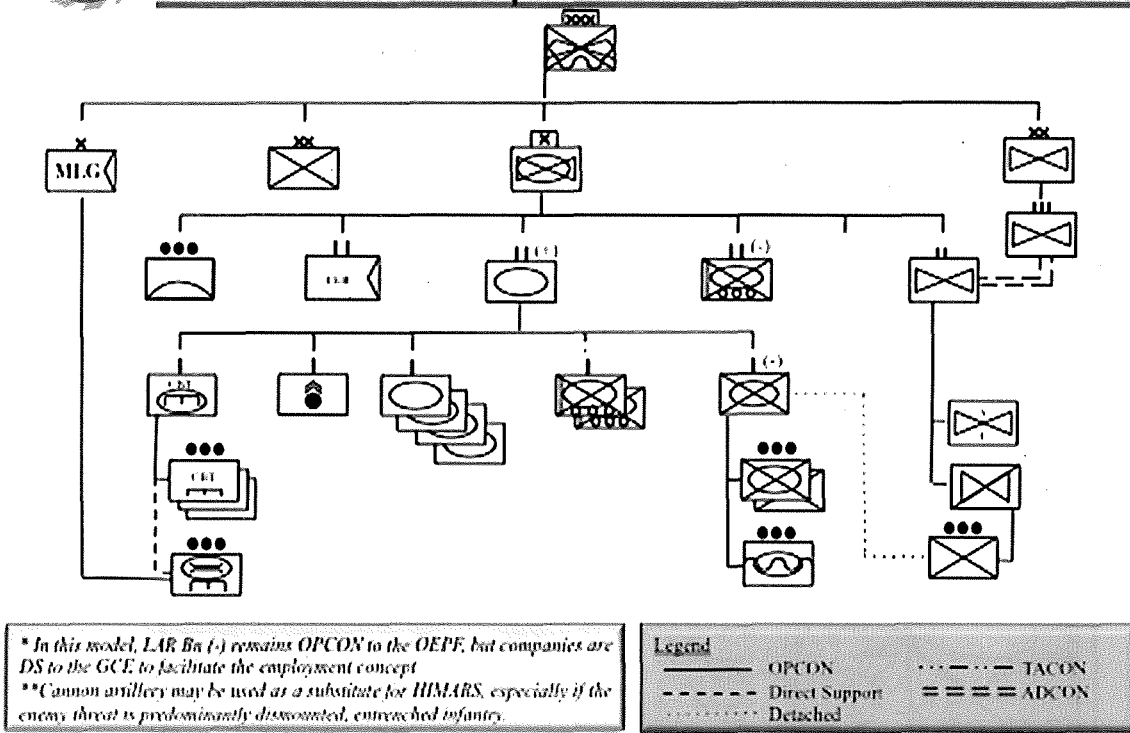


Figure 4

FM 17-95-10

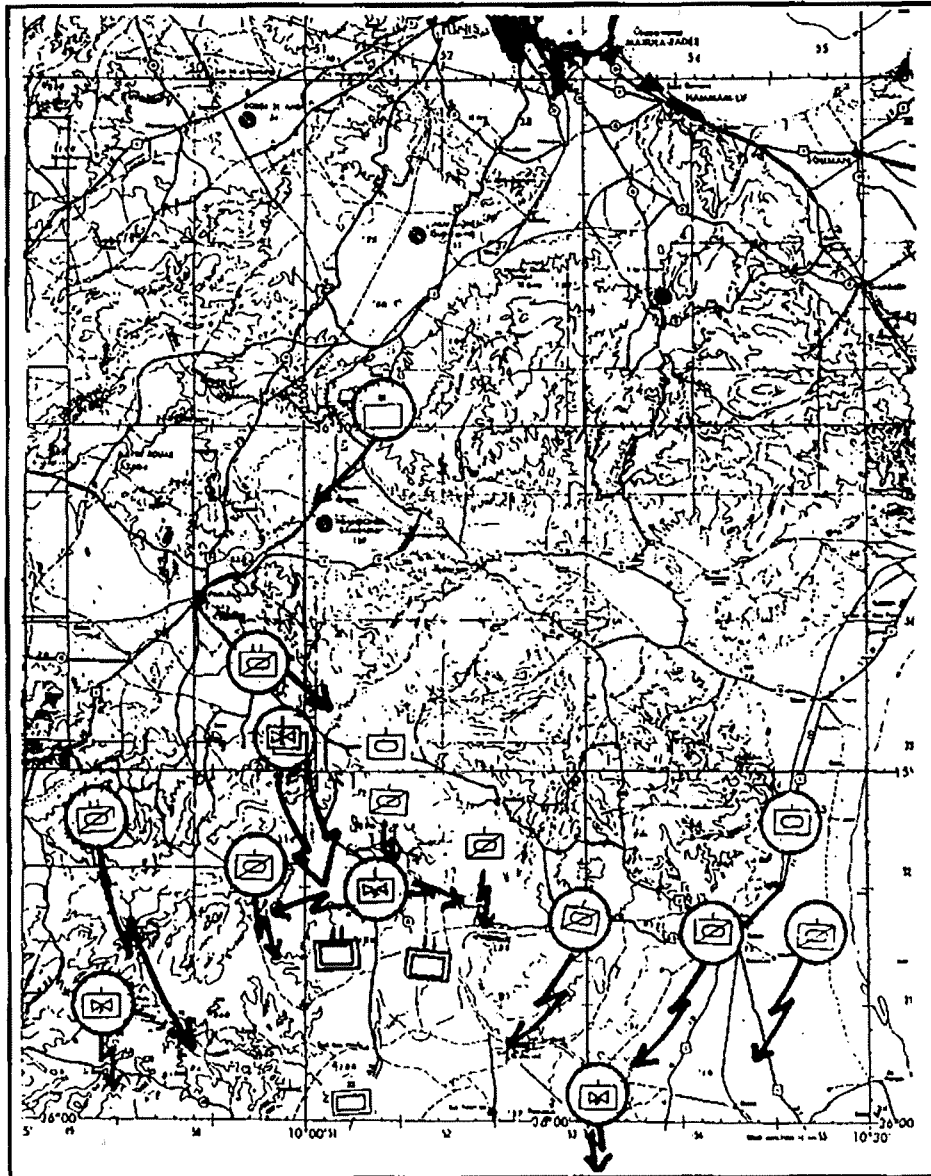


Figure 3-17. Reconnoitering in depth.

3-40

Figure 5. Source: U.S. Department of the Army, *The Armored Cavalry Regiment and Squadron FM 17-95.10*, September 1993.

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