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TASK FORCE SYNCHRONIZATION: WHAT IS ESSENTIAL?

A Monograph

by

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The monograph first examines the theoretical concepts relevant to synchronization and their significance to current AirLand Battle doctrine. The battlefield operating systems are then dissected to determine the present procedures available to the task force commander and determine their sufficiency. The final portion of the argument covers techniques that have been developed to improve a task force's capability to synchronize operations.

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ABSTRACT

TASK FORCE SYNCHRONIZATION: WHAT IS ESSENTIAL? by Major David M. Rodriguez, USA, 52 pages.

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The monograph first examines the theoretical concepts relevant to synchronization and their significance to current AirLand Battle doctrine. The battlefield operating systems are then dissected to determine the present procedures available to the task force commander and determine their sufficiency. The final portion of the argument covers techniques that have been developed to improve a task force's capability to synchronize operations.

The importance of the task force's understanding of time and space factors is essential to effective employment of combat power. Furthermore, the communication of the concept of operation, that explains when, where, and how combat power is arranged to attain the mission objective, must be done in a clear, timely manner throughout all levels of the organization. The interaction between the task force members must be so cohesive that it enables the maximum results of a fine tuned team to be achieved. Finally, recommendations about the utility of the techniques currently in use are proposed.

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I. INTRODUCTION

U.S. Army Field Manual FM 100-5, Operations, promotes synchronization as one of four basic tenets of AirLand Battle doctrine. The ability to execute operations in accordance with the synchronization tenet, as well as the initiative, agility, and depth tenets, will determine success on future battlefields. "Synchronization is the arrangement of battlefield activities in time, space, and purpose to produce maximum relative combat power at the decisive point."[1] FM 100-5 states the commander is responsible for synchronizing battlefield activities.

Experience at the National Training Center (NTC) consistently identifies synchronization as a major weakness of task force maneuver units. Current trend line analysis studies, after-action reports, lessons learned bulletins, and the TRADOC briefing "Anatomy of an NTC Battle" all support this inability to synchronize activities as a deficiency in training. The inability of maneuver task forces to synchronize combat power has an adverse influence on the capability to effectively execute AirLand Battle doctrine.

Though this problem occurs in both defensive and offensive operations, this monograph will concentrate only on the offensive aspect. The purpose of this analysis is to determine if it is possible to achieve

synchronization of a maneuver task force's combat power during offensive maneuver, and if so, what is essential to successful synchronization.

II. METHODOLOGY

The synchronization tenet in AirLand Battle doctrine can be traced to theoretical concepts from the classical military theorists. This link will be illustrated to demonstrate the relevance of theory to current doctrine.

We will review current procedures for achieving synchronization at the task force level. Each operating system will be analyzed to determine the sufficiency of these procedures to synchronize combat power. The strengths and weaknesses are highlighted to assist in determining what is essential to synchronize combat activities.

Next, the task force synchronization matrix promulgated at Fort Leavenworth for the Pre-Command Course will be analyzed. Between the current doctrinal literature and focus of instruction at the Pre-Command Course, we will cover the formal Army solution to synchronizing combat activities at the maneuver task force level.

Additionally, in conjunction with the Army's expanding experience at the National Training Center, other techniques have been developed by units to

synchronize combat power. Based on units achieving relative degrees of success during an NTC rotation, two of these techniques are the most prevalent. These are called the base unit approach and task force plays.

The base unit approach is a technique that utilizes a base unit as the main effort at any point in time and then switches this base unit according to the situation. Task force plays are a set of standardized plays similar to football plays that a unit practices and adapts to the situation at hand. We will examine these techniques to determine their strengths and weaknesses.

The criterion applied as a measure of effectiveness in synchronizing combat power is the mastery of time and space relationships. As Clausewitz stated"...the equation of time and space does underlie everything else and is, so to speak, the daily bread of strategy...."[2] The importance of time and space that Clausewitz initially formulated continues in our current doctrine. FM 100-5 states "...to achieve this (synchronization) requires anticipation, mastery of time-space relationships and a complete understanding of the ways in which friendly and enemy capabilities interact."[3] The criterion will be applied to the seven battlefield operating systems. This framework for analysis will cover the full range of task force functions to determine a maneuver task force commander's ability to

synchronize battlefield activities.

The force examined will be a balanced mechanized infantry task force supported by forces that would normally be assigned to a task force which is the main effort of the brigade. All organic support associated with the task force is present and in combat ready condition. Forces include two tank companies, two ground surveillance radar teams, a Stinger section, and an engineer company. The employment concepts of each will be discussed throughout the monograph.

III. THEORETICAL BACKGROUND

The influence of Jomini includes the concept of decisive points. This is where the synchronization tenet of AirLand Battle is supposed to produce maximum relative combat power.4 Jomini defines decisive point as follows:

> That there is in every battlefield a decisive point, the possession of which, more than any other, helps to secure the victory, by enabling its holder to make a proper application of the principles of war: arrangements should therefore be made for striking the decisive blow upon this point. 5

As implied by Jomini, the focus of combat power should be oriented on these decisive points. He goes further in his development of the idea when he describes combinations. Jomini's concept of combinations more explicitly explains the importance he attaches to producing maximum combat power relative to the enemy at

decisive points. Combinations are achieved by:

> ...it appears, therefore, that all the combinations of a battle consist in so employing the force in hand as to obtain the most effective action upon that one of the three points (decisive points) mentioned which offers the greatest number of chances of success. 6

Combinations of actions or effects of combat power can be translated into the current desire to combine more than one operating system to create synergistic effects on the enemy.

Clausewitz also provides an excellent theoretical base that is relevant to the current AirLand Battle tenet of synchronization. In his discussion of superiority of numbers he states:

> We believe then that in our circumstances and all similar ones, a main factor is the possession of strength at the really vital point. Usually it is actually the most important factor. To achieve strength at the decisive point depends on the strength of the army and on the skill with which this strength is employed. 7

Thus, he also supports the idea that relative strength at the decisive point is critical to victory. Clausewitz further argues that, with few exceptions superiority of numbers is the most important factor in victory. 8

One of those exceptions leads us to the importance and relevance of synchronization in our current doctrine. Because we expect to fight outnumbered, our doctrine emphasizes the ability to create synergistic

combat power effects that are more than the sum of their individual parts. In Clausewitz's words: "...the forces available must be employed with such skill that even in the absence of absolute superiority, relative superiority is attained at the decisive point."9 This superiority can only be achieved through effective synchronization of available combat power.

