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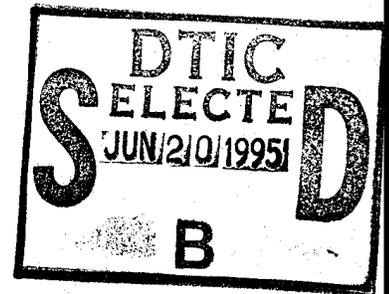
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**BRIGADES:  
BUILDING BLOCKS FOR FORCE XXI**

BY

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BRIGADES: BUILDING BLOCKS FOR FORCE XXI

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19950619 097

## ABSTRACT

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TITLE: Brigades: Building Blocks for Force XXI

FORMAT: Strategic Research Project

DATE: 18 April 1995 PAGES: 132 CLASSIFICATION: Unclassified

While the US Army has become brigade based for many aspects of training and deployment, this echelon has not received the institutional or doctrinal emphasis necessary for the future. Now that the US Army is embarking on a journey to develop a Strategic Land Force structure for the Twenty-First Century - Force XXI, it may be an opportune time to revisit this echelon. Thus this paper explores an organizational level that has recently been eliminated from the active force structure - the separate brigade and the heavy separate brigade in particular. The study first traces the operational and organizational history of separate brigades focusing on several key units such as Wilder's Lightning Brigade, the China Relief Expedition, Task Force Butler, the Red Devils Brigade in Vietnam, and the Tiger Brigade in the Persian Gulf. This paper then develops a vision of what a brigade based Force XXI structure might look like. Several types of combined arms, self-sufficient but tailorable brigades are described. In this concept, divisions would become tactical command and control echelons to which a flexible number and type of modular brigades may be allocated. Corps would remain the key operational echelon for interface with joint or multinational forces while controlling a flexible array of modular brigades. Finally, this study describes a fictional scenario in which a digitized Force XXI separate brigade is employed as an operational maneuver force with strategic significance in the year 2005.

CHARTS

- I: Heavy Separate Brigade (HSB)
- II: Headquarters and Headquarters Company, HSB
- III: Continental Army Brigade, 1777
- IV: Wilder's Brigade, 1863
- V: China Relief Expedition, 1900
- VI: Regimental Combat Team, 1944
- VII: Task Force Butler, 1944
- VIII: ROAD Separate Armored Brigade
- IX: 1st Brigade, 5th Infantry Division, 1970
- X: 2d Armored Division (Forward), 1978
- XI: Fixed Brigade, 1979
- XII: Divisional Base, Fixed Brigade, 1979
- XIII: AOE Heavy Separate Brigade, 1986
- XIV: 194th Separate Armored Brigade, 1989
- XV: 1st Brigade (TIGER), 2d Armored Division, 1991
- XVI: 194th Separate Armored Brigade, 1993
- XVII: Enhanced Brigade, National Guard, 1994
- XVIII: Separated Brigade, 1995
- XIX: NTC Model Brigade, 1993
- XX: 3d Brigade, 24th Infantry, April 1994
- XXI: USMC Support Brigade, 1994
- XXII: Proposed Force XXI Armored Brigade
- XXIII: Map of Bosnia
- XXIV: 3d Armored Brigade (Separate), 2005

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# BRIGADES: BUILDING BLOCKS FOR FORCE XXI

## CHAPTER I

### INTRODUCTION

Army Chief of Staff, General Gordon R. Sullivan, has challenged one of the most successful armies in history, the U.S. Army of the early 1990's, to reinvent itself to become even more successful as an information age army in the early 21st century.

"We have begun to move into third wave warfare, to evolve a new force for a new century - Force XXI... The goal is to create new formations that operate at even greater performance levels in speed, space and time. Force XXI - not Division XXI, and there is a message there about breaking free of old concepts - will use command and control technology to leverage the power of the information age."<sup>1</sup>

The concepts of information age or a Third Wave Warfare have been influenced by the futurists - Alvin and Heidi Toffler - who have also described their organizational concept for future warfare,

"Until recently the 10,000 - 18,000 man division was thought to be the smallest combat unit capable of operating on its own for a sustained period. . . But the day is approaching when a capital-intensive Third Wave brigade of 4,000-5,000 troops may be able to do what it took a full-size division to do in the past, and tiny, appropriately armed ground units may do the work of a brigade."<sup>2</sup>

Based upon Sullivan and the Tofflers, it would appear that Information Age Warfare in the 21st Century may not be based upon the division as the primary unit of ground combat, as it was during the 20th Century but perhaps at a lower echelon - the brigade.

The Army currently manages several critical programs at the brigade level to include rotations to the Combat Training Centers (CTCs), and establishment of "brigade" sets as the primary echelon for pre-positioned equipment stored in Europe, Korea, the Middle East as well as one set afloat. Recent deployments in the post-cold war environment of uncertainty and volatility have often been by brigade combat team, sometimes with the parent division headquarters, and sometimes without. Additionally, recent military operations in Panama, the Persian Gulf, Somalia, Uganda, and Haiti have been conducted extensively at the brigade level.

However, while the exact structure of Force XXI units will be finalized only after extensive analysis and testing, the Army has already made decisions that may bias those designs, once again to a division basis. The recent TRADOC Pamphlet 525-5, "Force XXI Operations" provides the conceptual foundations for the redesign of the operational army. It describes five Force XXI organizational characteristics as:

"doctrinal flexibility, strategic mobility, tailorability, modularity, joint and multinational connectivity and the versatility to function in War or OOTW".<sup>3</sup>

While these characteristics do not prescribe a specific organizational echelon, the Pamphlet goes on to specify,

"we must organize around the division as the major tactical formation with the capability to tailor it for specific mission purposes."<sup>4</sup>

Additionally, the Force XXI Campaign Plan dated 9 September 1994

states that "Initial efforts will begin with the redesign of the TOE division."<sup>5</sup> In keeping with this divisional focus, the Secretary of the Army, Togo D. West, and General Sullivan recently announced the plan to restructure the Army into 10 divisions, each of three full brigades.<sup>6</sup> However, due to basing constraints, seven of these divisions will have a brigade separated from their parent division. Ironically, the last active duty brigade organized for independent operations, the 194th Armored, at Fort Knox, will be inactivated by July 1995 in order to provide manpower for the 10 Division Force.

The inactivation of the 194th SAB will end the over 35 year history of heavy separate brigades in the active Army. Separate brigades, or earlier in World War II and Korea separate Regimental Combat Teams (RCTs), provided flexibility to commanders of corps or higher, by giving them modular units tailored to operate independently. These 'pocket' divisions proved ideal in situations where less than a division was required, in order to avoid fragmenting a full division to provide only a brigade-sized unit. At the height of Vietnam, the Army had 15 brigades organized to operate independently, including 3 attached to a divisional headquarters as the Americal Division. Why with the end of the Cold War, and with the prospect for small contingency operations projected from CONUS greater than previously, does the U.S. Army eliminate the heavy separate brigade from the active duty force pool?

The Army can retain separate brigade capability by designing

all divisional brigades to be easily 'separable' and by structuring at least the seven 'separated' brigades with the full capabilities previously contained in separate brigades. The emotional issue of divisional designations can be avoided by designating all active brigades as part of a division. Alternately, if active duty non-divisional (or separate) brigades are once again required, they need to be given significant and proud lineages perhaps even using "unemployed" (inactivated) divisional designations, as in the National Guard.

This paper will address the organizational history of separate combined arms brigades in the United States Army and based upon insight from that study will suggest a proposal for a brigade based "Force XXI". It will consist of three parts: the first will be an historical survey of the separate brigade and its predecessors, focusing on heavy or armored forces; the second will be a proposal for a heavy separate, or separable brigade as part of Force XXI; while the third part will depict a fictional future scenario involving a Force XXI brigade in a contingency operation.

## CHAPTER II

### SEPARATE, BUT NOT EQUAL: SEPARATE BRIGADES IN THE UNITED STATES ARMY, 1776-1995

The heavy separate brigade has officially existed since the implementation of the Reorganization Objective Army Division (ROAD) in the early 1960s. But, independent combined arms brigades capable of decisive impact have existed much earlier as tactical units, smaller than a division but larger than a regiment/battalion. What then differentiates a modern heavy separate brigade from the normal divisional brigade? The first difference is mission.

"The vast array of enemy forces and range of potential areas of potential conflict necessitate a tactical element (separate brigade) smaller than a division with its own support assets, capable of strategic and tactical deployments. ... (It) allows the national command authorities greater latitude in its contingency options."<sup>7</sup>

These brigades may conduct limited independent operations under the direction of a joint task force or theater commander. As part of a corps they can function as a reserve or security element or be attached to a division to concentrate combat power."<sup>8</sup>

The second difference has been organizational. In practice this has meant that HSBs have contained a brigade base, which is a scaled down version of a division base. This base (Chart I) includes, besides a headquarters and headquarters company (HHC), combat, combat support, and combat service support units. The HHC at 328 personnel, while larger than a divisional brigade HHC, includes MP, chemical, and signal platoons as well as division

like special staff that affords the separate brigade the capacity to operate alone and with a greater number of subordinate units (Chart II).

The brigade as a operational unit in Western military organizations predates the U.S.Army by over a century. Brigades were first used by the great Swedish General and King, Gustaphus Adolphus, during the "Military Revolution" of 1560-1660.<sup>9</sup> The brigade was the largest tactical maneuver element directly subordinated to the army commander and consisted of 3 or 4 battalions (or regiments) with accompanying artillery. As such, brigades gave Gustaphus more flexibility and mobility while further increasing combined arms. As Michael Roberts described in his essay "The Military Revolution, 1560-1660",

"The Army was no longer to be a brute mass, in the Swiss style, nor a collection of bellicose individuals, in the feudal style; it was to be an articulated organism of which each part responded to impulses from above."<sup>10</sup>

Frederick the Great later perfected and adapted the brigade structure to reach the peak of 18th century linear warfare. The term 'fire brigade' also became used to describe a temporary combined arms force for putting out a fire or crisis as used by Frederick the Great in his brilliant campaign of 1757 and the twin victories of Rossbach and Leuthern.<sup>11</sup>

In the American Revolution, General George Washington (who had been a brigade commander in the French and Indian War) made the brigade the basic maneuver element of the Continental Army. Upon taking command of the rebel army before Boston in 1775,

George Washington imposed greater rationality and control by introducing divisions and brigades as administrative echelons between his headquarters and regiments.<sup>12</sup> For his successful attack on Trenton and Princeton in December 1776, Washington shifted from the regiment to the brigade as the tactical element for this counterattack and provided an artillery company in direct support of each brigade.<sup>13</sup> After destroying a German brigade at Trenton and severely mauling a detached British brigade at Princeton, Washington concluded that the campaign demonstrated the value of a brigade composed of several infantry regiments and an artillery company (Chart III). Later in 1777, Washington created permanent numbered brigades of 4 or 5 regiments as building blocks for the Main or Continental Army as well as for detached commands.<sup>14</sup> General Washington also insisted that Congress provide 'Brigadier Generals' to command brigades unlike the British system of using the senior regimental commander to command their brigades as a temporary duty.<sup>15</sup> Also in keeping with Washington's concept of the brigade as a building block, he added permanent brigade staff and logistical support sections. The Continental Army divisions in contrast remained tailored to each situation and less permanent.

