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14. ABSTRACT The Marine tank has been an invaluable part of the Marine Air Ground Task Force. The current Marine M1A1 Main Battle Tank's lethality, maneuverability, and survivability remain largely unmatched. However, the current operational environment has not seen the employment of Marine tank units. Further, the Marine Corps will be facing a transitional period in the coming years. There will most certainly be an increased emphasis on core competency oriented training. Tank and infantry integration training will be a must. The current modifications to the Marine M1A1 were developed with the future in mind. It will be imperative for the Marine tank community to ensure the tank's new capabilities are integrated as the force transitions.					
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SPECTRUM OF OPERATIONS**

**SUBMITTED IN PARTIAL FULFILLMENT
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Preface

As I reflected on my topic I quickly realize that there was a rapidly growing tactical and operational knowledge and operational experience gap forming between the infantry and the tank community. The memories of tanks leading the Marine Corps to Baghdad or fighting side by side with the infantry in cities like Falujah, Ramadi, and Husauba have quickly faded. This must not happen, for we are creating an entire generation of officers across the MAGTF that have little to no experience in training with, supporting, embarking, communicating with, deploying and fighting with tanks. Conversely, the tank community is suffering from the same shortfalls. As the knowledge gap widens so does the personnel gap caused by requirements to fill individual augment billets. It is my hope that I can provide a well accounted history of the tank within the Marine Corps and its place within the MAGTF.

I would finally like to take a brief opportunity to thank my mentor, Dr. Douglas Streusand for his patience, guidance, and enthusiasm. He is a true academic, possessing a passion for the student I have rarely encountered. I would also like to thank Ms Rachel Kinkade and her team of research assistants of the Grey Research Center, Marine Corps University Library, for their unwavering professionalism and enthusiasm. They are a unique crew who love what they do.

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Executive Summery

Title: Tanks Within the Marine Air Ground Task Force (MAGTF): A Versatile Combat Multiplier

Author: Major Cornelius Hickey, United States Marine Corps

Thesis: The Marine tank is the proven versatile infantry support arm of decision within the Marine Air Ground Task Force.

Discussion: The Marine tank was first employed in the Southern Solomons in 1942 to support the infantry as they fought their way inland on far flung islands like Guadalcanal, New Georgia, and Cape Gloucester. It was on these islands and others where the ground work was laid for future Marine tank doctrine. During the interwar period amidst a wave of budget cuts a select few visionaries recognized the value of the tank and fought hard to keep it within the Marine inventory. These men authored numerous papers arguing for the build up of a tank force within the Marine Corps. The Korean War provided the setting that validated the Corps' decision to maintain a tank force. It was in Korea that the tank infantry team was actualized. More work and doctrinal refinement still remained but the concepts were sound and the infantry became convinced of the utility of the tank. To this day, many of the same principles developed over the past seventy plus years are still in practice and are what have allowed today's tank community to modernized the Marine Corps current tank platform. Modernization of tank platforms has always occurred more rapidly during war time. However, never has there been such a rapid modernization effort as there has been during the past ten years. This monograph will discuss the history and evolution of the Marine tank and how it has operated within the MAGTF. A detailed account of the modernization effort to the Marine Corps' current M1A1 platform will also be discussed and how it is relevant to current and future operations. Never has there been such a combination of lethality, survivability, and maneuverability in one platform capable of bringing to bare all available systems with such devastating affect.

Conclusion: The Marine tank still exists to support the infantry of the Marine Air Ground Task Force. It will be crucial over the prevailing years to ensure the relevancy so bitterly fought to attain during combat on Guadalcanal to Falujah does not parish. It has become increasingly more important for both the tank and infantry communities to maintain their historically close working relationship in order to ease the post war on terrorism transition.

*And the Lord was with Judah;
And he drove out the inhabitants of the mountains;
but could not drive out the inhabitants of the valley,
because they had chariots of iron.¹*

-The Book of Judges 1:19

Introduction

The future operational tempo promises to be every bit as challenging as the past nine years. With the transition and reallocation of Marine forces and equipment from Operation Iraqi Freedom (OIF) to Operation Enduring Freedom (OEF), the Marine Corps can expect to see training and readiness to continue to be tailored to the current fight. Concurrently, Commandant has charged the Combatant Commanders to reset the Marine Corps for the future.² The Commandant has outlined six guiding Core Competencies by which the prescribed reset is to adhere:

- (1) Conduct persistent forward naval engagement and is always prepared to respond as the nation's force in readiness.
- (2) Employ integrated combined arms across the range of military operations, and operate as part of a joint or multinational force.
- (3) Provide forces and specialized detachments for service aboard naval ships, on stations, and for operations ashore.
- (4) Conduct joint forcible entry operations from the sea and develop amphibious landing force capabilities and doctrine.
- (5) Conduct complex expeditionary operations in the urban littorals and other challenging environments.
- (6) Lead joint and multinational operations and enable interagency activities.³

Of the six core competencies that have been identified, the first five will require well trained and integrated tank units. Throughout the Marine Corps' inventory, no other ground combat platform can rival the M1A1's lethality, survivability, maneuverability, and over all infantry support capability across the range of military operations. To replace the tank's capabilities would require a multitude of other systems at a higher procurement cost to match what the tank provides.⁴ In short, the Marine tank is the

proven versatile direct fire infantry support arm of decision within the Marine Air Ground Task Force.

History

It is important to understand the role the tank has played in Marine history. First, it is essential to point out the significant difference between tank units and armor units. When referring to combat vehicles in the Marine Corps, Marine Armor does not exist. Armor is an Army term that dates back to the fledgling armor divisions that were established in 1940. These units were developed not to support the infantry but to operate as separate maneuver forces and were in direct response to the burgeoning establishment of armor forces that was occurring in Europe at the time, specifically in Germany. The early founders of armor units decided the term armor would better distinguish their units from the earlier conceived tank platoons and companies that still existed to specifically support the infantry and cavalry units.⁵

World War II was a significant stepping stone for the Marine Corps for it expanded its combined arms knowledge and added the direct fire capability of the tank to its amphibious doctrine. In 1942, shortly after the Japanese attack on Pearl Harbor, U.S. Marines were conducting forcible entry on to far flung Japanese held islands such as Guadalcanal, New Georgia, and Cape Gloucester and continued to Betio Island on Tarawa Atoll, Saipan, Guam and Tinian. Landings at Iwo Jima and Okinawa followed along with numerous other landings in between. During this long and arduous campaign, the Marine Corps began to hone its tank infantry team doctrine. These early battles were a troublesome time in Marine tank history. Often tank crews would drive headlong in advance of the infantry only to end up alone and unsupported while being swarmed by

Japanese soldiers. Saipan saw the first real steps towards a coherent tank infantry team working in a unified effort. Tanks and infantry realized that when movement was executed in support of each other, gains in ground increased and lives lost decreased. It was these later actions that probably did more to lay the ground work for arguing for a permanent Marine tank force during the inter-war period.⁶

By 1949 the Marine tank community, with the help of some very influential officers, had a secure position in the Marine Corps ground combat element. One of the inter-war advocates for the tank force was LtCol Arthur J “Jeb” Stewart who wrote a series of papers that called for a permanent tank force that would equip the infantry to not only gain a foot hold during an amphibious landing but would enable them to attack off the beach to deeper inland objectives. Stewart identified the development of armor forces, amphibious operations, and airborne operations as the three most significant advancements of World War II. The war however was too short to see a reasonable combining of the three. Stewart believed that future coastal defenses would not be fixed positions but mobile defenses and would require an adaptive amphibious force to defeat them. He felt the solution was the tank infantry team. Stewart called for a revision in the Marine Corps amphibious doctrine to include tanks. This had posed some significant logistical considerations but did not impede its evolution. In 1949 the Marine Corps called for a permanently sustained, equipped, and trained tank force. This was no small accomplishment considering the budget cuts that plagued the entire military following WW II.⁷

These revisions came none too soon for in July 1950 the North Korean Peoples Army (NKPA) conducted a massive offensive that caught the United States and the

Republic of Korea nearly flatfooted. Still heavily involved with Japanese reconstruction, the United States did not desire to be involved in another war, especially with a communist country with close ties to Soviet Russia and Communist China.