This discussion provides an overview of the classical theorists' concepts relevant to the AirLand Battle doctrine tenet of synchronization. Since these theorists viewed warfare, the complexity of the modern battlefield has expanded both in range and lethality of weapons systems. During the 19th century, commanders had to synchronize only the physical presence of their forces since the existing weapons technology meant the effects of this combat power could be felt only at close range. Changes in weapons range and the increased spectrum of combat power effects make synchronization today a more complex challenge.

The battlefield activities we must now arrange are so varied that we now must deal with the activities' consequences or effect. Explaining this added dimension, FM 100-5 states: "While themselves separated in time and space, however these activities are synchronized if their combined consequences are felt at the decisive time and place."10 Due to the wide range of

operating capabilities of combat, combat support, and combat service support assets available to the maneuver commander, an extraordinary effort is required to synchronize activities in time and space. This situation has led us to our current problems in implementing AirLand Battle doctrine.

IV. CURRENT DOCTRINAL PROCEDURES FOR SYNCHRONIZING COMBAT POWER

Current doctrine for synchronizing task force activities is espoused in FM 71-2, The Tank and Mechanized Infantry Battalion Task Force. As with the majority of doctrinal manuals, it is oriented on what to do, not how to do it. A general summary of employment concepts is the major theme of the synchronization procedures of the task force during offensive operations. Acording to our doctrine: 'The commander and staff synchronize and integrate all combat, combat support, and combat service support assets organic and available to the battalion task force.'11 The seven operating systems will be examined in detail to illustrate the current doctrine.

'The concept of the operation describes a plan for massing firepower by synchronization of fires and maneuvers.'12 It is here the sequence of operations and the plan to synchronize combat power relative to the enemy is accomplished. Two concepts that are used which

assist in synchronizing combat power at the task force level are main attack and main effort. FM 71-2 defines them as follows:

> ...both main attack and main effort are mechanisms for allowing the concentration and coordination of combat power, but they are not synonymous. The main attack is the task force's main effort at the decisive phase of the attack. The main effort is the focus of combat power at any given time during the attack. 13

These concepts help the maneuver commander synchronize during offensive operations.

The important time and space factors relevant to the fire support system during offensive operations are the different response times for each type of fire and range. Examples of different response times are priority of fires, priority targets, preplanned fires, scheduled fires, groups, series, and targets of opportunity. The fire support system must be prepared to suppress, neutralize, or destroy these targets.14 These various desired effects require different lengths of time to accomplish. The different fire support weapons systems are tasked to accomplish these missions. "The assignment and shifting of these missions throughout the sequence of the operation is critical to properly integrating the fire support assets of the task force into the maneuver plan."15 Another important consideration in fire support planning is the impact that firing special munitions such as Copperhead and

FASCAM has on the availability of the fire support assets to respond to other missions. Full effect of the fire support available can only be obtained in locations that most of the force can range.

The task force intelligence operating system includes scouts, sub-unit combat reports, and ground surveillance radar (GSR) teams normally OPCON to the task force. It also includes information pushed down from brigade and division that makes the products of other sources available. This system is not thoroughly covered in current doctrine. Besides conducting offensive IPB, employment of GSR teams as far forward as the situation permits in a reconnaissance and security role, and use of scouts and infantry patrols to recon the battlefield, not much is discussed in FM 71-2 regarding the time and space considerations for employing these assets.16 Presently, problems with time and space factors in this system are understanding the decision support template and the associated reporting requirements.17

The air defense operating system time-space factors included in our current doctrine are only how and who should control them, and what the employment considerations are. In the offense doctrine recommends attaching the assets forward to use in an area type support role.18 To accomplish this, Stinger teams

execute bounding overwatch to maintain coverage of the lead elements during offensive maneuver.19 Because Stingers are mainly employed against high performance aircraft, the time factors relevant to their employment are critical to employment techniques. A currently unresolved problem is not having a dedicated, survivable vehicle for Stinger employment.20

The mobility, countermobility, survivability operating system during offensive operations emphasizes mobility.21 The time and space factors important in this system are how long it takes to eliminate and reduce obstacles, breach minefields and the location of this element during movement. All mobility tasks are done to obtain and maintain freedom of maneuver. This includes choice of routes or axes. Since the pace of operation depends on the route and is normally slowed by obstacles, the impact of this system has far reaching effects on the task force. Failure to appreciate this relationship could negatively affect the pace of the task force's movement and the relative position of the units within the task force. NTC experience indicates hasty breaching must be accomplished in seven to ten minutes to be successful.22

Countermobility operations include employment of FASCAM and obstacle emplacement along the task force flanks.23 Obstacle emplacement time factors have an

impact on their use, but this mission is not as important compared to the mobility mission.

Survivability assets at the task force include all smoke delivery weapons. Whether delivered by fire support means or vehicle generators, the timing of smoke, size and location of screen, and duration are the key time-space considerations associated with synchronization. The effect of smoke on both friendly and enemy ability to accomplish the mission must be considered.24 Commanders must be aware of how long it takes to build up a smoke screen, how big an area can be screened, and how long the screen can be maintained. Other survivability considerations include covered avenues of approach, speed of movement, camouflage, suppression, and the effect of Nuclear, Chemical, and Biological warfare. The impact of these factors on the ability to accomplish missions must be envisioned by the task force.

