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MAGTF TARGETING

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EXECUTIVE SUMMARY

TITLE: MAGTF TARGETING

I. Theme: To establish the historical and doctrinal rationale for the Marine Corps' initial weak targeting efforts in SWA, to discuss some possible solutions, and to recommend some actions to correct the targeting process prior to the next conflict.

II. Thesis: The relatively weak targeting effort by the MAGTF in the Persian Gulf conflict is a result of our history, our amphibious doctrine, an inadequate personnel structure to support such large/complicated operations, and the lack of specific targeting education.

III. Discussion: The Marine Corps entered the modern age of warfare in WWII. Our current targeting doctrine was written with amphibious operations and relatively limited wars as its focus. The conflicts in Korea and Vietnam did little to alter our doctrine for, or the staffing of, targeting cells. The personnel structure of our Division Headquarters and MAGTF Command Elements relative to the targeting process reflect this dated approach. Until recently our targeting process was reactive rather than pro-active. Even today it does not bridge the gap between amphibious and joint targeting, nor is it taught throughout our education system. Educating the total targeting team, including the Target Information, Target Intelligence, and Liaison Officers will provide them a common language for both internal and joint use. Providing manned structure spaces in the MAGTF command elements will replace the ad hoc relationships recently experienced. Doctrine that can span the spectrum of conflict will ensure a common starting point for all future conflicts.

IV. Summary: Our history and doctrine are reflected in our training of target officers and our targeting structure. The joint nature of future battles requires us to review our training, doctrine, and structure.

V. Conclusions: We have to make some modifications in our doctrine and training relating to targeting; we have to actively train officers to target properly; and we have to create and staff billets for professional targeteers in order to creditably contribute in the next joint conflict.

TARGETING FOR THE MAGTF

Targeting is a discipline the Marine Corps has ignored for as long as I can remember. As a result we paid a significant price during the early days of Operation Desert Storm. Only the superb efforts of . . . (persons) . . . saved us at what was very nearly the last minute.¹

The dimensions of the battlefield have increased in geographic size and complexity, yet the time to traverse it has been reduced. This has had enormous impact on targeting. Since its inception in World War II, our doctrinal method of targeting has not been significantly changed to keep up with the expanding size of the battlefield, increased range and sophistication of the weapons, tempo of operations/speed of equipment or the joint nature of the battlefield. Our targeting system is reactive rather than proactive and has routinely focused on what in today's words is called the "near battle." We have not used deep battle targeting to implement the shaping of the battlefield, nor have we had doctrine to assist us in that effort until recently. In our last three wars, Marines did not plan the deep targeting (sometimes called interdiction). Our doctrine is not joint, or reflective of new trends, nor do we train or effectively exercise targeting officers.

I will explore our targeting history through the last three wars, the doctrine and structure for our targeting based on that history, and what we found in Southwest Asia for targeting. Some thoughts on how to fix the problems and some recommendations will end the paper.

HISTORY

World War II saw the Marine Corps involved in serious ground fighting on many islands in the Pacific Ocean. Because of the size of these islands, there was no need for deep targeting on the ground as we currently define it. Almost every target fired upon was reactive. Isolation of the Amphibious Objective Area (AOA), was the responsibility of the CATF, while Marines focused on the immediate land battle.

Iwo Jima was the first reported use of a Fire Support Coordination Center (FSCC) at the Marine Division level.² The FSCC was the agency responsible for the early targeting procedures. FSCC procedures were refined throughout the Island Campaigns until the Tenth Corps FSCC made its debut on Okinawa. This FSCC was similar to the ones we have today as far as manning and functions are concerned. The first Target Information Center (TIC) was in III Amphibious Corps during the Okinawa Campaign, and functioned down to the infantry battalion level under the supervision of the artillery liaison officer.³ "Working in close conjunction with the naval gunfire and air liaison officers, the TIC collated intelligence regarding enemy defensives (sic)."⁴ FSCC's and TIC's became linked at this point. There were no really deep targets as all fixed targets were scheduled for fires or fired upon before the landing. All other located targets were reactionary, and were dealt with as they presented the opportunity. This system still exists today in our doctrine. For close targets it is more than adequate.

We learned a great deal about fire support from World War II, especially in the integration of supporting arms, communications, and fire support techniques. We did not learn a great deal about deep battle targeting because we did not fight a protracted, large land mass campaign.