The Korean War is one of the high points in Marine Corps history, for when the rest of the military was suffering with post WW II draw downs the Marine Corps, though suffering from active duty personnel shortages of their own, still maintained an exceptionally robust reserve force. Among the reserve forces were several tank battalions. These battalions were not equipped to their full table of organization and equipment (TO&E). In fact, many of the “tankers” were simply former infantrymen or other Marines from varying occupational military specialties (MOS). Though lacking training they did not lack combat experience. Many reservists saw combat in the Pacific during WW II. Training would prove to be a shortfall, for in 1949 the tank and amphibious vehicle school did not escape the budget crunch and was closed. The handful of enlisted and officer cadre who were trained tankers would provide basic instruction but the real education would be conducted on the job and in more cases than not during combat in Korea.⁸

Company A, 1st Tank Battalion was hastily formed to accompany 1st Marine Brigade to the Korean Peninsula. There was friction from the outset, for the tank company was forced to replace its M4A3 Sherman’s with the new M26 Pershing’s equipped with the a more powerful 90mm main gun specifically designed to combat the venerable Type-34 soviet made tank being employed by the North Koreans. While the company’s tanks were being embarked aboard transports the tankers were allocated one day to become familiar with the new M26.⁹

Despite serious training and readiness shortfalls the Marines of Company A were quickly pressed into combat shortly after their August 10 1950 landing at Pusan, South Korea. The company was sent in to reinforce the beleaguered Pusan perimeter and supported the infantry in numerous counter attacks against the NKPA. Although they encountered several early setbacks the Marines of Company A went on to conduct one of the first one sided victories in the early days of the war. Marine tanks and infantry successfully stopped a massive NKPA offensive consisting of six battalions that had established a bridgehead in the vicinity of Naktong. The tank infantry team, with close air support from a flight of F4U Corsairs, destroyed six NKPA T-34's and countless dismounted infantry. Naktong represents one of the first true Marine air ground integrated operations. That and other operations continued with similar success; however, the landing at Inchon will for ever be one of the most significant amphibious landings conducted by the Marine Corps in its history.

The complexity of the landing site cannot be understated.¹⁰ A reinforce platoon made up of six M26's, one Sherman flame tank, and a retriever supported an infantry battalion from 7th Marines for the initial assault on Wolmi-do Island. Upon landing, the tank platoon made short order of the enemy fortifications. With the hardened positions neutralized the infantry were able to clear the remainder of the island of any remaining enemy soldiers. Once complete the tank platoon quickly seized the near end of the causeway and assisted the infantry with its clearing to the mainland. This action allowed for the main force to continue its landing at the main landing sites. With much more fighting ahead of them, the tanks of Company A and 7th Marines had successfully

completed the first amphibious landing by a tank infantry team since WW II and made LtCol Stewart's vision a reality.¹¹

Marine tanks would go on to support the infantry with the clearing of Inchon, the seizer of Kimpo airfield, the crossing of the Han River and eventually the seizer and clearing of Seoul itself. In the capital, the tank infantry saw it first true test in urban combat. Following the destruction of one of the companies flame tanks the tank infantry teams were quickly reminded that, movement without mutual supporting fire and movement from each other was recipe for disaster.¹²

Tanks continued in the war filling numerous other vital roles in addition to direct infantry support. Throughout the war they would maintain security on many of the vital main supply routes (MSR). Additionally, they were critical in the successful withdrawal while under fire from the Chosin reservoir by conducting a delaying action at the rear of the 1st Marine Divisions column. Anywhere tanks were in the column Marines stood a better chance at survival. Towards the wars end during the deadly outpost campaign flame equipped tanks as well as standard main battle tanks fought from fixed positions in the mountainous terrain to bring direct main gun and flame fire on Chinese positions. Additionally, tanks augmented the over worked artillery battalions by providing indirect fire support by occupying reverse slope positions and utilizing the gunners quadrant. The Korean War demonstrated the flexibility of the tank and the Marines who operated them.¹³

Budget increases, improved training, and a more active acquisitions process followed the Korean War. The Cold War was upon the country and Vietnam would see the first formal influx of Marine tank units in March of 1965. The Vietnam War saw a

host of different Marine tanks consisting of the M48A3, M103A2, and the M67A2.

These and other armored vehicles spent much of the time guarding installations and vital bridges and roads. Early combat operations were few due to the jungle terrain and many tanks were left out of the fight. Tanks saw their most valuable combat contribution during the battle of Hue city. In the urban environment, the heavy direct fire power and the array of main gun ammunition allowed the infantry to clear the city of eight battalions of North Vietnamese Army regulars. Some infantry commanders complained that the tanks attracted too much enemy fire while others favored their decisive fire power.¹⁴

During the battle for Khe Sahn the single tank platoon assigned to 26th Marines was employed primarily as indirect fire systems for the tank ammunition had a greater range than the artillery on site. The indirect fire mission was not a desirable employment method by the tankers and they avoided it when possible. The avoidance was that it was less precise than direct fire and the tank crews believed that direct fire was the first priority for tank employment. Marine tank units began their redeployment back to the United States in 1969 and would not see any serious direct action for some time.¹⁵