The combat support system is required to provide continuous support during offensive operations.25 Important time-space factors for the trains include movement, the time it takes to resupply classes III, V, and IX, and the distance from the maneuver forces. Each task of this system is accomplished as far forward as possible to provide timely support and maintain the momentum of the attack. The bounding of the combat

trains behind the maneuver units has been a problem at the NTC. Units have habitually outrun their support and dramatically increased turnaround time for resupply trips. Two techniques are emerging to correct this situation. The best is a 'trigger point' (event oriented) system to key trains displacement, and the other is a codeword from the operations center to bound forward based on the current tactical situation. The intent of both techniques is to keep the combat trains within four to six kilometers of the lead elements.26

The command and control operating system is the key to all task force operating systems. The commander uses the command and control process to manage all time and space factors in accomplishing the mission. Key considerations include making maximum use of time, synchronizing all assets, and conducting time analysis.27 To put it in proper perspective:

> ...time analysis must be an integral part of mission analysis, and must be conducted continuously until the mission is accomplished. Time is critical to ensure the synchronization of forces and other combat multipliers at the right time and place. 28

The impact of time permeates everything the task force does. Its importance has not decreased since the days of Napoleon who stated: 'The loss of time is irreparable in war.'29

The factor of time is a key element in the command estimate process. The analysis of time is accomplished

using four guidelines: determine time available, know the decision cycle, allocate time, and coordinate time during the wargaming process.30 These guidelines need to be expanded to thoroughly understand their influence on the command process.

Determining the time available starts upon receipt of a mission from higher headquarters and concludes upon fulfillment of the mission. This drives the available time to plan and coordinate, conduct rehearsals, perform reconnaissance, update the plan and move to the line of departure. It continues throughout mission completion and includes time estimates until the force is prepared to assume the next mission.31

Knowledge of the decision cycle is important in understanding both your own as well as the opposing forces relative situation. The steps in the cycle are as follow: commander receives information, processes it, makes a decision, issues orders, and subordinates execute the operation.32 Colonel John Boyd goes so far as to state that "Conflict can be seen as time-competitive observation-orientation decision action cycles".33 He further states "...if one side in a conflict can consistently go through the Boyd (decision) cycle faster than the other it gains a tremendous advantage".34 The impact of time and speed factors on this cycle are dramatic and point out the importance of

speed of action relative to the opposing force.

Time allocation is the action taken after one determines time available. The commander must allocate appropriate time for the entire length of his operation. This commitment of the commander's valuable resource of time is key. FM 22-103 puts this into perspective: 'the reality of the limits imposed by time must be recognized and actions framed with this consideration in mind.'35

Timing considerations during the wargaming process are essential to ensuring the concept of operation is solid and not unrealistic in terms of time and space.36 This includes movement times during the operation, timing and duration of indirect fire and smoke, time to effectively apply combat power at the appropriate moment and place, and time to complete all sub-unit tasks required of subordinate elements.37 An appreciation for these factors will enable the commander to understand the time and space relationships of subordinate units throughout the operation. This understanding prevents the commander from demanding too much or too little from subordinate units during the execution of the operation.

V. TASK FORCE SYNCHRONIZATION MATRIX (Appendix A)

The synchronization matrix is a technique developed at the Center for Army Tactics at Fort Leavenworth, Kansas to arrange battlefield activities to produce maximum relative combat power. It has been tested in

CPXs and is currently being taught at the Pre-Command Course. The matrix includes enemy timelines for their expected course of action across the top of the matrix. Along the side, the seven battlefield operating systems are arranged in time segments to display the friendly concept of operation. "The primary goal of the synchronization matrix is to arrange battlefield activities into a single coherent matrix."38 This matrix becomes the focus of the coordination efforts of the commander and staff to ensure their plan is synchronized. The idea of converting all activities to time is not unique, but the method of arranging them in one matrix is new.

The maneuver operating system portion of the matrix synchronizes the tasks of subordinate units over time. The commander's scheme of maneuver is depicted in this portion with time estimates for each major action being used to schedule the timing of the offensive maneuver. The time and space factors that are in the matrix include routes, movement times, refuel times, mission accomplishment times, and preparation time. The S3 estimates all maneuver routes and times based on the specific mission, his knowledge of the situation, and his experience.39

The fire support system is integrated based on similar time and space estimates. The fire support

officer makes these time estimates and chooses firing positions in coordination with the brigade S3 based on missions of the artillery units. Firing positions, relocation times, number of relocations, ammunition resupply, and scheduled fire missions are the factors which are integrated into the matrix. The support relationships and when they change are also depicted.40 This process insures close integration between the maneuver and fire support system.

The intelligence operating system supports the matrix in two ways. First, the S2 completes the intelligence preparation of the battlefield and predicts the most likely enemy course of action. The S2 then predicts the time for all key events in this course of action to occur. The rest of the staff will develop plans and synchronize activities based on these predicted sequences of actions.41

Upon completion of the IPB process and the subsequently produced timeline of the enemy actions, the S2 integrates his efforts with the S3's scheme of maneuver.42 Important factors of time and space included in the matrix are movement times of task force controlled assets, collection tasks over time and changes in support relationships to maneuver units over the course of the mission.

The air defense operating system is integrated into

the overall matrix using three factors of time and space. These are mission support relationships and weapon status as they change over time, and movement times of the ADA assets.43

The engineer operating system is integrated into the matrix using four factors of time and space. These factors are: movement times from roadmarch to obstacles, times to breach or emplace obstacles, resupply times, and changes in mission support relationships over the course of the mission.44 The task force engineer makes these time estimates based on an estimate of the situation, doctrinal manuals, and personal experience.