The regiment however, remained the largest permanent peacetime organization in the United States Army until World War I. Brigades, divisions, corps, and armies formed only as needed in wartime and disbanded in peacetime.<sup>16</sup> During the Civil War, these higher organizations remained flexible and without fixed

structure or authorizations. As Professor Russell Weigley states, "All of them were task forces, composed of varying constituent elements as circumstances and accident decreed."<sup>17</sup> Later in the war, as higher level organizations and designations stabilized, numerous brigades became proud instruments of battlefield tactics with names such as the "Stonewall", "Iron", "Orphan", or "Regular" Brigade.

During the Civil War one of these Union brigades contained many of the characteristics of a modern heavy separate brigade. Officially designated 1st Brigade, 4th Division, XIV Corps of the Army of the Cumberland during the Chickamauga Campaign, this unit under the command of Col John T. Wilder operated independently directly under Army control.<sup>18</sup> This unique brigade was composed of four regiments of horse mounted infantry all equipped with Spencer seven shot repeating rifles and supported by a horse artillery battery (Chart IV). Wilder's brigade was mounted infantry, not cavalry, and had become the workhorse of the army because "Wilder's men, mounted and armed with rifles, were the only unit in the Army of the Cumberland that could be depended upon to operate away from infantry support and be able to attack or defend themselves on an equal basis with their adversaries."<sup>19</sup> The brigade led the army's advance in June 1863 through the Hoover Gap where MG George Thomas awarded them the nickname of the 'Lightning Brigade' for their rapidity of fire.<sup>20</sup>

Later, during the Battle of Chickamauga, the 'Lightning Brigade' would heroically try to save the Union Army in several

sharp engagements. On 18 September 1863 Wilder's men, on orders from the army commander, MG William S. Rosecrans, delayed an enemy corps from crossing a ford for most of a day allowing him to reposition his army. During the next two days, the brigade stopped Confederate breakthroughs with its mobility and firepower causing Confederate General James Longstreet to remark later that the steady and continued racket of their guns led him to think an army corps had attacked his flank. The war's end found the brigade assigned to MG James H. Wilson's Cavalry Corps under whose command they conducted the decisive dismounted assault on Selma, Alabama in April, 1865. With its great tactical mobility and superior firepower, Wilder's Lightning Brigade represented an ideal force with which to conduct independent operations directly under corps or army commanders.<sup>21</sup>

Only with the entry into World War I did the U. S. Army establish permanent tactical units larger than a regiment. Although eight corps were activated for the Spanish American War, most deployments consisted of brigades as they became ready. During the short campaign for Puerto Rico, an independent regular brigade made the most spectacular advance.<sup>22</sup> In 1900, the United States formed the China Relief Expedition to participate in the international efforts to free the Peking legations from the 'Boxers'. General Adna R. Chaffee commanded the 2,500 man expedition with MG James H. Wilson as second-in-command and direct commander of, "The Ninth and Fourteenth Infantry, the marine battalion, six troops of the Sixth Cavalry, and Riley's

Battery of six rifled guns, all in excellent condition and constituting as compact and complete a brigade of fighting men as ever made its appearance in the Far East..."<sup>23</sup>(Chart V). Later, General Chaffee also used separate brigades successfully in operations other than war (OOTW) during the Philippine Insurrection.<sup>24</sup> However these larger units were soon disbanded.

Based upon his assessment of requirements in France, General John Pershing, Commander American Expeditionary Force, established the division as the basic, self contained tactical unit. At 28,000 men, the 'square' division of two brigades each consisting of two regiments, was the effective strength of an allied or German corps and was designed for sustained combat and high casualties in trench warfare.<sup>25</sup> Corps and armies varied by need and were not fixed in size.

During World War I the U.S. Army also formed its first 'heavy' armored brigades for duty on the Western Front in France. After reviewing Allied tank operations, GEN Pershing approved plans for a Tank Corps to be created. Separate Tank Brigades of two light and one heavy tank battalion were to support each deployed corps. However, due to personnel and equipment shortages, only LTC George S. Patton's 304th Tank Brigade saw action at St. Mihiel in September 1918.<sup>26</sup> Shortly after World War I, all four tank brigades were replaced by the 1st Tank Group as the U.S. Army's highest armored headquarters.

For World War II, LTG Leslie McNair, as commanding General of Army Ground Forces, streamlined the old 'square' infantry

division to provide for mobility and agility. The resulting structure eliminated the brigade echelon and with only three infantry regiments remaining was termed the 'triangular' division. This unit at less than 15,000 men contained only the essential combat, combat support, and combat service support units needed all of the time. Additional or special units were provided from 'pools' of non-divisional battalion sized units held under the control of groups or brigades that were considered administrative headquarters.<sup>27</sup>

While not envisioned in the pre-war concepts, separate infantry regiments, usually configured as Regimental Combat Teams (RCTs) saw extensive use during World War II. During the transition to the triangular division many 'fourth' regiments became orphans. Additionally, some regiments became garrisons for theater defensive purposes not requiring a force as large as a division. During actual combat operations a majority of the infantry regiments operated as RCTs whether divisional or separate. As a minimum, this normally meant that they had their share of the division's medical, engineer, and field artillery attached or in direct support. In addition, many RCTs also had companies of tanks, tank destroyers, and anti-aircraft artillery attached from non-divisional groups<sup>28</sup> (Chart VI). "Thus the RCT was a combined arms force, a small division in itself."<sup>29</sup>

A total of some 55 separate infantry regiments served during World War II, of which 35 deployed overseas. Additionally, separate regiments could be used to form division

sized task forces such as the Americal Division or the 1st Airborne Task Force. Separate regiments reconstituted shattered divisions as well to include the 106th Infantry Division during the Battle of the Bulge and the 92d Infantry Division in Italy. In Burma the remnants of Merrill's Marauders were combined with a dismounted cavalry RCT to form the 5332d Brigade. Other separate infantry regiments, such as the 156th in France and the 158th in the Southwest Pacific, were well utilized as army-echelon 'fire brigades'.<sup>30</sup>

During World War II the U.S. Army also formed armored divisions, brigades, and combat commands. The original Armored Division in 1940 had an armored brigade of 3 tank regiments and an armored infantry regiment. Based on analysis of combat in Europe, the brigades and regiments were replaced by two flexible combat commands controlling combinations of tank and armored infantry battalions and a smaller reserve command.<sup>31</sup> While no separate combat commands were ever formed, on numerous occasions it became necessary for a corps commander to detach a combat command from an armored division and attach it to an infantry division.<sup>32</sup> Totalling just over 10,000 men, the light armored divisions were flexible and mobile, but too small to provide armor support to infantry divisions on a routine basis.

Providing habitual tank support to infantry divisions was the mission of the separate tank battalion. The Victory Plan of 1941 envisioned 112 separate tank battalions would be required for a 215 division army, but only 65 were activated.<sup>33</sup> To control

these separate battalions pooled at corps, tank or armored groups were formed. The first of these to see combat was the 1st 'Provisional' Tank Group hurriedly sent to the Philippines in late 1941. Designated as GHQ troops directly under GEN Douglas MacArthur, the group consisted of two National Guard tank battalions with M3 light tanks and a maintenance company under the command of recently promoted BG James R. Weaver. In action, they provided crucial armor support to cover the withdrawal of infantry units to Bataan.<sup>34</sup> A total of 23 armored groups were formed and 10 of these spent the war in Europe while 4 served in the Pacific. Most of the armored group headquarters in Europe rarely saw combat duty, being used instead as staff sections for corps headquarters or being used to augment the under resourced reserve command in armored divisions.<sup>35</sup>

The best example of the tactical employment of an armored group occurred during Operation DRAGOON in Southern France with Task Force Butler. Lacking his own brigade sized armored force for exploitation off the beachhead, MG Lucian Truscott, VI Corps commander, decided to form one. Established as the Provisional Armored Group, VI Corps, Truscott placed it under the command of his deputy corps commander, BG Frederick B. Butler. TF Butler was a balanced mobile force consisting of a separate cavalry squadron, a tank battalion (-), a motorized infantry battalion and supporting artillery and other units (Chart VII). Rapidly assembled two days after the initial assault on 17 August 1944, TF Butler struck out from the beachhead in a deep attack aimed at

cutting off the retreating Germans at the Rhone River near Montelimar. Using his speed and combat power, Butler was able to rapidly drive over 100 miles in three days and establish blocking positions in the German rear. While not completely able to trap the retreating Germans, over the next 10 days TF Butler and the rest of VI Corps inflicted tremendous punishment on the Germans and gave MG Truscott what has been described as "his greatest tactical achievement".<sup>36</sup>

At the end of World War II in Europe, a General Board was established to make recommendations for the composition of post war units. While the board recommended more infantry for an armored division and organic tanks for an infantry division, it recommended eliminating the armored group at corps.<sup>37</sup> In armored divisions the board recommended a composite tank-infantry regiment (one tank battalion/two armored infantry) commanded by a BG in lieu of combat commands because of superior esprit found in regiments.<sup>38</sup> A mechanized cavalry brigade composed of two mechanized cavalry regiments and other supporting units was recommended for assignment to an army for "employment on missions where a strong but light and fast combat force is needed".<sup>39</sup> Post war doctrine retained the combat command structure for armored divisions and called for an armored regiment as corps troops, but in practice the armored group remained.<sup>40</sup>

As the army demobilized after World War II, some units smaller than a division were retained. Separate infantry

regiments were employed as garrisons in various places to include Trieste, Austria, and the 5th Infantry RCT in Korea. On the eve of the Korean War, the U.S. Army had in its structure eleven separate regiments as well as 20 RCTs and 5 armored groups in the reserve components.<sup>41</sup> During the first few months of the Korean War, four separate regiments arrived to augment the U.S. forces; the 5th RCT then in Hawaii, the 29th RCT from Okinawa, the 187th Airborne RCT from the 11th Airborne Division, and the 65th Infantry from Puerto Rico which was used to 'round out' the understrength 3d Infantry Division.<sup>42</sup> Although GEN MacArthur requested an armor group of three medium tank battalions in July of 1950 as a non-divisional element, only the three battalions deployed as separate units and all were rapidly integrated into divisions to make up organic shortages.<sup>43</sup>