Modernization and Transformation within the MAGTF

Since its inception into the Marine Corps just prior to the Gulf War, the Marine M1A1 Abrams has evolved significantly. Originally designed by the Army to fight massive Russian armor divisions on the eastern frontier of Europe, the M1A1 represented the very best of western land warfare ingenuity. To this day, M1A1's maneuverability, survivability and most importantly its lethality remain largely unmatched. However, the M1A1's development represented a departure from the infantry supporting role its predecessors once filled. The new M1A1 took on more weight, a larger main gun, a

lower profile, lost the all important rear mounted infantry phone and saw a reduction in the array of main gun ammunition¹⁶.

The Gulf War was the first time the Marine Corps employed M1A1 tanks in combat. Of the three active battalions of the time only one battalion was issued the new tank. The remaining battalions deployed to the Gulf with the M60A2. Though it was rushed into Marine service, the new tank performed well. Following the end of the Gulf War the evolution of the Marine M1A1 tank began slowly. However, in December of 1993 the Marine M1A1 would see service again in Somalia during Operation Restore Hope.

What is widely known is that while the Marine Corps was employing tanks during the humanitarian operation, violent clashes were kept at minimum. When employed, the tank quickly brought order simply by its presence. In fact, quite often the tank did not have to engage targets because its presence induced an instant calming affect. That at least was the case until a very poorly executed disarming mission began aimed at confiscating all personal weapons.¹⁷ From that point on tanks became the target of reprisals.

What is not as well known are the incidences in Somalia where the tank's capabilities not only saved lives but also provided the commander on the ground a critical moment of pause and flexibility that would otherwise not have been possible if an inferior weapon system had responded. An example of the tank's versatility occurred on a winter evening in Mogadishu when a Marine tank platoon (-) attached to TF Mogadishu was ordered to respond to a possible ambush in the vicinity of the U.S. embassy. At the same time, reports came in of infantry and "technical" activity in the same area. All

activity was located along a main road known as 21 October Road. The tanks had just returned from dropping off a Moroccan unit at the airport. The tank crewmen quickly mounted up and proceeded to the location of the reported activity. Once on scene, the gunner in the lead tank identified what appeared to be armored vehicles and personnel digging in an open area. Almost immediately the tanks began to receive small arms fire originating from the open area. The tank platoon commander, Captain Campbell, did not feel the situation warranted immediate action was needed. From the safety of inside his tank, the platoon commander was able to develop the situation and determine how much of a threat there actually was.

After some time, Capt Campbell was asked by his higher headquarters if he knew where the Moroccans were. In reply, Capt Campbell said that he believed Moroccans were still at the airport where he had left them. In fact, the Moroccans had departed the airport to conduct a mission without notifying coalition headquarters. In the end, it was the Moroccan unit that had been firing on the U.S. tanks. If the platoon commander had been in any other vehicle that evening the situation could have easily escalated into blue on blue (friendly on friendly) incident.¹⁸

Another example occurred when it was reported that Somali insurgents operating a tank within the city of Mogadishu. The quick reaction force tank platoon were dispatched to the location. Once on the scene the tank crews quickly identified the tank in question. Capt Campbell reported back to headquarters and was subsequently given instructions to destroy the tank. The tank crews were able to observe the turret of the tank moving from side to side and the gun tube was elevating and depressing. However, there was no hostile action taking place. Once again Capt Campbell reported to higher

and received the same instructions. Still, the instructions did not settle well with Capt Campbell and he chose to allow the situation to develop from the safety of his tank. By this time he had been ordered quite enthusiastically to engage the “enemy” tank. After several tense moments, three Somali children appeared from inside the turret of the tank and ran away not knowing how close they had come to being killed. The tank the children were playing in was old and unserviceable and unable to fire; the children were simply playing. The tank provided the commander a moment of pause for he possessed the confidence the unmatched lethality and survivability the M1A1 provided. If a lesser vehicle had responded the outcome could very well have been different.¹⁹