The combat service support operating system is thoroughly addressed in the synchronization matrix. The S4 sequences his support activities over the entire operation. Activities included in the sequence are refueling operations, resupply operations, movement of the trains during the operation, and movement times and distances of the resupply trips. The refuel and resupply operations are scheduled based on projected activities of the supported units to ensure continuous sustainment with minimum disruption of activities.45

The command and control portion of the matrix is divided into two sections, the command group and the main operations center. The factors of time and space that are used for integration into the overall matrix

are locations of each element over time, the handover of control of the battle, and movement and setup times of the main operations center.46

The major strengths of the task force synchronization process with respect to mastering time and space factors necessary for synchronizing battlefield activities are close coordination within the staff; development of a thought pattern to consider time and space relationships; and the conversion of all important activities to time. Since the synchronization matrix requires input from all staff sections, the interrelationship of each staff section must be clearly understood. This forced integration improves the coordination effort and discourages staff planning in a vacuum. 'This process requires staffs to work together to produce a synchronized plan.'47 This is true because of the centralized nature of the technique. The development of a thought pattern to always consider the impact of time and space relationships while planning is a major contribution of the matrix. '...synchronization is a mental mindset that requires time-distance factors of both friendly and enemy activities to be considered in tactical planning by the commander and staff to ensure synchronized plans and operations.'48 The more this mindset can be developed throughout the force the better the plans that will be developed. This mindset

also has a positive effect during the execution phase because it improves subordinate's understanding of the pace of the operation and the spatial relationships required to make the plan successful.

The requirement to convert activities to time accomplishes one of the main tasks in synchronizing operations. 'Regardless of the technique however, it is necessary to reduce basic activities to time.'49 This is an extension of employment capabilities that is important to the commander. Besides understanding what and how forces under his control are employed, it gives him an understanding of how long it takes to accomplish these missions.

The weaknesses of the task force synchronization matrix are: the technique is time consuming; it depends heavily on correctly predicting enemy actions; and it has the inherent danger of being a prescriptive or checklist approach to mission execution. The time required to complete one of these matrices can become inordinate. The desire inherent in most organizations to reduce uncertainty can quickly increase the details integrated into the matrix. '...from Plato to NATO, the history of command in war consists of an endless quest for certainty ....'50 This can readily consume precious time. Experience at the NTC and various war games clearly indicate this as a major weakness.

'...depending on the extent of detail integrated into the play, it can be relatively time consuming.'51 Because this process is accomplished in conjunction with the staff planning process, time is always a constraint.

The system is based on correct prediction of enemy intentions. 'It is primarily planned against one course of action and if the enemy radically alters his course of action, it may require rescheduling.'52 This problem brings in the question of flexibility. Is an inordinate amount of time being dedicated to get a 100% solution to a plan that may be based on false assumptions? The cost of not developing flexible plans and the risk of susceptibility to deception indicate this type of planning is not recommended. Also, when there are time constraints on planning, how easily can the matrix be adjusted to different situations?

The final weakness of this synchronization matrix is that it is generated just like a schedule and can be viewed as a checklist to be followed for success during the mission. This type of attitude can lead to failure. Dr. Girdler further observed:

> If carried to the extreme, it could be taken as prescriptive rather than descriptive plan of friendly tasks. Commanders and staff must see it as a plan, whose scheduling requires adjustment based on the situation.53

Nevertheless, the potential of being prescriptive is there and could be a major weakness of the process.

VI. BASE UNIT APPROACH TO SYNCHRONIZATION (Appendix B)

The base unit approach is another concept created to assist units in synchronizing combat power. The system is built around the AirLand Battle imperative to designate, sustain, and shift the main effort.54 Through the relational support of the remainder of the force to the base unit, the concept attempts to focus combat power at the critical place and time.

The purpose of the base unit approach is to:

> ...allow the force to synchronize the energy of its combat systems, to relate them to doctrinal principles, to enhance unity of effort and to maximize the generation of combat power at the appropriate point and time to achieve victory.55

It does this by designating a base unit which becomes the main effort of the task force. Therefore, by merely changing base units, the commander changes the support of the rest of the force to reorient quickly to support the new base unit.

The maneuver operating system is the most important system in the base unit approach to synchronization. The scheme of maneuver is chosen in accordance with the estimate of the enemy situation. The main attack and main effort (base unit) are designated. When the base unit is selected, it automatically indicates:

> ...who will receive priority of fires, logistical support and attached unit effort for any operation, creates the pacing unit around which the forces movement and maneuver will be focused, and establishes the commander's normal location on the

battlefield. 56

As is illustrated, all the other operating systems support whomever is designated the base unit at any particular time throughout the operation.

The important time and space factors that are strengths of the base unit approach are: the creating of a pacing unit; decreasing time required to transmit orders and instructions; reducing the time needed to concentrate combat power; and forcing the commander to weight his effort. The creation of a pacing unit establishes the speed and tempo of the operation.57 All units will move at the pace required to maintain the specific spatial relationship to the base unit during offensive maneuver. The maneuver thus becomes an event oriented operation keying on the base unit. This approach also assists in keeping orders short. 58

The base unit concept decreases the time to transmit orders because merely changing the base unit gives explicit guidance to the remainder of the task force.59 The speed at which orders are transmitted also enhances the maneuver operating system's agility and speed to react to rapidly changing situations. Another positive aspect of this technique is decreased radio traffic.60 This increased speed of transmitting orders leads to the next advantage of this approach.

The time required to concentrate combat power is

diminished dramatically. Since the base unit receives all priority of support, the focus of all combat power generation is in support of the base unit. Whatever support the task force has, quickly responds to requests from the base unit.61 This also has the advantage of insuring the main effort is weighted.

The selection of a base unit automatically weights the main effort of the task force. This forces the commander to make a critical decision as to allocation of support. The decision causes risk in other, less important parts of the plan and prevents the 'corridor commander' from keeping everything balanced. The 'corridor commander' is described by Tukhachevskiy as:

> Commanders with a poor understanding of the essence of maneuver i.e. the union of efforts, prefer, most of all, to divide the area of their maneuver uniformly among their subordinate units and demand the same results from all. It is a misfortune to be subordinated to such a corridor commander. A completely opposite picture obtains with good, efficient leadership...a clearly posed objective and an internally coordinated plan to mobilize all the resources and equipment and rouse and direct the spirit and enthusiasm in a clearly comprehensive direction. 62

Forcing the commander to weight an effort and take risks in other areas is the most important advantage of the base unit approach.

The shortcomings of the base unit approach are: frequent switching of the base unit risks the ineffective support of units; supporting a new base unit

when link up is required is difficult on the move; and adjusting combat service support elements to changes in the base unit cannot be executed very rapidly. Numerous changes in the base unit risk two problems that will contribute to ineffectiveness. One, some units may never get to support anyone because they are continually moving. Second, there is a strong possibility that everyone does not get the word because of rapid changes.