The "deepness" of battle is a function of the weapons of the day. The cannon and rocket artillery in WWII were of relatively short range. The air arm was lending speed, mobility, height and depth to the battle, and had the potential to involve us in deep targeting. "Considerable emphasis was placed, however, in direct assistance to the troops themselves."⁵ Marine emphasis was on Close Air Support (CAS) as flying artillery, and for the most part we left isolation/interdiction of the battlefield to our Naval brethren as part of their isolation of the AOA effort.

The conflict in Korea offered the Marines an opportunity to plan for and interdict/isolate military action far from the front lines. In truth, the Marines did not participate in the decision making or in the planning sessions for these deep strikes. The usual turf battle between components, so familiar today, reared its ugly head, and Marine air was subordinated to the Far East Air Force (FEAF).⁶

Although not formally listed as a separate component, the Marines may, as a member of the Navy component, have been able to nominate targets for the deep targeting, called the interdiction or air campaign for this war. FEAF realized the importance of interdiction and had a formal targeting committee.⁷ By the

war's end, the air interdiction campaign became almost an Air Force only show. Marines were not formally represented on this committee, and had influence only through the 5th Air Force for CAS, or through the Navy during amphibious operations.

Our targeting process, as a function of the FSCC, served us well in the later stages of WWII and Korea in the close battles, and was the one generally used in Vietnam. However, political considerations shaped the battlefield. Vietnam provided a unique perspective on the deep targeting/interdiction campaign.

Throughout the war, the freedom to target Korean targets by President Truman was not given to the military by President Johnson in Vietnam.⁸ Close targets were selected, scheduled, and attacked by artillery or CAS, while interdiction, especially of the Ho Chi Minh trail, became the heart of our air campaign. The nominal controlling authority for deep strikes in Vietnam was CINCPAC, Admiral U.S. Grant Sharp.⁹ The actual target selection and timing of the attacks sometimes was made by the President or Secretary of Defense.¹⁰ The Marine ground forces had the various levels of FSCC's and the Divisions had their targeting sections in Vietnam, but again their focus was on the near targets. By this time we no longer had formal target sections at the infantry battalion levels. We had changed some terminology, but the FSCC and targeting were still more reactionary than deep.

DOCTRINE AND STRUCTURE

While FSCC's, and at certain levels, the TIC have been in our Divisions for over 40 years, they remain nearly identical to their

WWII ancestors. The means of making war and our thinking about how to make war have changed, our doctrine has remained constant, "...we have tended to focus on the tactical aspects of war to the neglect of the operational aspects."¹¹

Targeting (DOD, NATO) the process of selecting targets and matching the appropriate response to them taking account of operational requirements and capabilities.¹²

Our current doctrine focuses narrowly on targeting as a function of amphibious operations, not as a part of joint operations. In 1981 we published OH 7-5, "Targeting by MAGTF's," which broadened our perspective somewhat, and it was followed two years later by OH 7-5.1, "Targeting in Support of the Landing Force During Amphibious Operations." It appeared targeting was going to be a discipline of its own, neither joint nor deep, but at least there was some interest in this function. Unfortunately this interest was short lived: Neither manual is now available for use.

THE MARINE DIVISION, FMFM 6-1, has only a passing comment on targeting, and refers the reader to FIRE SUPPORT COORDINATION, FMFM 7-1 on this most important issue. This slight indicates the status of the targeting process. It has not been a priority because our interest has been on things close and amphibious, not joint or deep. The targeting of the deep battlefield had been left to CATF in the past. Marines participated more as players than planners in the targeting process. The present amphibious

targeting doctrine can be found in NWP 22-2(Rev B), (FMFM 1-7), SUPPORTING ARMS IN AMPHIBIOUS OPERATIONS. The emphasis is still amphibious and does not transition the targeting section to a fully capable Marine-only or joint targeting section within its pages.

The Navy and Marine Corps Intelligence Training Center uses NWP 22-2 as the basis for their targeting instruction. There is no reference to FM 6-20-10 or FMFM 6-18. As a result, our target intel officer approaches his job with an amphibious bent. To illustrate this, consider that ". . .the TIC is dissolved when the landing force headquarters is displaced ashore."¹³ Marines usually phase the command element ashore rather quickly, and that could mean the intelligence section would be ashore with some capability. Yet that capability is insignificant relative to what the Navy can generate in the way of national level intelligence aboard ship. It takes time to generate that capability on the ground. The targeting process, reliant as it is on intelligence, is a refined, detailed and reliable method of targeting for the amphibious assault.