Simultaneously with the Korean War, the U.S. Army deployed combat units to Europe as part of our renewed strategy of containment of the Soviet Union. In addition to 4 divisions, a separate tank group (17th) deployed to Frankfurt assigned to 7th Army. Initially composed of 3 tank battalions (two reserve component) and one armored infantry battalion, it provided a combined arms reserve to V Corps to which it was OPCON. Later redesignated the 4th Armor Group, it remained in Frankfurt until 1963.<sup>44</sup>

At the end of the Korean War, the U.S. reevaluated its national strategy and the U.S. Army developed a new tactical organization to implement that strategy. Termed the PENTOMIC

Army, the reorganization replaced regiments and battalions in infantry divisions with five Battle groups of about 1500 men each. When organized for combat, the battle group normally received tank and engineer companies as well as an artillery battalion. While smaller, the reinforced battle group greatly resembled the RCT of World War II or Korea, and retained a Colonel in command.<sup>45</sup> Additionally, to help with the span of control challenge of 5 subordinate groups, embedded in the divisional headquarters was a new feature, a small brigade staff.<sup>46</sup> Composed of only 23 personnel, this staff was intended to be led by the assistant division commander (BG) and provide, "command, control, and supervision of subordinate and attached elements as directed by the division commander" and to serve as an alternate headquarters in an emergency.<sup>47</sup>

To replace separate RCTs, separate combined arms brigades were established. Two of these units were activated in 1958, the first at Fort Benning to control school troops and the 2d at Ft. Devens to replace the 4th RCT.<sup>48</sup> While no TOEs existed for brigade elements, the 2d adapted a support structure from the divisional model.<sup>49</sup> The National Guard also eliminated RCTs with this reorganization and replaced them with 3 combined arms separate brigades in Hawaii, Arizona, and Puerto Rico.<sup>50</sup> This restructure had little effect on armored divisions or non-divisional armored structure. Three armored groups also remained and between 1958 and 1962 the 1st Armored Division was reduced to only one combat command as an economy measure.<sup>51</sup>

In Europe, implementation of the PENTOMIC structure coincided with the redesignation of the 11th Airborne Division to the 24th Infantry Division and the U.S. Army's largest troop deployment between the Korean and Vietnam Conflicts. As part of contingency plan for the Middle East, an ad hoc Army Task Force 201 was to be built around the embedded brigade HQ of the 24th Division for operations in Lebanon. The Task force consisted of two airborne battle groups from the 24th and a tank battalion from the 4th Armor Group and other supporting units totaling over 10,000 personnel.<sup>52</sup> To build his staff, BG David Gray, ADC of the 24th and commander of TF 201 was allowed to take his pick from the 24th's HQ. A later report calculated that the staff of the 24th was " rendered almost inoperative until replacements could be secured and trained."<sup>53</sup> In addition, by providing 2/5ths of its battle groups with requisite supporting elements required the " 24th Division to cannibalize itself."<sup>54</sup> By one estimate the division's capability to perform its primary mission was reduced by as much as 60%. Although no serious combat resulted from this peacekeeping operation in Lebanon, the PENTOMIC structure did not elicit confidence in its flexibility to conduct contingency operations.

To meet low intensity challenges in the era of 'flexible response', the Army abandoned PENTOMIC organizations in the early 1960's and developed a more adaptable tactical structure. Termed "Reorganization Objective Army Division" (ROAD), all divisions were now composed of three brigades with varying

numbers of attached maneuver battalions.<sup>55</sup> This doctrine also required combined arms units of less than division size and at the direction of the Army Staff, separate airborne, armor, infantry, and mechanized infantry brigades were developed. These brigades, like the division, had no fixed structure, but consisted of a combat support and a combat service support base to which 2-5 maneuver battalions could be assigned. The base consisted of an expanded brigade HHC, a cavalry troop, an engineer company, an artillery battalion, and a multi-functional support battalion (Chart VIII). Since these brigades could operate independently or be assigned to a division, flexibility in force employment increased.<sup>56</sup>

The operational concept for separate brigades is found in the original study. One or more separate brigades were to be assigned to field armies or corps. At both of these echelons, separate brigades provided for rear area security and replacement of units destroyed in combat. Additionally, at the corps level, separate brigades replaced the separate battle groups and armor groups previously found as corps troops.<sup>57</sup> In May 1961, President John F. Kennedy announced to a joint session of congress that the army's divisional forces would be modernized to increase conventional flexibility to include organizing separate brigades that would be organized to help meet direct or indirect threats around the world.<sup>58</sup>

In order to provide designations for both divisional and separate brigades the army turned to the Office of the Chief of

Military History (OCMH). For divisions, the army drew upon the lineages of the two previous brigades associated with the division in World War I and from the division HQ for the third. For separate brigades, designations associated with Organized Reserve Divisions no longer in the force and not likely to be reactivated were assigned.<sup>59</sup>

The Army Staff determined in September 1961 that the Regular Army needed several separate brigades for unique missions not appropriate to a division. The 1st Infantry Brigade at Ft. Benning converted into the 197th Infantry Brigade, while the 194th Armored Brigade replaced the 16th Armor Group at Ft. Ord. In addition, the following separate brigades were organized: the 171st and 172d Infantry Brigades (Mechanized) in Alaska, the 173d Airborne Brigade in Okinawa, and the 193d Infantry Brigade in Panama. The Berlin Brigade, created in 1961, continued as a TDA and not a TOE unit.<sup>60</sup>

In the Reserve Components, conversion to ROAD structure resulted in fewer divisions and more separate brigades. By 1965, the Army National Guard had seven separate brigades of which four were armored or mechanized and the Army Reserve had four separate infantry brigades.<sup>61</sup> Later, during the peak of the Vietnam War, the National Guard structure was further reduced to only 8 divisions, while separate brigades increased from 7 to 18.<sup>62</sup>

As a result of the escalating crisis in Indochina and the failure to use reserve components, the war in Vietnam saw widespread use of the ROAD concept of separate brigades. The

173d Airborne Brigade deployed from Okinawa in May 1965 as the first U.S. Army combat unit to arrive. Later in July, divisional brigades configured to operate separately deployed from the 1st Infantry and the 101st Airborne Divisions. In the summer of 1965, to support the requirements for Vietnam, the Secretary of Defense announced the activation of 3 additional separate brigades and one division for the active army in 1966. These units included the 11th, 196th, and 199th Brigades and all were in Vietnam by the end of 1967. The 199th had been specifically requested by the U.S. Commander in Vietnam, General William C. Westmoreland, as a brigade sized unit to defend the Long Binh area.<sup>63</sup>

Facing a deteriorating situation in early 1967 in the northern part of South Vietnam, Gen. Westmoreland requested a mechanized brigade for service along the DMZ. Before a unit could be provided, Westmoreland changed his mind and requested the rapid deployment of a separate infantry brigade. Activated as the 198th Infantry Brigade at Ft Hood, it included mechanized infantry battalions 'dismounted' and converted into light infantry. To shore up the defenses along the DMZ, Westmoreland created a division sized task force (TF Oregon) in April 1967 to reinforce threatened USMC units. By September, this unit had been redesignated the Americal Division and assigned three separate infantry brigades (11, 196, and 198) along with a modified division base that accounted for the unique structure.<sup>64</sup> As a result of the enemies TET offensive of 1968, Westmoreland

again requested two more brigade sized units and he received the 3d Brigade, 82d Airborne and the 27th Marine Regimental Landing Team (RLT) from the strategic reserve.<sup>65</sup> Once in country, the 3d Brigade of the 82d Airborne Division, which had deployed configured as the division ready brigade, reorganized and increased from 3650 personnel authorized to 4626 as well as received a Brigadier General as a commander.<sup>66</sup>

Because the Joint Chiefs of Staff (JCS) wanted the 27th RLT back in reserve, GEN. Westmoreland requested as a replacement the mechanized brigade he had needed earlier. He obtained the 1st Brigade of the 5th Infantry Division (Mechanized) reconfigured as a separate brigade with one battalion each of infantry, mechanized infantry, and armor (Chart XI).<sup>67</sup> As GEN. Westmoreland remarked, "I asked for this highly mobile unit to operate in the coastal areas ... and in the area south of the Demilitarized Zone." <sup>68</sup>

The Marines were looking forward to this promised mail-fisted army brigade. The open grassy plains were ideal tank country, unlike most of Vietnam, and the brigade was envisioned as an excellent deterrent to formations of NVA light infantry. Once the 1st (Red Devils) Brigade, 5th Infantry arrived and began sustained combat operations, its impact was evident. The NVA were unaccustomed to facing a heavy force and tried to stand their ground leading to violent firefights and their destruction.<sup>69</sup> The U.S. Army XXIV Corps, formed to control army elements in the north with the Marines, normally controlled the

Red Devils Brigade directly, but frequently placed the brigade in support of the 3d Marine Division. On those occasions, the brigade relied extensively upon its own 75th Support Battalion for logistical support because the Marines could only provide rations and fuel.<sup>70</sup>

Beginning in March 1969, the 1st Brigade, 5th Infantry demonstrated the advantage of mechanized forces. Operating in an area long thought to be impenetrable to armored forces, a combined arms team of 1500 men built around 1-77 Armor, designated TF Remagen, advanced along Route 9 to the Laotian border. For 43 days the task force operated in rugged terrain on a completely aerial supply line, destroying NVA base areas.<sup>71</sup> Later, during Operation LAM SON 719 in 1971, the Red Devils Brigade, reinforced by four additional battalion sized elements, supported the ARVN forces by keeping Route 9 open and by covering the withdrawal of the ARVN units out of Laos. Shortly afterwards, the brigade turned over most of its equipment to the newly formed 3d ARVN Division and was inactivated.<sup>72</sup>

During the conflict in Vietnam, the ROAD concept was put to the test of combat. At the conflict's peak, the regular army had 12 separate brigades of which four were in Vietnam (not counting 3 brigades in the Americal Division), two in Alaska, one in Berlin, one in Panama, and 4 in CONUS. Of these, only two were heavy brigades, the Red Devils Brigade in Vietnam and the 194th Armored Brigade now at Ft. Knox where it replaced the last of the Armor groups (16th) as the Armor School support unit.<sup>73</sup> Additional

separate brigades were formed in Vietnam as divisional elements withdrew from 1969 to 1972.<sup>74</sup> The ROAD building block concept had worked well, particularly in a war that was fought by brigades with divisions serving much like corps had previously.<sup>75</sup> But brigade commanders faced a challenge in building effective unit esprit like that found in divisions or battalions, because as one brigade commander noted, "Being recently created and lacking a distinctive history or tradition, the brigade must build its esprit on the present and future, not the past."<sup>76</sup>

During the late 1960's, when the army faced a severe manpower shortage, a new type of unit was developed smaller than a division, the 'Division Forward'. In 1968, the U.S. Army could no longer afford to maintain 5 divisions plus their support in Europe. That year the 24th Infantry Division (Mechanized) withdrew from Germany to Ft. Riley leaving its 3d Brigade behind. For political reasons, the division was to remain under the operational control of the commander in Europe and participate in "Return of Forces to Germany" (REFORGER) exercises annually.<sup>77</sup> Later, when the 24th Division became the 1st Infantry Division, this brigade was designated the 1st Infantry Division (Forward) to keep the divisional designation in the forefront. However, the unit was configured as a heavy separate brigade capable of independent operations under VII Corps.<sup>78</sup> In recognition of its special status, the unit was commanded by a Brigadier General.