This weakness is clearly illustrated by the heavy engineer element. To shift their support requires physical movement to the new base unit. For a unit to physically move and quickly integrate their force with the new unit is difficult and time consuming. The newly supported commander will have much difficulty controlling this new attachment and the risk of uncoordinated action is tremendous.

The responsiveness of the combat service support elements to shift priorities is much slower than the rest of the force. To shift these priorities during offensive maneuver is very difficult. The shifting of this priority should be restricted to emergency situations instead of shifting each time the base unit is changed.

VII. TASK FORCE PLAYS (Appendix C)

Task force plays are techniques developed by units to improve their capability to synchronize combat power.

The plays have grown out of the desire to perform well at the NTC, but the concept is applicable to all tactical operations. They are designed to be simple, yet flexible, and are similar to football plays in that they stress teamwork and flexibility. The basis for all task force plays is the maneuver system, but all systems are considered in the plays. Two supplemental procedures refined through NTC experience are the fire support and engineer execution matrices. These are analyzed here because: "...the fire support and engineer matrices are critical to task force plays."63

"The principle goal of plays is to decrease the time required to plan and distribute operations orders to subordinates."64 Having a prepackaged plan that can be slightly adjusted to fit the situation is how this goal is achieved. The idea of getting an 80% solution quickly in comparison to a perfect plan much later is maximized. The 1/3 - 2/3 rule of giving your subordinates 2/3 of the planning time to prepare for the operation is actually improved using these procedures. Thus, the greatest benefit of plays is saving time during the planning process. It is interesting to note that the actual timing of the operation is normally worked out after the order is issued during a rehearsal with key leaders.65 The importance of this "wargaming" of the plan to coordinate timing cannot be overlooked.

These time estimates give the task force leadership an idea of how long it takes to move under actual conditions and facilitates sequencing unit moves.66

In a task force play, the maneuver commander employs each maneuver element in the manner best suited for each type of force. Because teamwork is stressed and cohesion of units is paramount, the task organization of the company teams remains constant throughout all plays. Each company team is habitually assigned the same mission to ensure peak proficiency is attained. This task organization consists of four company teams with a constant armor and infantry mix. There is a designated force to conduct the main attack and a designated force to conduct the supporting attack.67 The only flexibility inherent in the maneuver system is the choice of axis along which the main and supporting attacks will be employed. The use of fragmentary orders to change the attack on the move is always possible, but flexibility of maneuver in task force plays is questionable.

The fire support operating system is especially well integrated with the task force play scheme of maneuver. Because the development of the play is done over a relatively long period of time, the scheme of maneuver and plan for fire support can be well coordinated.68 The sequence of the attack lends itself

to a well coordinated fire support plan. As previously stated, a fire support matrix is considered an essential part of the plays.

The fire support execution matrix is an event oriented schedule of fires to support the task force scheme of maneuver. The events that trigger action in the offense are movements of friendly units.69 This event oriented schedule of actions includes some key time-space factors that continue to plague the fire support operating system in terms of coordination between maneuver and indirect fire support assets.

An important space consideration included in the fire support execution matrix is the positioning of the firing units. Range to targets and land management in the brigade area impact on the choice of firing positions. This ensures the space factor is integrated with the maneuver unit's scheme of maneuver.

The time factors taken into account in this procedure include when to fire in support of the maneuver units as well as survivability moves. The tension between protection and firepower is well thought out during this planning step. 'A unit can only fire a few missions before it has to make a survivability move and the fire support system must ensure battery moves do not interfere with planned fires in support of the commanders concept.'70 The importance of this time

factor cannot be overlooked. Since the schedule in this case is event-oriented, one can see the difficulty in executing this type of plan.

Other important time and space factors are response times for different type missions and the impact of FASCAM missions on the availability of the firing unit. These are not accounted for, but it does consider the most influential time factors. The important space factors are well planned in this process. This procedure insures synchronization of maneuver, intelligence, and fire support systems. The decide-detect-deliver methodology enhances the fire support system's responsiveness to the maneuver commander.71

The intelligence and air defense operating systems are not addressed very thoroughly in the task force plays. There are no relevant time-space factors discussed in the task force play system about either of these key operating systems.72

The engineer operating system is addressed in task force plays, but more so in the defense than in the offense. In the defense an engineer matrix is considered an essential part of the plays.73 In the offense the engineers are employed in accordance with current doctrine. "Engineers seek to improve movement of maneuver forces and critical supplies by reducing or

eliminating obstacles, breaching minefields, and improving routes for maneuver and supply."74 The time-space factors associated with this operating system are related to the training level of the engineer unit.75

"The task force commander must understand the level of training in his engineer unit and have a 'feel' for the time factors so important to the mobility effort."76 One of these factors is how long it takes to breach a minefield. The different time factors for a daylight or night breach are important considerations. Though not recorded, these factors must be clearly understood based on experience, training level, and wargaming experience of the unit.77

The combat service support operating system is not thoroughly covered in the task force playbook system. Combat service support is covered in the artillery matrix and engineer matrix; however, the discussion is very brief. The area covered in both matrices include amounts of Class III, Class IV, and Class V resupply based on anticipated consumption.78 There are no time factors associated with these resupply requirements for the engineer or fire support systems.

The time-space factors of the command and control operating system are a large part of the task force plays. As stated earlier, the most important time

factor the plays were designed to improve was the planning time of the staff. Conducting the time analysis and balancing the detailed planning against preparation for the mission led the proponents of task force plays to allocate more time to subordinates than is normally done. "Using the plays enabled us to receive an order at 1100 hours and brief the order by 1400 hours."[79] This tremendous reduction in time allows the unit to concentrate on wargaming immediately after the order and provides maximum preparation time to subordinate units.