There are only a few procedures that can be directly translated into joint operations. The new Marine Corps draft FMFM 6-18 [lifted from FM 6-20-10] has a concept of targeting that differs significantly from our old doctrine. This new doctrine stresses an entirely new targeting procedure as shown in the following chart:

NWP 22-2/
FMFM 1-7
PROCEDURES

FM 6-20-10 OR
FMFM 6-18
PROCEDURES

- | | |
|--|-------------------------|
| 1. TARGET DETECTION AND IDENTIFICATION | DECIDE [WHAT TO ATTACK] |
| 2. RECORDING | DETECT [IT] |
| 3. TARGET ANALYSIS | DELIVER [WEAPONS ON IT] |
| 4. DECISION TO ATTACK | |

Up to this point, I have used the terms "reactionary" and "close"; and "pro-active" and "deep" almost interchangeably. The FMFM 1-7 (NWP 22-2) method is primarily a reactionary method while the FMFM 6-18 is pro-active. The new method allows the commander to state his intention, his concept, and other guidance, and allows the targeteer to be pro-active for both deep and close battles. It integrates perfectly with army doctrine, and can be used in amphibious and joint/combined operations as well as the transition period between amphibious and continental war fighting. It gives us the additional capability of using the newest weapons on the battlefield in a pro-active way. This new style of targeting is called the "decide, detect, deliver" or "D³" method, and was the method used by I MEF in SWA. While proving its validity in that war, it has not been integrated into full use, nor have other doctrinal publications been changed to reflect it.

"How to" doctrine is only half of the solution. The other half is people assigned to accomplish the task. The first Table of Organization, (T/O) that contains a target section is at the

Marine Division in the FSCC.¹⁴ The levels of FSCC's below the Division do not have a targeting capability unless the commander augments his FSCC from within. There is currently no structure for a targeting cell in the MEF Command Element Table of Organization (T/O). "Although all echelons do not have officially a designated target information sections, the targeting process is accomplished in every FSCC and must be understood by FSC's."¹⁵ There is no way to ensure that every FSC will understand it the same way. "Regardless of how well doctrinal and procedural publications are written, different people will interpret them differently ... only by training in targeting can the different interpretations be identified and reconciled."¹⁶ It seems we expect our targeting officers, who are ad hoc'ed into the job, to learn this process by osmosis. There is no single school or class to instruct our officers in this critical process.

SOUTHWEST ASIA

There are historical and doctrinal reasons why our initial targeting efforts failed in SWA. Our lack of focus on these joint-type procedures, lack of trained targeting officers, incomplete manning (structure) of the targeting sections all contributed to the failure. A new, yet unaccepted method of targeting, and the initial mistaken notion that the MEF was not going to "fight" the war also contributed to the failure.

The I MEF command element in SWA proved to be evolutionary. It started as a simple headquarters element and grew to the

largest organization planning actual combat for Marines since WWII. Over 900 personnel performed dozens of command functions, and controlled an area similar to the area bounded by El Toro, San Diego, 29 Palms, and Yuma, Arizona. The actual battlefield would include half again that area. The shaping of the battlefield fell to a section of the Command Element that did not exist when the MEF deployed. The action officers had not worked together, and there was no equipment in the T/E for the function. None of the action officers were trained to accomplish the varied tasks associated with targeting. The intelligence officers tasked to work within the targeting section were not trained to support the targeting function. All this had the potential for a disaster. Fortunately, the Marines assigned were able to overcome the shortcomings. Several dedicated officers deliberated and agonized over the proper course and finally adapted the D³ system to their unique situation. Targeting was planned and executed to reflect the commander's intent. The results proved that a formal targeting section, manned by trained officers would benefit the MAGTF.

POSSIBLE SOLUTIONS

The war with Iraq defined our targeting problems. We must now begin to fix them in an expeditious manner.

Education of a MAGTF targeting officer must become a priority. Our most recent experience clearly demonstrates that a fully qualified, joint targeting officer would have been able to

make a contribution to the overall joint war effort earlier than we did. Colonel W.H. Schopfel, I MEF FSC during Desert Storm, has stated that the targeting process at the MEF was evolutionary, and that it took several iterations before it was working.¹⁷ Every system has quirks that must be mastered before productive accomplishment flows, but there are basics that can and must be mastered before the process can begin. A nucleus of officers trained in the procedures can cut this evolutionary process to a fraction of what we experienced in SWA.