During the 1970's, as the Vietnam drawdown ended, the army restructured toward a heavier force mix primarily oriented toward

the defense of Western Europe from the Soviet Union. The number of separate brigades on active duty declined to only five, but the 197th Infantry Brigade was relieved of school support as a primary mission in March 1973 and became part of the strategic reserve and counted as part of the 'divisional' forces.<sup>79</sup>

Initially, organized almost exactly as the 1st Brigade, 5th Infantry had been in Vietnam, it fielded one battalion each of infantry, mechanized infantry, and armor but later became a full mechanized brigade. In 1975, the 194th Armored Brigade also converted to a strategic reserve unit and was reassigned to Forces Command as a heavy separate brigade of two tank battalions and one mechanized infantry battalion.<sup>80</sup> The National Guard also increased its heavy separate brigade structure to nine (3 armored and 6 mechanized) by 1974 while the Army Reserve converted the 157th Infantry Brigade to mechanized.<sup>81</sup>

Congressional dissatisfaction with excess support forces in Europe led to the deployment of two additional heavy separate brigades to Germany in the mid-1970's. The Nunn Amendment to the 1975 Military Authorization Act required a 18,000 person reduction of army support forces in Europe while allowing for a increase equivalent to two thirds of a division.<sup>82</sup> Referred to as Brigades 75 and 76, these new units were initially designated 3d Brigade, 2d Armored Division and 4th Brigade, 4th Infantry Division (Mechanized) respectively. Both brigades were configured with two mechanized infantry battalions and one armor battalion and a full slice of support units. Although the

designations suggested that these units were elements of existing divisions and operated with them, the brigades were actually organized as separate combined arms units. Deploying to Wiesbaden in 1976, the 4th of the 4th operated under the control of the 8th Infantry Division as a fourth maneuver brigade.

The 3d Brigade, 2d Armored Division was initially split among major training areas and was under the control of the 1st Armored Division. Redesignated the 2d Armored Division (Forward) in July 1978, it occupied recently constructed facilities in northern Germany at Garlstedt. Commanded by a Brigadier General who reported directly to USAREUR HQ for U.S. administrative matters and to the NATO Northern Army Group (NORTHAG) HQ for operational planning, this unit served as a visible symbol of U.S. political will to defend all of Germany. The unit also served as the nucleus of a possible 3 division corps to reinforce the relatively weak NORTHAG sector blocking the North German plain. The stationing of a self contained, tactical nuclear capable, combat force of over 4000 soldiers significantly strengthened NATO defensive posture during a politically dangerous period of the Cold War and thereby contributed to deterrence (Chart X).<sup>83</sup>

During the late 1970's, the U.S. Army embarked on its first major organizational review since ROAD. Termed Army 86, it relooked the entire field structure to include the brigade level.<sup>84</sup> A study was performed of a relatively 'fixed' structure for a divisional brigade with combat support and combat service

support units organic to a brigade base and with the divisional base reduced (Charts XI and XII).<sup>85</sup> Similar to organizations found in NATO armies, especially the Germans, the brigade became the tactical building block of combat power. Planners saw the major strength of the concept in the habitual association that facilitated the training philosophy of 'train as you will fight, fight as you train'. Disadvantages were viewed as an increased span of control for a brigade commander, reduction of the division's tactical flexibility, and the additional manpower required for this "semi-self contained organization".<sup>86</sup> General Donn Starry, Commanding General of TRADOC, believed that the

"management by the brigade of its own resources out balanced the span of control problem--just as in the case of regiments in the pre-ROAD era."<sup>87</sup>

However, while GEN Starry considered the fixed brigade was an important future option that might be right for the 1990's, he believed the Army was not yet 'culturally ready'. Briefed to the Army Chief of Staff, General Ed (Shy) Meyer, he agreed that the fixed brigade was an idea whose time had not yet come.<sup>88</sup>

As part of Army 86, the doctrinal basis and requirements for separate brigades were relooked. In February 1981, the Combined Arms Center (CAC) pointed out to the Army Staff that the current separate brigade structure had evolved primarily out of political, geographic, and budgetary reasons, rather than for doctrinal need.<sup>89</sup> That March, DCSOPS highly recommended that CAC retain separate brigades in the force structure to fill the following doctrinal requirements: on-line combat force,

reconnaissance-in-force, covering force, limited objective attacks, enveloping force, flank and rear security guard force, corps reserve, economy of force, as an attachment to a division to concentrate combat power, for securing key points during retrograde, and a counterattack force. DCSOPS noted that separate brigades provide for performing the above listed missions

"without having to use all or part of a division. Fragmenting a division is an ad-hoc approach that does not provide for continuity of unit ... command and reduces the total combat effectiveness of the fragmented division."<sup>90</sup>

The message continued by adding that

"although not a doctrinal issue, the separate brigade provides the capability to rapidly field a force for missions not requiring a division size force."<sup>91</sup>

In May 1982, General Glen Otis, Commander of TRADOC, approved a concept statement for separate brigades. This statement envisioned separate brigades having a dual role: to operate as an independent force under the direction of a joint task force or theater commander, or to operate in a larger force- either as a 'mini-division' under a corps, or attached to a division to concentrate combat power. TRADOC, envisioning the great range of contingencies the U.S. Army could expect to face, strongly suggested the need for the separate brigade-a tactical element smaller than a division- with its own support, and capable of rapid strategic and tactical deployment.<sup>92</sup> In the Operational Concept of 1983, separate brigades were envisioned as complementing, not competing with, divisions. Their primary

doctrinal purpose was to perform missions that might otherwise require fragmenting a division.<sup>93</sup> "Because of increased capabilities,...the HSB's area of influence and interest may be larger than those normally assigned a divisional brigade."<sup>94</sup> The HSB was also seen as ideally suited for operations in the enemy's rear and for economy of force operations due to its ability to cover larger sectors than a divisional brigade.<sup>95</sup> Additionally, the heavy separate brigade was seen as best suited for providing staying power to light forces engaged in contingency operations due to its ability to better sustain itself without overburdening the austere support in a light infantry division.<sup>96</sup>

The final version of Army 86 evolved into the Army of Excellence (AOE) in the mid-1980's. AOE originally proposed a heavy separate brigade (HSB) as a balanced 2 armor and 2 mechanized battalion structure, but due to cost and deployability concerns, TRADOC recommended a 3 battalion structure. The approved AOE heavy separate brigade called for a highly mobile and powerful force of over 4,000 personnel made self-sustaining through organic CS and CSS units (Chart XIII). Included in the notional AOE corps structure, these brigades provided the corps commander a flexible combined arms organization to influence the fight.<sup>97</sup> AOE called for two of these brigades to be active and 8 in the reserve components of which 4 were round-out brigades to active divisions. The two 'divisions forward' were also organized as HSBs.<sup>98</sup>

Heavy Separate Brigades, organized as "mini-divisions" under

AOE with an important battle field mission, should have been units proud of their designations. Armored Cavalry Regiments (ACRs), while a similar sized force though with a different mission, enjoyed the prestige not found in the HSBs. ACRs as regiments have long battle histories and numerous traditions. For example, the 3d ACR has 38 battle streamers, while the 194th Separate Armored Brigade has only one battle streamer, and that as the 97th Recon Troop in World War II.<sup>99</sup> As a result, it is not surprising that a commander of the 194th in the mid-1980s desired changing the "lackluster brigade designation" to a unit having "a proud heritage". Also in 1986, the assistant commandant of the Armor School requested that the Army's Personnel Chief redesignate the 194th as the 10th Cavalry Regiment because,

"Although the 194th is not an ACR, it is in fact a separate brigade with more organic assets than a divisional brigade, and more closely resembles an ACR than a divisional brigade."<sup>100</sup>

While the request was not granted, others sought to restructure as opposed to redesignating the 194th SAB.

In 1989, the TRADOC Commander, GEN Max Thurman, called for enhancing the training opportunities at the U.S. Army's National Training Center (NTC). The NTC, which had been established in the early 1980's, employed a dedicated opposing force (OPFOR) consisting of the 177th Armor Brigade of some 1700 personnel. Since the OPFOR was not considered a deployable force, the 177th was not fully resourced and had only one tank battalion, one mechanized infantry battalion, an engineer company and a

provisional headquarters and support battalion. GEN Thurman wanted to be able to conduct brigade level exercises at the NTC and needed a larger OPFOR. Consequently, he proposed moving all or part of the deployable 194th Armored Brigade at Ft. Knox to the NTC and converting the 177th to a full TOE brigade (Chart XIV).<sup>101</sup> The Army staff recommended moving sufficient spaces to FT. Irwin to expand the 177th HHC and support battalion while retaining the 194th designation at Ft. Knox for domestic political reasons and eliminating the excess personnel spaces as an economy measure. The 194th would retain a combined arms task force and other small support units as active army elements and receive reserve component units to 'round-out' its HSB structure.<sup>102</sup> This plan was later implemented in FY1990 and thereby removed one of only two deployable HSBs stationed in the U.S.<sup>103</sup>

Consequently, on the eve of the U.S. Army's largest conflict since Vietnam, the U.S. Army lacked sufficient HSBs to give it flexibility. Not only was the 194th not available to Central Command as their war planner thought, but the 1st Infantry Division (Forward) was also being inactivated as one of the first European reductions after the fall of the 'Berlin Wall'. FORSCOM still had the 197th Separate Infantry Brigade (Mechanized) at Ft. Benning, but it had not been fully modernized with the latest equipment. Ironically, several brigades in the National Guard had the newer equipment because of their 'roundout' relationship with higher priority heavy divisions. At this point, the reserve

components contained the majority of the total army's separate brigades with 23. Of these, thirteen were HSBs (five were armored and 8 mechanized) and five of those were 'roundout' brigades.<sup>104</sup>

As a result of the 'roundout' concept, none of the active component heavy divisions in the U.S. had all three brigades. Since the roundout brigades were not mobilized soon enough to respond to the crisis in the Persian Gulf, all three heavy divisions deployed from the U.S. required augmentation. The 197th went as part of the 24th Infantry while the 1st Infantry Division linked up with the 2d Armored Division (Forward) in theater. That left the 1st Cavalry Division short a brigade.<sup>105</sup>