The major strengths of plays in regards to mastering time and space factors necessary for synchronization are: reduction in time for the planning process; ease of communicating the concept of operation; and the event oriented integration of indirect fire support. The standardized sequence of actions for each particular mission and subsequent fitting of the play to the enemy and the terrain saved tremendous time in the planning process. This time savings translated into increased time for rehearsal and subordinate unit preparations. Doing tasks the same way routinely, also helps subordinate leaders execute when they are exhausted.

The concept of operation is clearly communicated to subordinate units. The understanding and knowledge

level of the subordinate units about time and space relationships during any particular play is very high. This is because of repetitive practice and training on the plays prior to implementation. This training, which amounted to rehearsals of each operation over different terrain, improved the 'feel' for time and spatial relationships during each phase of the operation. The speed of execution is therefore enhanced.80

The event-oriented integration of fire support is a strength of task force plays. The close cooperation of the indirect fire and maneuver coordinators during the development of the plays enabled some indirect fire actions to become part of the standard sequence of operations. This procedure enhances the ability of the task force to integrate fire with maneuver. The fire support execution technique is a more responsive way of planning for the maneuver task force than the detect-decide-deliver approach to fire support.81

The drawbacks of plays in respect to mastering time and space factors are: that companies only train, rehearse and understand their particular part of the task force mission; the lack of flexibility in speed and space factors in varying situations; and the problem of becoming too predictable. In the effort to produce great teamwork between units, the experience and feel for time and space relationships in each play resides in

the unit assigned that mission. The marginal benefit of specialization at company level is small. This specialization produces units that can execute their individual mission well, but degrades their ability to perform other missions. This decreases the commanders flexibility when faced with different situations.

The actual timing of each mission fluctuates due to the situation. There are many variables such as the 'fog and friction' of war and friendly and enemy situations that the timing of each mission cannot be accurately estimated. The standardized actions of the task force, if not accomplished in estimated time frames, could have an adverse effect on the ability to complete the mission.

The problem of becoming too predictable is an inherent weakness in the plays. If the enemy knows exactly how the unit will act in a given situation, he can plan accordingly. 'There can be no fixed schemes. Every scheme, every pattern is wrong.'82 Although this may be an overstatement, the problem of becoming predictable is real and commanders must guard against it.

VIII. CONCLUSION

This monograph began by identifying synchronization as a problem area based on unit performances at the National Training Center. The classical theorists'

concepts relevant to synchronization were discussed and linked to our current AirLand Battle doctrine. Three major techniques of accomplishing synchronization at the task force level were examined and analyzed to determine their respective strengths and weaknesses. This analysis was intended to lead us to determine the feasibility of properly synchronizing combat power at the task force level and if feasible, then, what is essential.

Synchronization of a maneuver task force's combat power during offensive maneuver is possible and there are essential tasks that support attainment of this goal. The essential tasks to successfully achieve synchronization are derived from the strengths of each technique analyzed. These include a clear, timely, well communicated concept of operation, integration of task force assets in accordance with fully developed employment concepts, and a task force that is accustomed to fighting as a team.

A clear, timely communicated concept of the operation is the main vehicle with which to synchronize battlefield activities is time and space. Each of the techniques reviewed accomplishes this in a different way. The task force synchronization matrix graphically depicts the entire concept of operation; the base unit approach uses a standard concept to support the main

effort; and plays actually standardize the sequence of actions in each mission's concept of operation.

Whichever technique is used it is essential to communicate the concept effectively. This must be done throughout each level of command:

> Each successive subordinate is expected to articulate and elaborate that concept in accordance with the particular conditions of enemy, terrain, and resources at his level; thus the higher concepts are progressively tuned to local reality. This is the genius of the system -- a centralization of concept, a decentralization of execution and a full exploitation of forces and opportunities. Cascading concepts carry the top level commander's intentions to the lowest levels, and the nesting of those concepts traces the critical path of concentrations and priorities.83

General Depuy's thought also points out the most important principle in our doctrinal concept of operation section in the OPORDER. The critical path of concentrations and priorities is the main effort.

The concept of main effort must be a part of the concept of operation. FM 100-5 states: 'The commander identifies the main effort when he states his concept of the operation.'84 This designation of the main effort prevents the 'corridor commander' from taking the easy way out. 'Therefore it takes courage and moral character to select a main effort.'85 The concept provides the central idea of the base unit approach and is directly addressed in our doctrinal procedures. 'The main effort assures synchronization on the operation

while leaving the greatest possible scope for initiative."86 The other important factor with regard to producing a concept of operation is its timeliness.

The timeliness of presenting one's concept of operation cannot be overemphasized. Time is identified as the most critical resource of the commander and must be well managed.87 Both the plays and base unit approach operate off standardized operational concepts to improve the task force's capability to rapidly develop and communicate a concept of operation. Both techniques reap the benefit of this speed by giving subordinate units more time for mission preparation.

Maneuver task forces must fully understand employment capabilities of all operating systems in the task force in terms of missions, time, and space. This understanding must permeate all levels of the chain of command. Because of wide ranges in capabilities of the combat, combat support, and combat service support equipment in a task force, this is no small task. A leader training program both at branch schools and unit professional development programs must stress this concept.

We must no longer just memorize a range of a weapon and think we know how to employ it. A general knowledge of the time it takes to accomplish missions and move to required locations where the mission needs to be carried

out is also vital. Although it is important to know ranges, we must understand time and space factors that result in the consequences of each operating system at the desired time and place. Mastery of these time, space, and force factors will enable us to properly employ combat power. The time standards in the ARTEP standards are a step in the right direction, but these must be continually reviewed to ensure that every task the unit must accomplish is realistically addressed. Only then can we be confident that we are training as we will fight.

Rommel, after experiencing problems with subordinates who did not fully understand the importance of time and space factors stated: ' The sole criterion for a commander in carrying out a given operation must be the time he is allowed for it, and he must use all his powers of execution to fulfill the task within that time.'88 The mindset of thinking in terms of time and space means a thorough understanding of employment concepts throughout the chain of command. Subsequently, all leaders will better develop a 'feel' for relational effect of the seven operating systems on the battlefield.