Presently we have only one kind of targeting officer officially recognized in our Military Occupational Specialty (MOS) Manual, the "Nuclear and Chemical Weapons Employment Officer," MOS 5715. Taught at Fort Sill, Oklahoma in a four week package, the officer is taught to analyze possible nuclear and chemical targets, and how to conduct the weaponeering to match weapons to the targets. He is not a trained MAGTF targeteer.

Some aviation officers may be qualified as targeting officers as a result of successful completion of the Weapons Tactics Instructors Course at Yuma, Arizona, and the assignment of MOS 7577. He is not a trained MAGTF targeteer.

The United States Air Force conducts the Combat Targeting Officer Course at Goodfellow Air Force Base, Florida. It covers some Air Force peculiar details perhaps not needed by Marines during its 14 week duration, but has some critical information and procedures needed by our targeteers. The existence of a school for Air Force targeting procedures while the Marine Corps has NO

school is helping to define why we did so poorly at first. While the whole curriculum at this course may not be necessary, the information is needed by our instructor cadre in teaching Marines how to target properly and will reveal the USAF's process for validating targets during the target cycle.

The addition of the Intelligence Officer in the targeting education process will pay dividends. "An infantry commander could commit his force against an imperfectly located enemy. But the same level of information was not precise or timely enough to be used by a fire support coordinator for targeting."¹⁸ Our Intel Officer should possess the knowledge of what targeteers need in order to make those precise and timely targeting decisions. The Target Information and the Target Intelligence Officers speaking the same language solves some "green door" problems experienced by those sections in SWA. It also translates the commander's guidance and intention into a coherent target planning cycle.

Another area requiring trained targeting officers is the liaison officer detailed to other staffs, but especially critical when he is sent to the Joint Target Coordination Board (JTCB), Tactical Air Command Center (TACC) or Joint Forces Air Component Commander (JFACC). This officer can provide valuable insight into what the MAGTF is trying to accomplish in its targeting process. He also may be able to garner some additional sorties.

When we finally qualify targeting officers, it is imperative that we develop a method for tracking them for further service.

Any officer qualified as a targeting officer should carry an additional MOS for tracking vice assignment purposes. This is easy to do and is now being done for MOS 5715 at HQMC.

The MAGTF commander could be designated as a joint task force commander.¹⁹ One responsibility of the joint commander is targeting. Currently any MAGTF would have difficulty in overcoming the initial problems in setting a targeting program in motion because it lacks trained personnel.

The Division has the only formally structured targeting section with personnel specifically designated for targeting duties in the MAGTF. At regiment and below, and in the MAGTF command element, such billets are not provided by T/O, and personnel can be dedicated exclusively to targeting tasks if the commander requests additional personnel or shifts individuals from their normal duties.²⁰

If we had trained targeteers at the MAGTF, the Marine Joint Commander would have a vehicle by which component commanders could vie for support. This vehicle is called the Joint Target Coordination Board (JTCB) in joint commands. It meets as often as necessary to accept nominations, to prioritize targets, and to recommend the type of asset to be used, i.e., air, naval, TLAM, SOF, EW, etc. This meeting is rarely pleasant, as each participant is trying to garner as many of his nominations into the selected few as possible. This critical function deserves attention prior to hostilities. To maintain creditability the targeting officer at the MEF should be created and filled in

peacetime, ready for war. "While factors of economy may make it necessary to modify the wartime organization somewhat for peacetime operation, these modifications should not be such as to require a major shift in command structure on the outbreak of war."²¹

Because we do not now have the doctrine or trained officers to accomplish the task, a person trained specifically to target would be very useful in setting up the JTCB and ensuring a timely and accurate product. In fact, trained personnel throughout the targeting process from the intelligence officer, target information officer, air officer, and the liaison officer sent to represent the commander at the conference would be the optimal solution. For example, the Omnibus Agreement of 1986 might be manipulated to our benefit if we thoroughly understood the targeting process as used by the Air Force. The ability to refute and counter arguments by knowledgeable persons during the actual nomination process would prove advantageous.