The 1st (Tiger) Brigade, 2d Armored Division was slated for inactivation in August 1990 when Saddam Hussein invaded Kuwait. However, the brigade was alerted to prepare for attachment to the 1st Cavalry Division and to deploy to the Persian Gulf as that division's third brigade.<sup>106</sup> The Tiger Brigade, configured as a divisional unit, arrived in Saudi Arabia in October 1990 with some 2000 personnel.<sup>107</sup> However, when the I Marine Expeditionary Force needed additional armor support to replace the British Brigade that had been serving that role, the Tiger Brigade was detached from the 1st Cavalry Division, then in theater reserve, and placed under the operational control of the 2d Marine Division as its third ground maneuver element.<sup>108</sup> This situation was not without precedent and irony, for the 4th Marine Brigade had served as the second brigade of the Army's 2d Division in

World War I.<sup>109</sup>

While the situation facing the Marines certainly warranted augmenting them with this highly mobile force, the 3d Army/ARCENT staff selected the Tiger Brigade without an appreciation of the challenges this caused. While the separately configured 2d Armored Division (Forward) had been originally proposed, LTG Franks wanted to keep his VII Corps intact and the Germany based unit had recently changed several key leaders. Consequently, ARCENT had no plan to expand the divisionally configured Tiger brigade to the separate brigade structure required. Therefore, the brigade lacked proper TOE documentation and constantly had difficulty in filling the key personnel shortages required to reorganize as a separate brigade or to obtain necessary replacements.<sup>110</sup> Initial coordination determined that the 2d Marine Division could provide only food, fuel, and common ammo. All other supplies would still come from army sources. As the brigade used nearly as much fuel as the entire marine division, the marines lacked the transportation assets to resupply the Tiger Brigade. This required ARCENT to augment the brigade with over 40 additional heavy transports.<sup>111</sup> Also, as the Tiger Brigade lacked all the support assets found in a separate support battalion, augmentations to 502d FSB were required. Both a material management center and a movement control center were formed with augmentees and maintenance deficiencies were made up by the attachment of two National Guard companies as well as attachment of key specialists from the 1st Cavalry Division. Even

with this, repair parts support remained "non-existent". The end result was "a 800+ soldier Forward Support Battalion".<sup>112</sup> In order to communicate, the brigade received attachment of most of the 2d Armored Division's signal battalion and used almost an entire division's worth of MSE equipment for internal and external links to the 2d Marine Division.<sup>113</sup> By the start of the ground war the Tiger Brigade contained 4,335 personnel assigned and almost 2,000 more attached giving this one brigade about 2/3s the strength of either a World War II armored division or a complete AOE light infantry division (Chart XV).<sup>114</sup>

During the ensuing combat, the Tiger Brigade provided the I MEF and the 2d Marine Division concentrated, mobile, combat power. Employing 120 M1A1 tanks, 65 Bradley Fighting Vehicles, 24 155 SP howitzers, and 9 MLRS; the brigade contained the assets the marines needed to defeat any Iraqi armor encountered in their attack toward Kuwait City.<sup>115</sup> In the four day ground war the Tiger Brigade performed their task superbly losing only two men KIA while taking over 4,000 Iraqi prisoners and destroying or capturing over 300 tanks and other armored vehicles.<sup>116</sup> The brigade culminated their operations by conducting the 2d Marine Division's main attack on 26 February to cut off and destroy Iraqi forces retreating north out of Kuwait City. Dashing 65 KM in 3 hours, the brigade effectively secured the I MEF left flank and sealed off Kuwait City.<sup>117</sup> As the Tiger Brigade Commander, Col. John Sylvester, stated "The successful combat operations of the Army's Tiger Brigade and the 2d Marine Division during the

Gulf War illuminate the relative ease with which joint operations can occur, but it also amplifies our need to understand the preparations required to enhance the capabilities..."<sup>118</sup> Col Sylvester also noted that,

" While transforming a divisional brigade into a separate brigade organization was complicated, ...the fighting force derived from it is extremely lethal."<sup>119</sup>

After Desert Storm the U.S. Army planned for a force structure of 12 active and 8 National Guard Divisions as part of the 'Base Force'. With an active duty strength goal of 535,000, the army plan included retaining 4 active duty separate brigades (2 HSB) as well as 9 reserve component separate brigades (of which 5 were heavy) and 4 heavy round out National Guard brigades. This plan called for the inactivation of the 2d Armored Division (Forward) and the Berlin Brigade by 1994 and the conversion of the 197th Separate Brigade to the 3d Brigade of the 24th Infantry Division. The two 'active' heavy separate brigades, the 177th and 194th Armored, were to be restructured into composite active/ reserve units. Under this concept, the 177th added an Army Reserve tank battalion and other supporting units and received a mobilization capability.<sup>120</sup>

As part of the Base Force structure, the 194th Armored Brigade became a uniquely configured unit. Reduced to a headquarters and a reinforced tank heavy task force in 1990, the base force called for a total army brigade with regular army, national guard, and army reserve units. By 1 October 1993, the 194th would have consisted of a fully resourced brigade HHC and a

combined arms task force(active) with a battalion each of armor, mechanized infantry, artillery, and support from the national guard. Company sized units included a cavalry troop and an engineer company (NG) and a (CEWI) company (AR).<sup>121</sup> The 194th was envisioned as the U.S. deployable contribution, in place of the 2d Armored Division (Forward), to the proposed Belgian Trinational Corps to be established in Northern Germany. The goal was to have the 194th as a rapidly mobilizing, deployable, mission ready unit by 1995.<sup>122</sup> However, after the Belgian Government cancelled the Trinational Corps, the specific support for this brigade ended. The National Guard Bureau blocked the assignment of the Tennessee units in order to keep the 30th Armored Brigade in the structure for an additional year. Consequently, while the 194th expanded its HHC and developed relationships with three of the NG units, it never became a deployable entity. The 194th Armor Brigade did serve as a limited test of integrating company or battalion sized reserve component units into active duty brigades and provided a digitized combined arms task force (1-70 Armor) for an advanced warfighting experiment at the NTC in April 1994 (Chart XVI).<sup>123</sup>

In the aftermath of Desert Storm and the radical downsizing of the army, separate brigades have been eliminated from the active force structure. The "Bottoms-Up-Review" completed in October 1993 replaced the Base Force and called for further reductions in both the active and reserve components.<sup>124</sup> The active army, limited to only 10 divisions, will have all

divisions at full strength without roundouts or non-divisional brigades. "The Army National Guard will transition to a combat force of about 37 brigades, including 15 enhanced readiness National Guard Brigades..." (Chart XVII). In order to restore all active divisions to a full three brigades, seven of the ten divisions will employ the split-based concept in which one brigade will not be co-located with the division base. These separated brigades (5 heavy and 2 light), while not structured as 'separates', will be augmented with additional CS/CSS elements some of which will be TDA (Chart XVIII). Additionally, aligning "separated" brigades with divisions has created the potential for mission confusion. For example, the brigade remaining in Alaska will be assigned to Pacific Command, have its METL approved by U.S. Army Pacific, receive contingency training priorities from the 10th Mountain Division, and respond to U.S. Army Alaska for administrative issues.<sup>125</sup> With the inactivation of the 194th Armored Brigade in June 1995, the era of the regular army heavy separate brigade will be at an end.<sup>126</sup>

The lack of heavy separate brigades in the Regular Army appears to be mismatched with several recent strategic and training initiatives affecting the Army. Since the end of the Cold War, the U.S. Army has converted from a forward deployed force to a CONUS based power projection force.<sup>127</sup> By the end of the 1990's, the army will have two thirds of its forces based in the U.S. up from about one-half in the late 1980's. Consequently, the army has undertaken several improvements to enhance the

strategic mobility of CONUS based units. Additionally, the Secretary of Defense has directed the army to provide additional armor support to the USMC when required.<sup>128</sup> The above issues and the army's continuing training emphasis at the CTCs are all focused at the brigade level for execution.

Since Desert Storm, the emphasis at the combat training centers has remained at the battalion task force level within the brigade combat team. Both the National Training Center (NTC) and the Joint Readiness Training Center (JRTC) focus on about 10 brigade size rotations a year. FORSCOM Regulations specify the standard troop list for rotations by stating, "The goal is for units to train at 100% of MTOE with doctrinally correct attachments...".<sup>129</sup> Additionally, the scenario at the NTC calls for the brigade to be attached to the 52d Infantry Division, portrayed by the NTC Commanding General and his staff. "Elements included in the troop list must be those the brigade commander would ordinarily expect to have on the battlefield in a secondary effort."<sup>130</sup> For a typical heavy brigade combat team of one tank and one mechanized battalion, the troop list totals some 3,600 personnel and looks almost exactly like a heavy separate brigade (Chart XIX). With aviation or light infantry included, the brigade combat team swells to almost 5000. For the Advanced Warfighting Experiment in April 1994 (NTC 94-07), the 3d Brigade, 24th Infantry Division deployed over 5,450 personnel (Chart XX).<sup>131</sup> In order to field these large brigade combat teams, the division base must provide numerous CS/CSS personnel not normally

part of the brigade. The forward support battalion is augmented by 245 personnel from the main support battalion to provide elements it lacks such as material management, transportation and additional medical and supply personnel.<sup>132</sup> With each brigade going to the NTC at least once every two years, many critical CS/CSS personnel go every rotation. To help alleviate that problem, divisions are now using nondivisional units under their control to replace the MSB on rotations.<sup>133</sup>

On 29 March 1993, Secretary of Defense Les Aspin forwarded the "Report on Roles, Missions, and Functions of the Armed Forces of the United States" from the Chairman, Joint Chiefs of Staff to Senator Sam Nunn. By mid-April, Secretary Aspin published a memorandum that directed,

" The Secretary of the Army, assisted by the Secretary of the Navy, will establish joint procedures to provide additional armor support to the Marine Corps when required." <sup>134</sup>

The Army staff directed TRADOC in May to perform a doctrinal, training, and logistical analysis oriented on providing units, usually a brigade size force, to support the Marines. The Armor School at Ft. Knox received the tasking and briefed the TRADOC commander on their interim report in October 1993. The initial concept was for a divisional brigade reinforced to 4903 personnel with additional attachments to include a corps support group (-), and a MLRS battery (Chart XXI).<sup>135</sup> Upon being briefed, Gen. Franks, TRADOC Commander, commented, "Perfect unit to do this is a SAB or ACR." <sup>136</sup> The USMC Combat Development Command stated in their review of the interim report that they wanted an army unit

designated for the conduct of this mission in order to arrange joint training.<sup>137</sup> MG John Ellerson, Director of Plans and Policy for the Army Staff, stated in response to the interim report that they did not want to designate a specific unit and that the brigade could be a reserve component unit in a slow developing contingency.<sup>138</sup> Additionally, in October 1993, the Air Land Sea Application Center published the initial draft of a manual for integration of 'Army and Marine Operations (AMCI)' that stated the 'divisional brigade battle task force' assembled from parent division assets is a capable force well suited for AMCI.<sup>139</sup> The Army Staff submitted its final report on army armor support to the Marines in April 1994.