The actions of Captain Campbell and his Marines had a much farther reaching impact than he could have possibly imagined back in 1993. Until that point there had been a growing sentiment that tanks had no place in the urban fight especially in low to medium intensity operations. The M1A1 was considered heavy and burdensome and was thought to be more of a hindrance to operations. Ironically, the tank was more versatile than previously believed. Unfortunately, Marine tanks were pulled out Somalia and the operational focus shifted from a humanitarian mission to government restoration mission. What ensued after is widely know. Fortunately for the Marine tank community Capt Campbell’s after action report along with his recommended upgrades for the tank provided the framework for further advancement of the Marine M1A1.²⁰

The Marine tank community has taken on a “bend it to fit paint it to match”²¹ approach to modifying the M1A1. One of the earliest modifications was the development of the fording kit to enable the tank to conduct amphibious operations and relatively shallow river crossings.²² A cumbersome piece of equipment, the fording kit is still

utilized today by tank platoons that deploy with the Marine Expeditionary Units. Forcible entry from the sea is one of the primary missions of Marine tanks and the MAGTF that are in keeping with the Corps' title 10 responsibilities. To combat the threat of heavily fortified beaches and roads of the littoral regions, the Marine Corps purchased mine plows and mine rollers to conduct deliberate and in-stride breaching and rout clearance to support this mission. Marine plow tanks play a crucial role once the obstacle reduction detachment (OCD) has created the breach in a fortified obstacle belt.²³

More recent modifications are the reemergence of the infantry phone mounted on the rear of the tank. The addition of the infantry phone has enhanced coordination between tank crews and infantry when coordinating fires in an urban environment or simply the placement of the vehicle when manning checkpoints and blocking positions. The phone was the first in series of rapidly fielded upgrades at the outset of Operation Iraqi Freedom and has since been improved to ensure reliability and survivability.²⁴

The Fire Enhancement Program (FEP) is a second generation thermal system equipped with far target location. This system now allows the tank gunner to view targets through a 50x thermal magnification view screen making it possible to clearly identify targets up to 8000 meters away. The laser range finder on the FEP is able to provide a 10 digit grid return enabling the tank commander the ability to call for fire with accuracy of one meter divergence from a covered position. The FEP possesses Information Surveillance & Reconnaissance (ISR) potential that has yet to be fully exploited due to tanks not being slated for deployment in support of Operation Enduring Freedom.²⁵

The Commanders Weapon Station (CWS), the M2 Cal .50 heavy machine gun, has been modified with a forward view thermal site allowing the weapon station to be independently employed day or night. In the past, this weapon station would go largely unused during night operations for the tank commander was unable to employ it during limited visibility. Now the infantry have at their disposal a heavy machinegun employable from a covered position in all weather conditions.²⁶

The loader station has been modified with a Forward Observer / Forward Air Controller (FO/FAC) kit allowing complete integration of additional radios for communicating with and controlling coalition aircraft.²⁷

Two additional tank main gun rounds have been added to the inventory to better support the infantry. The 120mm Multi-Purpose High Explosive (MP-HE) Ammunition and Main Gun Data link is an upgrade that is ideally suited to support the infantry in the close fight. The addition of the data link to the tank's main gun allows the MP-HE fuse to be set to a point detonate, delay or airburst mode while loaded in the gun. The devastating effects of the ammunition are able to be tailored to the target thereby limiting collateral damage. The MP-HE is able to provide dynamic breaching of walls for infantry insertion, delayed functioning to enable destruction of interior rooms and destruction of troop formations with an airburst capability out to 4000 meters. Additionally, the Marine Corps has developed and fielded the new 120mm Canister Round. This is a true infantry support round that is ideal for engaging enemy dismounts at close range and confined quarters. Similar rounds are being used by Canadian tank crews in Afghanistan with overwhelming success and are often preferred over air delivered munitions for their true discriminating capability.²⁸

Due to the extreme temperature conditions Marine tank crews have operated in the Micro Climate Crew Cooling System was developed to combat the nearly constant 130 degree (+) conditions that have been endured during the summer months. This system has increased crew survivability and efficiency.²⁹

Future Upgrades

The Stabilized Commander's Weapon Station (SCWS) will allow the tank commander to employ his M2 .50 Cal while on the move. This provides the infantry and the MAGTF a multitude of stabilized all weather heavy machinegun assets that can be brought to bear against a determined enemy. Due to the SCWS modification there will be the integration of a Battlefield Management System such as Blue Force Tracker. This will greatly increase the tank's command and control capabilities and bring it much further into C4IR realm.³⁰

The improved loaders weapon station will do away with the mounted 7.62mm 240B machine gun and replace it with a remote operated 7.62mm system offering covered and concealed firing capability to the loader. This weapon will also eliminate the dangerous blind spot to the right rear of the tank.