Our MEF's often consider themselves as administrative only. The MEF has responsibilities as a warfighting staff, and this staff's focus should be more to future operations and limit its dealings in current operations to that which is necessary for minimal oversight. A Target Information Cell should belong to the Supporting Arms Special Staff (SASS) or FSCC if resident in the MEF. Because the MEF's role is looking to the future, the MEF Targeting Cell should have a slightly different orientation than the TIC at the Division. This difference will be deep

targeting, and targeting in support of the air campaign; if one is undertaken. In many situations the air campaign will be concurrent with ground operations. Again "deep" is a relative term; political/geographic area, time, and speed are all different aspects of "deep." Our targeteer has to be capable of planning throughout these dimensions.

If we assume that the MEF has current theater and national level intelligence products and an FSCC available at its location, and that the planning cell is functioning, then we should be able to produce a creditable target nomination sheet. The MEF Air Section would have an ACE Air Plan that would support the commander's intent and guidance that the target nominations would complement. Our trained liaison officer at the JFACC would represent us during meetings and validations, and our plan would be better supported. Right now we have neither the trained officers, manpower structure or doctrine to make this occur with reliability.

Our doctrine in the area of targeting should be revised to reflect the flexibility needed in today's combat. As an example, we are teaching intelligence analysts to target from FMFM 1-7 while the artillery officers are being taught from FM 6-20-10 or FMFM 6-18. Our doctrine in the area of targeting has to be joint and should be our method of targeting for amphibious operations, joint operations, or in the rare instance when Marines fight alone, Marine operations.

Our doctrine also should include some general and specific

duties for the liaison officers who will represent our interest on other staffs and in the joint community.

We can no longer expect the only structured targeting section in the MEF, that is the 6 man section at the Division FSCC, to shape the battlefield for the MEF commander. Ad hoc arrangements must cease. There must be some structured spaces at the MAGTF command element for trained and experienced target officers and NCO's. All need not be on active duty, as the reserve component can easily and capably fill these billets during the mobilization phase.

RECOMMENDATIONS

Recommendations to fix the problem are not difficult to discern. The costs are not out of proportion to the probable benefit. Fixing our targeting system will ensure dependable responses throughout the spectrum of conflict. These recommendations are:

1. Provide a formal school to train all service members of the targeting team in the skills necessary to target intelligently per the desires and intent of the commander. This school would be a benefit to all services and truly be joint. The U.S. Army had the same general criticism of targeting problems in SWA, and have already undertaken a study to start a curriculum²².

2. Provide a permanent targeting cell to each MAGTF Command Element (CE). This could be a single officer working in the G-3

during peacetime. Augmentation would come from the other elements of the MAGTF and from reserves when called upon to fight. I MEF proposes a reasonable T/O for the MEF FSCC in the after action comments from SWA.

3. The last and most controversial recommendation is the proposed location for the targeting cell or section. Historically the TIC has been a part of the FSCC. This made sense in WWII, Korea and Vietnam, and probably still makes the most sense, if we view the MAGTF Command Element as a business with an output critical to the well-being of the organization. There have been strong, rational arguments for putting the targeting cell under the Air Officer at the MEF (remember at this level the Air Officer is a representative of the Wing Commander). The argument has been the ACE does most of the execution of the deep battle and therefore should plan the targeting. The ACE does not directly interface with the other possible executing agencies (SOF, EW, TLAM) any better than the CE, so there may not be much benefit of separating the function from the source of information/coordination. This is especially true in a LIC environment where the Psyop effort may be stronger than the bombing effort. The MEF CE should keep control of targeting within its headquarters.

A second argument called for targeteers to fall directly under the G-3. This is certainly an option. The section could not help but fulfill the commander's intent when they have only the G-3 to steer their course, but may burden the G-3 with

unnecessary detail. Most G-3's have enough to do and should not be burdened by an additional function.

It is also argued that the MEF Plans Section should be responsible for the targeting. The Plans Section is looking forward toward future operations, and targeting is integral part of shaping the battlefield. The problem to be solved here is on the hand-off between the plans and current operations sections. There have been "walls" erected that have not been conducive to effective hand-off of these operations in the past. A smooth transition to current operations is desirable. A better way of accomplishing this task would be to have an independent agent perform the targeting for both plans and operations. This one agent provides the human aspect so essential for the successful transition from plans to operations. This person already exists.

My recommendation is to leave the TIC under the FSC. Note I did not say FSCC. The FSC will be the PERSON to bridge the gap between the plans and operations. He does this now in all other fire support issues. Additionally, he may be the only person in the CE who has had any targeting training or experience. The FSC will have two sections to supervise, the FSCC and the TIC. He will be included in all planning functions, as he is now, and will be a member of the MEF staff permanently, even in peacetime. He is still the logical choice to supervise the TIC.