Another result of the revised national strategy has been the redesign of the Army's prepositioned equipment. Prior to 1989, the Army's goal was for 5 divisional sets of equipment in Europe to support the NATO oriented concept of 10 divisions in Europe in 10 days. Prepositioned sets of unit equipment didn't exist outside of Europe. The present Strategic Mobility Plan for the Army calls for a total of eight brigade sets of equipment to be located not only in Europe, but also in Korea, the Middle East and an additional set afloat.<sup>140</sup> The Army Prepositioned Afloat Program consists of the equipment of a reinforced heavy brigade and a theater army logistics base element loaded on Large Medium Speed Roll-on/ Roll-off (LMSR) ships. The equipment is configured for a brigade with two tank battalions; two mechanized battalions; a battalion each of artillery, engineers, and combat

service support; MLRS and ADA batteries; and military intelligence and military police support not normally associated with maneuver brigades.<sup>141</sup> While not capable of forced entry, this concept relies on airlifting the personnel to an airfield from which they can subsequently link up with their equipment and supplies after unloading at a suitable port. With a goal of being combat ready within 4 days of linkup, the employment concept calls for the brigade to serve as a reinforcement to a forced entry operation by either Army airborne or Marines and to serve in a variety of roles as the joint or combined force commander's 'fire brigade' until the arrival of additional heavy forces. The army's draft manual on this concept envisions that brigades will be designated for this mission at least 18-24 months before possible use in order to conduct necessary training on unique tasks and to conduct liaison.<sup>142</sup> The Armor School proposed that units considered for this mission should not come from the highest force package, but should come from lower priority divisions and be the same brigade as designated to support the Marines.<sup>143</sup> Ironically, when strategic missions are being developed for brigades on independent operations, the U.S. Army won't retain any non-divisional brigades, but must rely on taking elements out of a division.

There are several useful lessons that can be derived from this study of separate brigades. These insights can be grouped into the following categories: doctrine, organization, and historic factors.

The doctrine of employing main battle elements smaller than a division on independent missions is extremely old and has been exercised on numerous occasions by the United States Army since 1776. Separate brigades such as Wilder's in the Civil War, Schwann's Independent Regular Brigade in Puerto Rico, Task Force Butler in Southern France, and the several separate brigades in Vietnam, performed valuable service in direct support to army and corps commanders. Separate brigade sized units have also proved valuable in independent missions to show the flag, demonstrate U.S. support or fight along side allies such as the China Relief Expedition, the 5332d Brigade in Burma, and TF 201 in Lebanon. Additionally, separate heavy brigades have been capable of providing additional armor support to the USMC when required as evidenced by the Red Devils Brigade in Vietnam and the Tiger Brigade in Desert Storm. Separate brigade sized units have also served in the doctrinal role of auxiliaries to the main tactical element, the division. Infantry divisions without armor had been supported by independent tank brigades in World War I and armor groups in World War II. Divisions depleted in combat, have been restored by use of separate regiments such as the 92d and 106th Infantry Divisions in World War II. Entire divisions have also been formed in deployed theaters of operation from separate regiments or brigades, as with the Americal Division in both World War II and Vietnam. Finally, divisions have been augmented by separate brigades such as the 197th Infantry Brigade (M) with the 24th Infantry Division in the Persian Gulf. Using

separate brigades for appropriate missions avoids dismembering divisions.

The force structure of separate brigades appeared to some observers to have evolved out of political, geographic, or budgetary needs rather than doctrinal insights. Separate active brigade sized units have proven useful for stationing at strategic locations requiring less than a division such as Berlin, Panama, Alaska, and Northern Germany. Separate Brigades provided useful support to branch centers and schools for many years at Forts Knox and Benning. Based upon the methodology of the 'Bottom Up Review' force, the National Guard would now appear to be "brigade based". Politically and economically this may be as a result of the ease of locating National Guard brigades within one state as well as the faster response time to deploy a reserve component brigade instead of a division sized element.

The historical aspects of separate non-divisional units have been handled best by the National Guard. During The American Revolution brigades were identified by states, during the Civil War by nickname or famous commanders. Later in World War II and Korea, separate regimental combat teams were formed that maintained old lineages. But unlike the Regular Army methodology for designating separate brigades from lackluster antecedents since 1963, the National Guard used honored lineages and traditions from previous divisions or from historic regiments. I believe lack of tradition has contributed to the reluctance on the Army's part to designate more units as separate brigades, and

instead to designate brigade sized units as "Divisions Forward" or even as 4th divisional brigades (separate) during Vietnam and in US Army Europe. The recent plan for ten active divisions continues this trend.

Despite an excellent record of tactical and operational utility, the U.S. Army has eliminated the Separate Brigade from the active force structure due to perceived irrelevance and lack of historic lineages. But, we may still need units organized and trained to operate independently of a division for Force XXI.

## CHAPTER III

### THE VISION: A FORCE XXI SEPARATE BRIGADE

While the Army has recently operated at the brigade level, it apparently has not mastered operations at that level. A senior brigade controller from the NTC reports that our commanders and staff officers have shown little ability to synchronize the brigade combined arms fight. Most divisional brigades, organized into brigade combat teams for the NTC, lack the mastery required to get the most out of every battlefield operating system. While there are numerous potential explanations for this problem, the most obvious are that as an Army we don't organize the way we plan to fight and we don't focus on institutional training at the brigade level. The recent NTC rotation with digital equipment reinforced the fact that existing divisional brigades may lack the requisite level of staff experience and habitual training relationships with the entire brigade combat team needed for Force XXI proficiency.<sup>144</sup>

Consequently, a new force structure may now be necessary to facilitate implementation of digitization and Force XXI. The fixed-structure division has been the basic tactical combined arms unit since 1917. The brigade, which earlier in our history had been the key tactical echelon, may need to be reincarnated as the basic combined arms building block of the army of the 21st Century. What follows is my vision of a brigade based structure

capable of operating the new equipment and employing the new concepts of Force XXI<sup>145</sup>

Combined arms brigades will have relatively "fixed" structures to achieve modularity, while still being capable of specific mission tailoring. (Chart XXII) The design criteria for brigades will be to give the brigade commander the dedicated assets across the battlefield operating systems in proportions designed to dominate the expanded battlespace of a Force XXI brigade under normal conditions. Combined arms brigades will be organized into several different packages, each designed for a range of military operations. Standard combined arms brigade structures would include armored, light infantry, airborne, air assault, and mixed (heavy/light). In addition, armored and light cavalry brigades would be similarly constructed. Brigades would be designed to conduct autonomous operations dominating a larger area than possible for brigades now. Brigades would also be prepared to operate as part of a higher Army element (division or corps), as part of a joint or multi-service force, as part of an interagency force for military operations other than war, or as part of a multi-national or coalition force.

The Force XXI combined arms brigade must be designed for relatively independent operations. Focused primarily on military operations requiring direct contact to accomplish its mission (close battle or population control), each brigade would consist of three main elements: a maneuver regiment, a support group, and a command and control warfare battalion (C2W Bn). Due to the

scale and scope of possible missions and the necessity for mastery of the science and art of warfighting, the brigade should be commanded by a brigadier general with colonels as commanders of the maneuver regiment and the support group, each of whom is also dual-hatted as deputy brigade commander. Additionally, since the focus of direct battle management will be at the brigade level, we will require a more experienced and capable staff than is currently found in a eighty man divisional brigade headquarters as well as an institutional training focus on how to fight combined arms brigades to match the field training focus on brigades at CTCs.

The key to employing brigades as building blocks of Force XXI will be to assign enhanced command and control assets to perform tasks now performed at division headquarters. Brigades will be organized around the information processing and dissemination capability of a command and control warfare battalion capable of conducting full-dimensional information warfare. This unit would combine at brigade level electronic warfare, PSYOPS, deception, intelligence analysis and collection management, communication systems operation, and information management. As such, this unit will be the brains of the brigade and operate the central battlespace integration node where fusion of all-source battle management occurs for the brigade commander. This information warfare system will be linked horizontally and vertically through the brigade's modernized communications architecture utilizing the full spectrum of digital and voice

systems such as Multiple Subscriber Equipment (MSE), Enhanced Position Locating and Reporting System(EPLRS), Tactical Satellites(TACSAT), and Combat Net Radio with Tactical Internet. The commander of this unit will also function as the Information Warfare Officer (IWO) combining the previous duties of the G2 and Communications- Electronic Staff Officer(CESO).

The C2W Bn will be linked to higher headquarters through a variety of systems. With the All Source Analysis System (ASAS), the brigade will be able to access theater and national technical intelligence. Integrated battlespace targeting architecture will provide sensor-to-shooter linkage through common ground stations from Joint Services Targeting and Reconnaissance System (JSTARS), Guardrail, long range Unmanned Aerial Vehicles (UAVs), and other aerial recon assets. Additionally, a Battlespace Coordination Element (BCE) will need to be equipped and staffed with the various communications or language capabilities necessary for connectivity with non-digitized U.S. Army elements, other services, other U.S. agencies, or multi-national forces. With augmentation by regional oriented specialists, the BCE can serve as a Civil-Military Operations Center (CMOC) for military operations other than war or as a C3I cell in coalition warfare.

The brigade will need organic capability to achieve Electromagnetic Spectrum Supremacy in its battlespace. It will accomplish this through use of directed energy weapons, jammers, or perhaps electromagnetic pulse generators. Other information warfare techniques such as deception and PSYOPS will also be

integrated by the C2W commander as the Information Warfare Officer.

The maneuver regiment of each brigade will be structured for specific most-likely contingencies, but remain capable of being tactically tailored before deployment. Each regiment would consist of a small headquarters focused on close combat training and three or four maneuver battalions. The regimental headquarters would serve as the forward battlespace integration node and provide a command vehicle to the regimental commander who operates as the deputy brigade commander (DBC) for operations. A small control staff would support him and link with the brigade central node from a pair of battle control vehicles. Consequently, the regimental level, operative for training supervision, melds under the brigade in combat to become a flatter organization, but with the regimental commander still in a supervisory role. The maneuver battalions would vary according to brigade type.

Armored brigades would be designed for mid-to-high intensity combat and be based on the digitized main battle tank as the key weapon system. These brigades' maneuver regiments would consist of at least three combined arms battalions including armored infantry, enhanced mortars, Line-of-Sight Antitank(LOSAT), and scout vehicles besides the tanks. The regiment in the armored brigade would also require a cavalry element of sufficient size to cover the extended frontage possible for a digitized brigade. This could be a small two-troop squadron equipped with stealthy

digitized scout vehicles backed up by tanks, mortars, and long-range precision antitank systems such as LOSAT or Non-Line of Sight(NLOS). The cavalry element would also operate the brigade's other collection systems such as a short range UAV, multisensor ground surveillance systems, and foot patrols with dismounted digital equipment.