Furthering to remedy the 360 degree situational awareness shortfall will be rear view sensor system (RVSS). This system will enable the driver to view a thermal image of what is directly behind the tank. Currently, the tank commander is forced to expose himself to enemy fire in order to determine if is safe to back up or make course corrections in restrictive environment. The benefactor of such a system will be the infantry on the ground.³¹

The modifications mentioned have made the Marine M1A1 uniquely suited to serve across the spectrum of operations in support of Marine infantry. For those who have operated with Marine tanks during high intensity close combat operations throughout the many campaigns of Operation Iraqi Freedom (OIF), most notably the battle for Fallujah, it is clear that the Marine tank is a dedicated member of the tank infantry team. BGen Simcock, Commanding Officer of Regimental Combat Team 6 from January 2007 to February 2008 had full confidence in his tank platoons for when he employed his tanks he knew there would be a good outcome. Many of the stories that followed operations involving the Marine tank infantry team recount how the tanks and infantry solved tactical problems that would have been far more costly if each had operated independently.

When focusing on the lower end of the spectrum of conflict the FEP provides long range observation and far target location capabilities and if required, round the clock all weather lethality. It is the tank's ability to observe at great distances without the need to engage that makes it so influential on the battle field. Above all, the least acknowledged capability of the tank is the luxury of not having to kill. A massively armored tank can be placed into situations where it may be exposed to intense enemy small arms fire without having to make the choice of returning fire or withdrawing. This enables the tank crew to continue to develop the situation and show resolve. This cannot be said for lighter vehicles that would be forced to solve the tactical situation with the application of fires or to withdrawal.³²

Counter Argument

The tank's inherent cost and logistical requirements often take center stage when the decision on whether or not to employ them arises. Indeed, Russia's experience in Grozny, Chechnya in the mid 90s and Israel's devastating tank losses during the 2006 conflict with Hezbollah have become arguments in some circles that tanks have seen their last days of meaningful utility. However, the heavy tank losses suffered during those conflicts were not due to the tank losing its usefulness. Tanks fell victim to poor intelligence, poor training, poor planning and over confidence on the part of the senior leadership in each case.

Tanks are maintenance intensive and require a significant degree of logistics support. To argue otherwise would be futile. However, these are planning factors not legitimate disqualifiers for tactical and operational employment. A monetary cost is inextricably linked to the employment of tanks. Once again this is a planning factor. To deny Marine infantry the proper support on the ground because that support comes with a heftier than desired price tag is an unacceptable argument.³³ Marine infantry regiments and battalions currently conduct their final Mission Rehearsal Exercise (MRX) prior to deploying to Afghanistan. Called Enhanced Mojave Viper (EMV), this exercise is conducted at the Marine Air Ground Task Force Training Center (MAGTFTC) at 29 Palms California. During the MRX, Marine infantry train with Marine tanks during the clear, hold, build training package as well as during the final exercise. However, the tank units supporting the MRX do not deploy to theater with the infantry. Marine infantry receive their tank support from the Danish and Canadian units that are in theater. This is disconcerting for two reasons: First, Marine infantry are not operating with tanks they

have trained with and second, the Marine tank community is missing a vital opportunity to maintain its war-fighting edge by not deploying its full complement of Marines, equipment and staff. The Marine Corps is creating a generational gap with regards tank infantry integration amongst its officers, noncommissioned officers, and Marines.

Core Competencies

The tank community is not waiting for the current war to conclude to begin refocusing on its core competencies. In fact, the tank community has been maintaining it's the majority of its core competencies despite the heavy individual augment (IA) tax that has been levied on the community. Most significantly, 1st Tank Battalion has been working over time on maintaining core skill sets during its semi-annual Steal Knight Exercise conducted at 29 Palms California. During their most recent exercise they conducted a full live fire deliberate breach at night with an infantry battalion and all supporting arms. This highly complicated training operation is reminiscent of the old CAX that was once the bench mark of MAGTF training. This is not to suggest that the Marine Corps must return to the old training program entirely. It is merely to illustrate that the community has taken the Commandants guidance to heart.³⁴ Further, the rest of the tank community continues to develop its training exercises to focus on core competencies regardless of the training restrictions that it must contend with at Camp Lejeune and locations where the reserve companies are stationed. Due to the shortage of available Naval amphibious support, 2d Tank Battalion utilizes barge and Landing Craft Utility support to conduct down sized amphibious training while conducting movements to the tank range. When possible, the battalion has conducted Deployments for Training (DFT) to other bases in order to hone its core competencies while maintaining current

and relevant skill sets.³⁵ The aggressive training these battalions are undertaking coupled with the advancements of the tank only serve to better equip the MAGTF now and in the future.