The mindset of thinking in terms of time and space is maximized in the task force synchronization matrix and to a lesser degree in the plays and base unit

approach. To master this type of thinking though, will require a career long orientation and development program designed to ingrain this way of thinking in all maneuver leaders. This mindset applies to how to think about the enemy as well as friendly forces.

The teamwork aspects of the maneuver task force are paramount. "Frequent changes in task organization should be avoided. The teamwork advantage is often far more important than a slightly more desirable mix of forces."89 But it goes further than this. We must stabilize leaders in position as long as possible. Development of teamwork must permeate all training. The potential to develop combat power that is more than the sum of the parts exists in all army organizations.

This quest for teamwork is epitomized in the plays and the results are indeed impressive. Our leadership manuals advocate team building. Maximizing this teamwork is the only way to accomplish the end state of a properly synchronized force.

The usefulness of the three techniques covered range the full spectrum of the centralized - decentralized method of command. The task force synchronization matrix is at the centralized end of the spectrum and the base unit approach is at the decentralized end of the spectrum. The ability to communicate a clear concept is required of the task

force commander in all three systems.

The task force synchronization matrix is the most effective when subordinates are poorly trained in tactical and leadership principles. Initiative is not required at all to execute this technique. Subordinates ability to follow a schedule in a mechanical manner is the sole criteria for successful accomplishment. This technique is ideal if the task force staff makes better use of planning time than subordinate leaders.

Task force plays are less centralized than the matrix and are logical techniques when subordinate leaders are weak and time to prepare is abundant. The flexibility and opportunity to maximize subordinates initiative is not fully realized. The fact that each unit habitually performs the same mission detracts from the commanders flexibility and limits the subordinate leaders' experience.

The use of the base unit approach is the most flexible and requires the best trained subordinates. The benefits of leaders' initiative is maximized. This technique is the one that most closely fits our doctrinal guidance of mission type orders. It provides a system to synchronize combat power while not falling into the checklist or cookbook approach to offensive maneuver.

Current doctrine does not go into enough detail

when discussing the how to of synchronizing combat power at the task force level. This has resulted in development of the varying techniques analyzed in the monograph. FM 71-2 does discuss six basic attack formations, but stops short of illustrating available actions to take on contact. This situation would be improved if the doctrine established a few basic actions or drills to take upon contact. It is interesting to note that 71-2 does this when discussing actions on ambush of a road march.

Establishing drills for actions on contact while in task force formations would improve our capability to synchronize combat power during offensive maneuver. Also the current situation of each commander developing a different technique would be eliminated. The institutionalizing of these drills would alleviate the current weakness of doctrine not providing the how to of synchronizing combat power during offensive maneuver.

The understanding of time and space factors is vital to employing a task force's assets. It enables leaders to visualize the effects of combat power in time and space. When well articulated concepts of operation permeate all levels of the task force, guiding a cohesive team into producing synergistic effects of combat power on the enemy the force is synchronized. In the end, the product of effective synchronization is

maximum economy of force, with every resource used where and when it will make the greatest contribution to success and nothing wasted or overlooked.'90 We can and must strive to accomplish this goal.

Appendix A: Task Force Synchronization Matrix

DECEP STORY	SEC	Portray a Bn. covering force
	CLOSE	Portray two Battalions defending in sector
	REAR	Portray two company reserve positioned 25k back

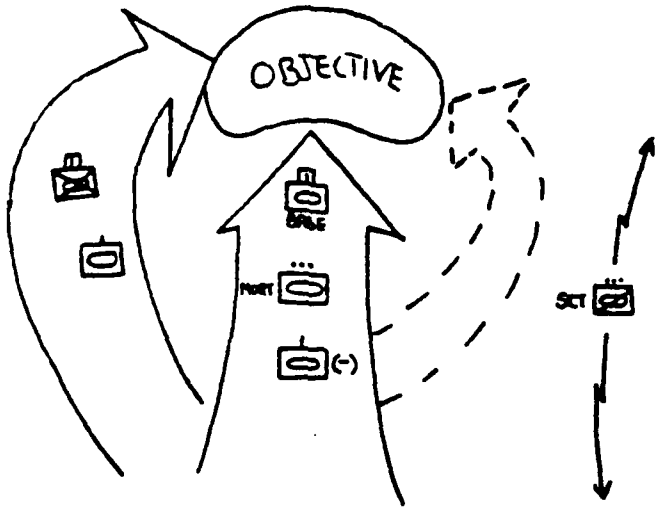
TIME	0100	0300	0500	0700	0900	1100	1300	1500
ENEMY COURSE OF ACTION		`DIV RECON--`REG RECON----------				`2ND ECH *MOVES	`CRP's	`1ST ECH ATTACKS `AIR ATK EXPECTED `ENEMY ARTY PREP BEGINS `JAMMING BEGINS
INTEL COLL		`------NAI 1 AND 2--------` TF 1-26 SCTS/GSR RPT MVTS		TF 1-26 SCTS RPT MVT		`NAI 3 *DIV LRSD TM RPT MVT		
US COURSE OF ACTION	SEC MBA DEEP REAR RES	1-26 IN+ 1-37 AR, 1-33 AR `INCREASES ALERT STATUS				`MOVE`BP22 1-26`BP 22 `1-25 AR`MOVE`	`1-26 SCTSstay `CB FIRED `LAUNCH 151 ATTACK HELO	
FIRES		`1-2 FA SPT 1-26 IN `1-5 FA SET FOR COUNTER BATTERY				`REARWARD PASSAGE 1-2`SET 1-2 `PRI TO 1-37 *1-5 FA`MOVE`	`SEAD FIRES `FIRE CB	
CMD AND CONTROL	C GP MAIN	`COLOCATE WITH 1-26------`SET IN 1-33 REAR AREA-				`MOVE TO TF 1-3 SECTOR `ASSUME CMD GP FUNCTIONS MAIN`CONTROL 151 DEEP		
MOBILITY COUNTER MOBILITY		`1ST ENG BN COMPLETES OBSTACLES IN SEC ZONE `MOVE TO TF 1-37 SECTOR/BUILD 200 HULL DOWNS				`MOVE TO TF 1-33 SECTOR/ 150 HULL DOWNS		
		`3RD ENG BN: DIG 4 200 METER TD/1-37 SECTOR `MOVE` DIG 3 300 METER TD/1-33 SECTOR						
ADA						AIR DEFENSE POSTURE IN AIR CORRIDORS RED AND BLUE `INCREASE `VERIFY AIR CORRIDOR STRIKE IS WPNS HOLD FOR 151 CROSS FLOT OPS		
COMBAT SERVICE SUPPORT		`MOVE CL IV TO LRP 26 `UNCOMMITTED CSS PERS ---INCREASE REAR AREA PATROLLING				`FARP SET FOR 1-26 IN BP 22 `PRESTOCK BP'S 101/104 1-37 AO `PRESTOCK BP'S 109/111 IN 1-33 AO	`151 ATK BN FARP SET VIC KR	