The support group of the Force XXI brigade would contain the necessary combat support and combat service support assets to sustain the brigade on independent operations. Battalion-sized units of field artillery, engineers, and logistical support would be typical. Company sized units of dual purpose ADA and Military Police as well as a platoon of chemical personnel would also be present. The group headquarters would serve as the rear battlespace integration node. It would also contain the brigade material management center and the movement control office that are required for independent operations. The group commander also would function as the Deputy Brigade Commander for support. The small group staff would man a battle control vehicle to keep the DBC situationally aware.

While the units of the support group would vary with the brigade type, the essential functional requirements would remain the same. The artillery battalion with a mix of digitized SP howitzers and MLRS in armored and mixed brigades would have reduced weight 155mm towed howitzers and high-mobility artillery rocket system (HIMARS) in light brigades. With digital links, the benefits of shortened response times will probably outweigh the

advantages previously gained from massed fires. Additionally, without use of MLRS, it may not be possible to range across a Force XXI brigade's entire sector.

The support battalion would provide multifunctional logistical support, maintenance, medical, transportation, and supply to the brigade and be based on modular cells for easy tailorability. While use of precision munitions may decrease ammo tonnages required, true asset visibility and "just in time" logistics may also reduce requirements. The support battalion will need to operate primarily through automated materiel management and distribution systems. However, employing the concepts of split basing, the brigade may not need to deploy its entire support battalion, but instead use satellite links for requisitioning parts, providing personnel support and for telemedicine.

Other elements of the support group would provide additional capabilities with digitized and other enhancements. The engineer battalion in heavy brigades would be similar to the Engineer Restructuring Initiative (ERI) battalion and provide mobility, countermobility, and survivability assets. New systems should be a robotic counter-obstacle vehicle and a heavy assault bridge. Digital management of friendly and enemy mines should increase situational awareness and reduce fratricide. The air defense battery would include linkage with the theater air defense system for early warning and missile defense. The battery would be equipped with dual-capable systems such as the Bradley Stinger

Vehicle and Fiber Optical Guided Missile (FOGM) designed to accompany the forward units. The chemical platoon would be triple capable and provide chemical recon, smoke, and decontamination. Lastly, the group would control a MP element capable of conducting Enemy Prisoner of War (EPW) operations, traffic control, and performing rear area security on the expanded non-linear battlefield.

Other brigades would be similarly structured, but with a different mission focus. The light infantry brigade would be based upon the digitized dismounted individual soldier, and be designed for low-to-mid intensity operations. The airborne and air assault brigades would be similar, but designed for parachute and helicopter assaults respectively. The mixed brigade would be like the armored brigade but would have one heavy battalion replaced by a light infantry battalion. The mixed brigade, similar to the structure used at the NTC for heavy/light rotations, would be a versatile force useful across a broad spectrum of military operations.

Certain assets, currently part of the division base, would revert to corps for assignment while being attached to divisions for training or for specific missions. Artillery brigades with MLRS battalions, corps support groups, and combat aviation regiments would normally be in direct support of each division. Other corps level assets, such as engineer, ADA, and MP groups or brigades, would remain in general support and be available for tailoring into divisions as required.

Under the foregoing concept, the division, now unencumbered by a fixed structure, would replace the corps as the echelon that can rapidly concentrate combat power. The division base, as created under the ROAD and continued under AOE, needs to be reorganized into an entity possessing only those assets needed full time for command and control warfare. Divisions, as agile tactical headquarters, would train primarily in computer simulated operations with various combinations of combined arms and functional corps level brigades. Combined Arms Brigades would be the largest units conducting live training. For esprit and morale, brigades might retain historical designations of the divisions with which they are located or fall under for training management. Consequently, this could result in having more than ten divisional headquarters once these are no longer tied to a large fixed base. As an example, divisional headquarters could be established that are specifically designed to conduct deep operations such as a Mobile Strike Force with corps aviation brigades, armored cavalry brigades, or MLRS artillery brigades. Additionally, other divisional headquarters could be formed oriented on military operations other than war, such as SETAF in Italy or ARSOUTH in Panama. These could be composed of theater level assets such as MI, Medical, Transportation, or MP brigades. Enhanced National Guard Brigades could also be grouped under Readiness Division Headquarters having a large complement of Title XI active duty personnel.

Finally, the corps should remain the army's largest

deployable echelon that would normally serve as the army force (ARFOR) HQ or Joint Task Force HQ. Such a corps would retain the key logistical role of supporting deployed army elements and would also serve as the source of additional combat and combat support functional brigades. Additionally, corps would need fulltime multi-service embedded staffs to provide joint flavor and enhance mutual understanding. Corps may also frequently be formed not only from Army elements, but also from Marine or allied divisions and brigades.

This organizational structure would restore the concept of alternate echelons being tactical only. In World War II, corps and army groups were the tactical echelons without large logistical units, while divisions and armies were both tactical and administrative and contained the logistical support. The ROAD concept removed the brigade/regiment level from the administrative category, while the Army later eliminated the field army and gave its administrative requirements to the corps. This proposed Force XXI structure would have companies, regiments, divisions, and armies (when required) as tactical only echelons. Battalions, brigades, and corps would be both tactical and administrative thereby allowing for efficiencies to be generated by skipping echelons and perhaps by maximizing information age techniques to provide support to the tactical only echelons.

## CHAPTER IV

### OPERATION BALKAN SHIELD: THE 3D ARMORED BRIGADE (SEPARATE) AND THE RELIEF OF SARAJEVO

What follows is a hypothetical scenario - an account of the application of the Force XXI Heavy Separate Brigade described above to a conflict in the year 2005. This is not a prediction of any future crisis, but only a vehicle to describe potential capabilities.<sup>146</sup>

By the year 2005, ethnic and religious conflicts had reached extreme levels of fanaticism. In addition to continued Serbian intransigence in the Balkans, radical Islamic groups were disrupting North Africa. That Spring, the Islamic Republic of Algeria invaded its conservative neighbor, the Kingdom of Morocco in an attempt to export Islamic radicalism. After exhausting other economic or diplomatic policy options, the U.S. in concert with other allies, began deploying a UN sanctioned multi-national force to help defend Morocco on 11 MAY 2005.

The mission to support Morocco went to the recently expanded European Atlantic Command (EACOM). EACOM implemented OPLAN 4999, that called for a JTF built around the 3d U.S. Army to handle the major regional contingency in Morocco. The Chairman of the JCS, ADM Steve Simpson, worried about the possibility of another crisis erupting while U.S. military forces and strategic lift assets were stretched thin. On 13 May, he discussed theater reserves with the EACOM Commander, GEN Dorian Peterson, on a DISN teleconference, "Dorian, I'm also going to allocate to you the II

MEF with a MEF (FWD) amphibiously embarked and two MPS squadrons, but I don't want you to commit them to Morocco without prior approval." ADM Simpson continued, "Prepare an offensive sequel into Algeria using II MEF, but until then keep them in Theater Reserve. I'm also moving the Army's heavy brigade afloat into the Mediterranean. As the only digital Pre-Positioned equipment set, it remains in national strategic reserve until I release it. I'm directing Contingency Command at Norfolk to place a digitized heavy separate brigade on standby to execute link up if required. I believe it will be one of the two brigades at Fort Riley that has that mission. We've also received approval for Presidential Selective Reserve Module 8065 which, as you know, is for one MRC in EACOM. The Service Chiefs are putting the final touches on required tailoring of that module before implementation. Mobilization Day will be 15 May 2005."

BG Jack Armstrong, CG of the 3d Armored Brigade (Separate), received a call several hours later from his boss, MG Clyde Nelson, of the 23d Readiness Division and Ft. Riley about the Moroccan Deployment.

"Jack, it looks like they are going to deploy most of III Corps for this one. They are shipping three fully digitized heavy brigades from Ft. Hood under the 2 AD as well as three non-digitized from Georgia under the 3d Mech. The 1st Air Cavalry Division Headquarters will be going as the Corps Mobile Strike Force (MSF) with the 3d ACR, the 6th CBAA, and 3d "Gary Owen" Brigade (Air Assault). From XVIII Corps they are also getting

three light infantry brigades and the 10th Mountain HQ, but no Airborne as they do not need to conduct a forced entry into the lodgement area."

"What about us?" BG Armstrong asked.

"Your folks are to be on 18 hour alert as the Contingency Command's Heavy Ready Brigade. Execute your Ready Brigade training plan and impose information security measures," MG Nelson responded. "My staff and the 5th Infantry Brigade (Mech) (Separate) will provide you assistance in training or deployment if that proves necessary."

Several months later, on 11 July 2005, the Chairman of the Joint Chiefs, reflecting on the on-going deployment, discussed the situation with GEN Peterson in Stuttgart. "Dorian, it's been almost 60 days since the U.S. began Operation SAND STORM to defend Morocco from Algerian aggression. While your deployment of CJTF Morocco and air and naval operations against Algeria have gone relatively smoothly, it has consumed most of our strategic air and sea lift."

GEN Peterson replied, "It will be another 15 days at the earliest before I'll have both III Corps and the Allied Rapid Reaction Corps completely closed and able to begin decisive operations to remove the Algerians from Morocco."

"But my problems are now in the Balkans. As you know, I have the 11th Air Cavalry Division Headquarters from Italy with the 173d Air Assault Brigade there as well as other theater level assets scattered in the vicinity of Sarajevo conducting

peacekeeping activities. My HUMINT Support Element's sources are informing my JIC that the Bosnian-Serbian government may see this as an opportunity to forcibly remove the UN presence from Bosnia and to overrun the Muslim enclaves."

"What do you need?" asked Adm Simpson.

"I'll need to reposition a Naval Expeditionary Force with the II MEF back into the Mediterranean as a deterrent. I'll be taking some risk in Morocco, but I anticipate the level of force being deployed there can now handle the Algerians," Gen Peterson stated.

"I'll discuss your concept with the SecDef, but send up your courses of action on your next SITREP," replied the CJCS.

That same day, MG Lincoln Turner, commander of the 11th Air Cavalry Division and UN forces in Sarajevo, was not pleased with the information on his computer screen. It indicated that the Serbs were planning to make a major effort in 7 to 10 days.

"Warfare can make strange allies," he said to Col Anderson, his Command and Control Warfare Group Commander. "Who would have thought the Serbs would be tacit allies of the Radical Islamic Algerians against their Muslim Bosnian brothers?"

"I believe they are only taking advantage of the situation presented to them," replied Col Anderson. "With the U.S. conducting a full Major Regional Contingency in Morocco and NATO allies providing a corps as well, no one has any additional troops for the Balkans and some like the French and British are even reducing what they have."

General Turner responded, "You're probably right, but try to get EACOM to give us more satellite coverage over the Serbian positions to supplement the long endurance UAVs. We won't get any JSTARS support with Morocco going on."