Recommendation

Throughout the research process there was one enduring question that I asked during the interviews. How does the tank community ensure continued promulgation of its capabilities? Overwhelmingly, those interviewed stressed the importance of cross training at the lowest level. Company Commanders from the tank and infantry communities to include those from the combat engineer battalions and the supporting establishment must lead the way in cross training with the different elements of combat power within the MAGTF. Company Commanders must go beyond encouraging their platoon commanders; they must force them to the field and train. Battalion Commanders must be doing the same with their company commanders. Young officers have become accustomed to the Pre-deployment Training Plan (PTP) concept. Their training plans consist of a checklist that must be green before they can deploy. The younger generation of officers is beginning to lose the out of the box thinking required to plan training that revolves around core competencies. Individual initiative hasn't disappeared but it is seen far and far less. As platoon and company commanders begin to focus on core competencies and begin to enjoy the capabilities of the MAGTF through innovative training they will be strengthening the foundation for their future commands and the Corps. Indeed, I believe that a version of the old Combined Arms Exercise (CAX) training event will be necessary in the future. However, given current operational commitments a revision to the training is improbable.

The Marine tank community with the assistance of the Tactical Training Exercise Control Group (TTECG) has developed a basic but exceptionally detailed training video that discusses the fundamentals of tank employment within the tank infantry team. The video has been made available to infantry units prior their deployment to EMV. If viewed and incorporated into pre-deployment training prior to the conduct of EMV this video has proven to be helpful in working through the initial friction associated with working with tanks for the first time. Tank infantry integration familiarization training should be made a pre-requisite before a unit is allowed to even set foot on the Delta Corridor at Marine Corps Air Ground Combat Center. As LtCol Gordon, Commanding Officer, 1st Tank Battalion indicated during his interview. "The single most precious thing I have is time, time to train the battalion, and time to share my training with the adjacent commands."³⁶ Time should not be squandered by working through basic doctrinal do's and don'ts during a vital training exercise when they could have been worked out prior to deployment.

Habitual working relationships should be fostered when ever possible. This is not to suggest that individual tank companies should be formally or informally assigned to support specific infantry regiments. Competing training and deployment schedules would rapidly erode the best intentioned efforts. Rather it may be preferable for the tank battalions to mirror their training schedules with those of the infantry battalions giving closer attention to the semi-annual and annual events where the most training value can occur. Infantry battalions would be wise to do the same. As the operations officer for 2nd Tank Battalion, the author often strove to ensure that the battalion was available to support any infantry unit within the division when ever a request was submitted,

regardless if it was short notice request. The Battalion Commander's standing order was to never turn down support to any unit especially an infantry unit. This was not unique to our battalion, 1st Tank Battalion in fact, was in a position to build a much better working relationship with 7th Marines.

The two active battalions and the one reserve battalion should continue to strive to develop an as close to standardized operating procedure (SOP) as possible. A fully standardized SOP could prove elusive for each battalion is bound by its geographical location. Further, the reserve battalion is constrained by conditions pertaining to the reserve force that do not exist in the active battalions. These points of friction would not prove insurmountable.

Conclusion

The Marine tank has proven to be exceptionally suited for supporting the Marine infantryman on the ground. From the earliest days of World War II to today's modern day asymmetric battlefield, the tank and the community of Marines that wield them in combat have never faltered in providing the direct fire arm of decision against the nations enemies. As the commandant has clearly outlined to the force, we must fight the current fight but get back to the business of fighting the Marine Air Ground Task Force as it is intended. Currently the MAGTF is not fighting at its maximum potential. In Afghanistan, Marine tanks remain elusive on that front. A great opportunity still exists to provide the Marine rifleman on the ground all that he requires to fight and win. Fully understanding the joint realm that we must operate in does not excuse the fact that the Marine Corps' single most powerful combat platform and messenger of resolve is operating in the safety of the United States. As put forth in this paper, the Marine tank of

today brings more to the fight than it ever has in the past. The tank community has not rested and has built on its core competencies by evolving the tank to meet the challenges of the fight we are currently in.