The costs of fixing this problem in targeting is not expensive, but the time has come to give it the attention it deserves. Old issues of the Gazette are replete with articles

about FSCC and TIC problems and possible solutions. Many of these arguments are as valid today as they were when Colonel Heinl wrote them in 1953! In this era of longer ranges, smarter weapons and shrinking resources, it is imperative that these problems be addressed and solved before the next conflict. We have a start in the draft FM 6-18 - we have a doctrine that can support the entire range of combat operations. If we build some structure, educate some officers and then provide some realistic training to support the doctrine, General Van Riper will not have to make a similar comment after the next conflict.

FOOTNOTES

¹Van Riper, "Observations."

²Isley and Crowl, p 502.

³Frank, Vol V, p 382.

⁴Clifford, p 232.

⁵Frank, Vol I, p 16.

⁶Momyer, pp 58-62.

⁷Ibid, 54.

⁸Ibid,p 173.

⁹Davidson, p 387.

¹⁰Ibid.

¹¹FMFM 1-1, p 87.

¹²JCS Pub 1-02, p 365.

¹³FMFM 1-7, p 7-4.

¹⁴OH 6-2A, p 7-1.

¹⁵FMFM 6-20-10, p IV-1.

¹⁶OH 7-5, p 1-5.

¹⁷Schopfel, Interview.

¹⁸Scales, p 114.

¹⁹UNAAF, p. 3-28.

²⁰OH 6-2A, p 7-1.

²¹Eccles, p 118.

²²Todd, Interview.

BIBLIOGRAPHY

- Clifford, Kenneth J. Amphibious Warfare Development in Britian and America from 1920-1940, Edgewood, Inc. Laurens, New York, 1983.
- Davidson, Phillip B. LTGEN USA (Ret), Vietnam At War. The History 1946-1975, Presidio Press, Novato, Ca., 1988.
- Eccles, Henry E. RADM USN (Ret), Logistics in the National Defense, The Stackpole Company, Harrisburg, Pa., 1959.
- Frank, Bemis M. and Shaw, Henry I. Jr. History of U.S. Marine Corps Operations in World War II, Historical Branch, G-3 Division, Headquarters U.S. Marine Corps, 1968.
Vol.1, Pearl Harbor to Guadalcanal.
Vol.V, Victory and Occupation.
- Isely, Jeter A. and Crawl, Philip A., The U.S. Marines and Amphibious War, Princeton University Press, Princeton, New Jersey, 1951.
- Momyer, General William W. USAF (Ret), Air Power in Three Wars. (WWII. Korea. Vietnam, U. S. Government Printing Office, Washington, D.C., 1983.
- Scales, Robert H. Jr. Fire Power in Limited War, National Defense University Press, Washington, D.C., 1990.
- Schopfel, Col. W. H. USMC, Interview of 10 April, 1991.
- Todd, Col. John R. USMC, Telephonic interview of 16 April, 1991.
- Van Riper, BGen Paul K. USMC, "Observations Made During DESERT SHIELD and DESERT STORM," Memorandum of 9 March 1991.
- U.S. Army. FM 6-20-10 Tactics. Techniques. and Procedures for The Targeting Process, Washington, D.C., 1990.
- U.S. Marine Corps. OH 6-2A: Fire Support Coordinator's Guide, Quantico, Va., 1987.
- _____. OH 7-5: Targeting in Support of the Landing Force During an Amphibious Operation, Quantico, Va., 1983.
- _____. OH 7-5-1: Targeting by Marine Air-Ground Task Forces (MAGTF'S) Quantico Va., 1981.
- _____. FMFM 1: Warfighting, Washington, D.C., 1989.

_____ FMFM 6-1: Marine Division, Washington, D.C.,
1978.

_____. FMFM 7-1: Fire Support Coordination, Washington, D.C.,
1981.

Joint Chief of Staff. Department of Defense Dictionary of Military
and Associated Terms, Joint Pub 1-02. Washington, D.C., 1989.

Joint Chief of Staff. Unified Action Armed Forces (UNAAF), JCS Pub 0-
2. Washington, D.C., 1986.

U.S. Marine Corps. Tri-Marine Expeditionary Force Order P3120.1, MEF
OPSOP, 1989.