*DIVISION MISSION ASSETS

Source: LTC Parker, Jim. Battalion Commanders PCC Instructor Notes, Subject: Task Force Synchronization Class, Ft. Leavenworth, Kansas: Center for Army Tactics, Undated.

Appendix B: Base Unit Concept (Attack)

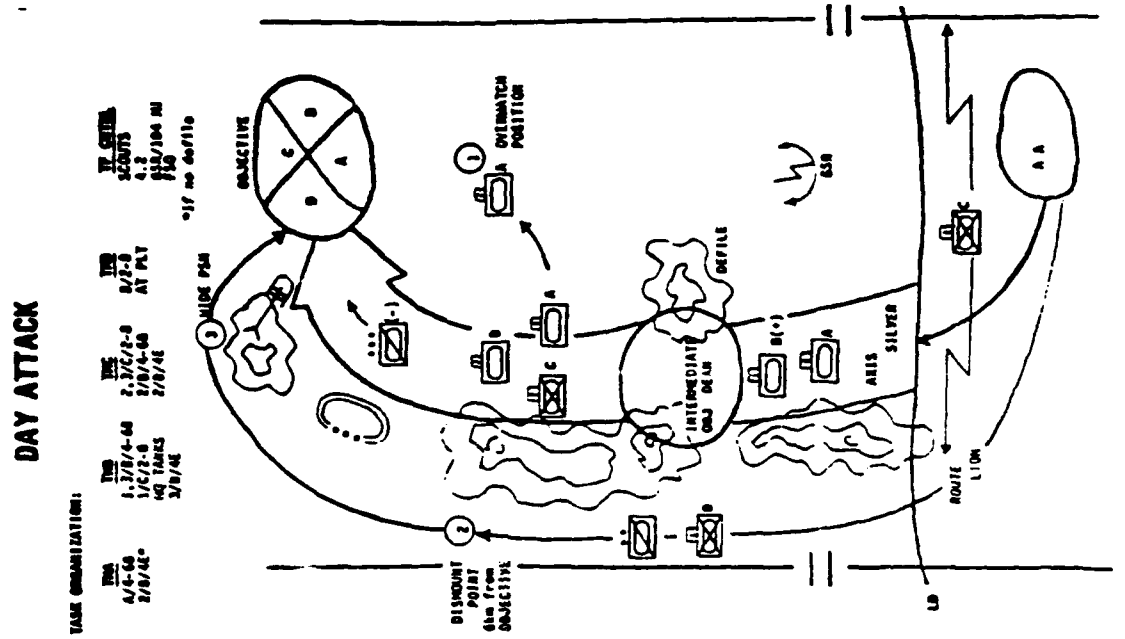
HASTY ATTACK/
DELIBERATE ATTACK



The base unit is positioned so that it is the most likely force to make contact. It's mission is to fix the enemy force while the bulk of the Battalion maneuvers to isolate and seize the objective. This can be accomplished by movement on one or more supplementary axis. The mortars give priority to the base company as do other support elements. If the attack is deliberate. The Base Company is reinforced with up to two extra platoons. Should companies be moving in sector towards an objective, the unit to make contact first will be the final Base Company.

Source: Base Company Maneuver Pamphlet, 6th Battalion, 32nd Armor, Unpublished, Undated.

Appendix C: Task Force Play (Attack)



SEQUENCE

DAY ATTACK

1. —RSR OUT TO OVERWATCH SECTOR
   - SCOUTS OUT (1 SECTION ON RTE LION, PRECEDES TM D. RECON OBJ.
     2 SECTIONS ON AXIS SILVER TO CLEAR TF AXIS, RECON OBJ)
   - —TM C ESTABLISH C—RECON SCREEN
2. —DISMOUNTS OUT
   - TM D ALONG LION TO DISMOUNT PT. TRACKS LINK W/SCOUT TRACKS, ACT AS COMMO RELAY. DISMOUNTS MOVE TO REAR/FLANK OF OBJ, HIDE. PREP TO ASSAULT. ATs SET IN OVERWATCH OF OBJ. CARRIERS CALLED FORWARD O/O
   - TM C (—TANKS) ALONG SILVER TO CLEAR INTERMEDIATE OBJ DEAN
3. —TF MOVES IN DIAMOND. TM A ON SIDE OF OPEN TERRAIN.
   - LINK W/TM C AT OBJ DEAN.
4. —DEAL W/SHAPE PLT AND OBJ OBSTACLES
   - TM A SET VIC CPs, OVERWATCH OBJ
   - TM B & C EXECUTE CLOSE ASSAULT TACTICS
   - COORD. INDIRECT FIRES/SMOKE ON SHAPE PLT & OBJ.
   - BYPASS OR BREECH MINEFIELD ON FLANK SIDE (TM B & C)
   - ELIMINATE SHAPE PLT.
5. —UNLEASH TM D
6. O/O TM B & C ASSAULT FROM FLANK; TM A OVERWATCHES. O/O CALLED FORWARD
7. CONSOLIDATE. TM D CARRIERS LINK W/DISMOUNTS. REORGANIZE

Source: Playbook, 4th Battalion, 68th Armor, Unpublished, Undated.

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