The Marine on the ground must be intimately familiar with all the assets that are available to support him. Operational environments change, what Marines face in Afghanistan is decidedly different than what they faced in Iraq. The knowledge Marine tankers gained in Iraq is being outpaced by the practical experience gained by the rest of the force in Afghanistan. An entire generation of young officers and enlisted from across the force are missing an opportunity to experience the MAGTF as it is meant to be. This is not meant to take away from the outstanding support that has been provided by our coalition partners specifically Canada and Denmark. On the contrary, these closing remarks are intended to highlight their pragmatic approach to the operational situation. These coalition partners are illustrating that tanks provide the commander more options on the ground.

As a tank officer, it is sometimes difficult to argue the benefit tanks bring to the MAGTF without sounding parochial. The intent from the outset was to highlight the very tangible contributions the Marine tank has and continues to provide. It is my belief that Marine tanks will be called upon to support the infantry in the current fight at some point in the future. However, it is my hope that it is not done so in response to a staggering loss of Marine lives.

"Before last night I had no idea what you guys were capable of doing, but now I'm a believer...Thank you!" Comment made to author by unidentified Marine from 1/5 following first night of ground combat operations during OIF I March 19 2003.

NOTES

¹ *King James Bible*, Book of Judges C1, V19

² *United States Marine Corps Service Campaign Plan 2009-2015*. Dec 2009

³ *Marine Corps Vision & Strategy 2025 Implementation Planning Guidance*

⁴ Interview with Wendell B. Leimbach, LtCol, 13 Jan 2010

⁵ Mildred H. Gillie, *Forging The Thunderbolt*, (Harrisburg, PA: The Military Publishing Co, 1947), 20-21, 36

⁶ Kenneth W. Estes, *Marines Under Armor: The Marine Corps and the Armored Fighting Vehicle, 1916-2000*. Naval Institute Press, Annapolis MD, 2000.

Prior to WWII the Marine Corps committed itself to procuring tanks from the Army. This was logical for the Army had the financial means and infrastructure. The Marine Corps understood that by taking this course of action they may not end up with a tank that fit their entire needs but this was considered acceptable to the alternative which was nothing.

⁷ *Ibid*, 118-128

⁸ *Ibid*, 135-137

⁹ *Ibid*, 136

¹⁰ Under the overall command of General Douglas McArthur the Marines were able to conduct albeit a relatively unopposed landing at the vital harbor just miles from the South Korean Capital of Seoul. What the landing site lacked in enemy opposition was made up for in its geographical complexity. Inchon was plagued by erratic tidal changes that allowed for favorable landing windows for short periods of time during the day. Additionally, the harbor was dominated by Wolmi-do Island, a small heavily fortified complex that jutted out into the harbor and was connected to the mainland by a small causeway. From this position, enemy forces enjoyed enfilading fire on anyone choosing to land on the harbor's main beaches.

¹¹ *Ibid*, Estes p 140

¹² *Ibid*, 141

¹³ *Ibid*, 140 - 145

¹⁴ *Ibid*, 168-171

¹⁵ *Ibid*, 168-172

¹⁶ Leimbach interview 13 January 2010.

¹⁷ It was the disparity in which different units were going about executing this mission that caused complications. Soon those individuals whose weapons were confiscated were being victimized by the criminal element this in turn fostered resentment towards the UN peace keeping forces especially the U.S. personnel.

¹⁸ *After Action Report by Capt Campbell*, TF Mogadishu, 1993 pp354-355

¹⁹ *Ibid*, p357

²⁰ *Ibid*, pp364-365

²¹ Quote from Mr. Phil Patch, Marine Corps Systems Command

²² *Ibid*, Leimbach

²³ *Ibid*, The tank infantry phone was purchased by the army once it realized the enhanced coordination capability it offered however, the Army has only retrofitted its deployed tanks with the device and does not intend to have it mounted on its tanks back in CONUS

²⁴ *Ibid*

²⁵ *Ibid*

²⁶ *Ibid*

²⁷ *Ibid*

²⁸ *Ibid*

²⁹ *Ibid*

³⁰ *Ibid*

³¹ *Ibid*

³² Interview with LtCol Thomas Gordon, CO, 1st Tank Battalion, 29 Palms CA. 29 January 2010.

³³ *Ibid*, Leimbach

³⁴ *Ibid*, Gordon

³⁵ First hand accounts while serving as Operations Officer, 2d Tank Battalion from February 2008 to June 2009.

³⁶ Ibid

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