By 15 July, based on the intelligence indicators, the EACOM staff prepared several courses of action for briefing to the CinC. After review, he selected one to recommend to the Chairman. He had rejected trying to just pull out the U.S. and UN forces from Bosnia, "Too hard, too risky, and unacceptable." Likewise trying to get other countries to contribute major forces would not be feasible given the time constraints and the threat.

"Those damned Bosnian Serbs have been able to rearm themselves with modern Russian equipment and are now a formidable foe with over 500 T-80/T-90 main battle tanks," he reflected. "They outclass most UN units' heavy equipment and still have thousands of partisan light forces."

"Employing my theater reserve of the 6th Fleet and the II MEF may be the only way to accomplish these two nearly simultaneous MRCs. Placing them in the Adriatic is my best option to defeat the Bosnian-Serb strategic center of gravity--the link to outside support. It may also distract the Serbs long enough to arrange for V Corps to move heavy forces overland. But what if the Serbs recognize the limited operational reach those Marines have from the Dalmatian coast? It's over 160 km from Ploce to Sarajevo through rough terrain! All I have to weight the operation is the Army's digital heavy brigade afloat in case I

must launch an immediate relief expedition from the coast."

"An operation of this type would have been almost impossible as recently as 10 years ago," GEN Peterson muttered to himself. "Now we'll see if all the Force XXI changes in equipment and focus on the brigade level paid off."

Upon receipt of the directive from the Secretary of Defense, a Naval Expeditionary Force consisting of two carrier battle groups and Amphibious Group 2 with II MEF(FWD) embarked, began moving into the Western Mediterranean on 15 July. Additionally, several Air Force tactical fighter wings rebased from Morocco to Sicily where they could also support either operation. This force, now designated CJTF Adriatic, would also assume control of the NATO operations DENY FLIGHT and SHARP GUARD which had been operating out of Italy for over a decade. The new force would be ready for action from the Adriatic in two days.

The 3d Armored Brigade (Spearhead) had been serving as Contingency Command's Heavy Ready Brigade (HRB) since the start of the crisis. The brigade rotated readiness commitments with the 5th Infantry Brigade (Mechanized) (Separate) also at Ft. Riley. Both brigades, while in contingency plans to Europe where they could flesh out division headquarters controlling only two combined arms brigades, were also in other contingency plans.

LTC John Motz, the brigade G3, was pleased with what the Spearheaders had accomplished with their priority on the Close Combat Tactical Trainers (CCTT) at the post Simulation Center. Because of the still limited availability of digital equipment,

the brigades at Riley were not fully equipped in order to generate a full set afloat. Consequently, the Task Force ARTEPS conducted in the virtual reality of simulation using Moroccan digitized terrain were extremely valuable. He had scheduled a full-up brigade SIMEX for next week to build on lessons learned from both the brigade's last rotation to the NTC with two task forces and the recent single task force rotation to the CMTC in Germany. His thoughts were then interrupted by a call on his STU-V from Contingency Command.

"Motz, this is LTC Jones CONCOM Crisis Action Team. 3d Armored Brigade is now on immediate standby to execute an Army Prepositioned Afloat (APA) mission to Split, Croatia."

Startled, LTC Motz replied, "Croatia! But we've been preparing for operations in Morocco for months!"

"I know", answered Jones. "But we have a new crisis brewing in Bosnia. The CJCS approved use of the APA as part of the JTF. Upon deployment you will be assigned to EACOM and attached to the II MEF. Good luck working for the Marines."

"Wonderful", Motz muttered to himself. Then he turned to his desk top computer and sent a message to the Sim Center. "Get the digitized Bosnian terrain module from DMA off the internet and load it into the WARSIM system and be prepared to do the same for the CCTT."

Motz then placed a priority satellite call for the G3 of the II MEF aboard the USS Wasp. "We need to discuss your concept of employment for the 3d Armored Brigade." Fortunately he thought,

they had participated in a CONCOM Joint Simulation Exercise in Collins Hall at Carlisle Barracks within the past year. While that had been a Middle Eastern location, the brigade had exercised as an armor brigade in support of a Marine Operational Maneuver from the Sea

By 16 July, the situation around Sarajevo for the UN peacekeepers had deteriorated. Serbian sniper and harassing mortar and artillery fire created casualties and kept them in their bunkers while the Serbs moved heavy equipment forward.

MG Turner, while looking at satellite images of the equipment coming from Serbia proper to Bosnian Serb staging areas thought, "Neither we nor the Bosnian Army have anything to equal this heavy firepower. They aren't backing down from our announced deployment into the Adriatic. Our airpower, while plentiful, is currently constrained due to concerns about civilian damage and the skillful positioning of the Serbs. We must get approval to place Belgrade at risk and get some heavy troops of our own on the ground fast before we are overwhelmed."

Then over Radio Pale--the Voice of Serbian Bosnia--he heard, "We will kill all UN and U.S. personnel in Bosnia if the imperialist U.S. Navy does not leave the Adriatic. U.S. intervention in Bosnia will only result in thousands of American body bags courtesy of the third most powerful army in Europe, the Bosnian-Serb Army and its Chetnik partisans."

General Dorian Peterson, CinC EACOM, received the execute order for Operation BALKAN SHIELD several hours earlier. The

State Department had secured the necessary landing and transit rights for the Combined/Joint Task Force to use ports, airfields, and land routes through Italy, Austria, Slovenia, and Croatia. He also had UN Security Council Resolution 895 that directed the U.S. to use all necessary force under Chapter VII of the UN Charter to stop the Bosnian-Serb attacks on Sarajevo, release encircled UN peacekeepers, and force a separation of the Bosnians and the Serbs leading to a manageable ceasefire. Due to the magnitude of this crisis, he placed his DCinc in overall command with two CJTFs built around the 6th Fleet/II MEF and the V Corps.

"I'm still concerned about the Serbian reaction," he declared to his aide. "V Corps will take about 14 days to move one division HQ and two heavy brigades by rail to Zagreb. Even flying in an enhanced National Guard brigade to Northern Italy to use the POMCUS set there will take too long. But their deployment in the open may distract the opposition just long enough."

Captain Dick Smith aboard the Large/Medium Speed Roll-on/Roll-off (LSMR) USS Shugart was sick of the sea. As the Army liaison officer responsible for the over 300 expensive, digitized pieces of equipment loaded on the eight ships in this squadron, he would be glad to unload them and turn them over to someone else. Using a SATCOM link he contacted the 3AB G4 at Ft. Riley. "Are you ready to deploy your Offload Preparation Parties? I've arranged for them to board the ships in Rijelka, Croatia when we arrive there 24 hours from now." (Chart XXIII- Map of Bosnia)

Maj Barnes replied, "My assistant G4 will be the OIC and

he'll have over 200 mechanics, equipment operators, and ship OICs coming from throughout the brigade. We will need to unload everything but the ADA battery and the chemical platoon. The CG doesn't consider the Serb air or chemical threat as significant."

"You want both M1A2 and M2A3 battalions? asked CPT Smith.

"Yeah," Barnes drawled. "We're even taking our roundout unit." (Chart XXIV)

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"This is Christiane Amanpour reporting live from Zagreb, Croatia for CNN. Today, 17 July, U.S. warships and Marines are conducting air operations from the Dalmatian coast against Serbian positions near Sarajevo. Additionally, U.S. Army forces are moving to Italy and Croatia for an apparent overland push. As part of that operation CNN has learned that 8 ships carrying the U.S. Army's most modern equipment has berthed in Rijeka harbor under tight security."

Radovan Karadzic angrily turned off the TV in his office in Pale and turned to his army commander General Ratzo Mladic. "Damn those Americans. I never believed they would do anything. Now my friend Slobodan Milosevic is wavering in his support for us. He now realizes that Belgrade could be at risk from the air if he is too open in his backing. While we've obtained some new equipment and experienced advisors through him from the Russians, he is not willing to risk any more."

General Mladic replied, "We can still accomplish our goals before the Americans can arrive with ground forces. Our heavy

units are intermingled with the UN troops and in civilian areas. That will curtail their airpower with concerns over civilian casualties and damage. I can seize Sarajevo in days; they won't be here for weeks."

Karadzic agreed, "Yes, but we must have some insurance. Hold off the general offensive for a few days until you have secured the Sarajevo Airport and blocked the main roads from Croatia with some of our elite Armored brigades."

"What if the Marines land on the coast? asked Mladic.

"Ratzo you fool!" Karadzic replied. "They are too lightly equipped to be a threat. But, just in case, move one of those brigades to block the coast road above Mostar."

Two days later, at 190230 July 2005, the 2d Marine RLT supported by extensive navy and marine air secured the port and airfield facilities on a wide area between Split and Dubrovnik on the Dalmatian coast. While the area was not considered hostile and in friendly Croatian hands, the Marines still received some sporadic shelling and sniper fire. The Marines rapidly moved their MPS ships into the ports for unloading.

That same day, Radovan Karadzic reacted by ordering the general offensive to begin in 48 hours. It would now take him that long to inform all of his units since he had lost radio communications from Pale.

"It must be the Americans using electronic warfare," he told General Mladic. "What's worse, they have knocked my radio and TV stations off the air. Now all I can hear is American propaganda

telling everyone they are coming and not to resist."

Later that evening the Army Pre-positioned Afloat Squadron slipped out of Rijeka harbor and carefully entered the harbor of Ploce. The Transportation Composite Group, which had arrived earlier by air from Ft. Eustis, met the outload parties aboard ship and commenced the offload.

The advance party and the initial increments of the "Spearhead Brigade" departed from Kansas supported by 23d Division's 1st Regional Training Brigade. They arrived in Split by commercial aircraft where the commander of the brigade's support group set up his rear integration node to control the flow. The 503d Support Battalion operated the reception area using a "force provider" set. The troops were also transported by the 503d to the marshalling area where they were linked up with their designated equipment. The entire process could take up to seven days to complete. Elements of the brigade's 533d C2W Battalion were some of the first to arrive to begin setting up their communications and electronic intercept stations.

LTC Jon Kerr, commander of the 2d Battalion, 136th Infantry (Minnesota NG), had been mobilized with his unit in May as the roundout to the 3d Armored Brigade. He was thankful for the enhanced status and training support his unit enjoyed. He also had several active component soldiers integrated into his unit including his XO and his battalion Bradley master gunner, CW3 Bailey. Because his unit would draw digitally equipped M2A3s if deployed, Chief Bailey and the other active duty cadre were

critical to the simulation based training strategy the unit pursued. He was at the post Sim Center observing a company/team STX on 21 July when he received a call from the brigade chief of staff.

"Jon, this is COL Bowen. The airflow to Bosnia is going on schedule. As our last unit to deploy, we'll need you to begin movement on 24 July."

LTC Kerr reviewed his unit's training status. That would mean deploying at M+75; ten days ahead of his mobilization training plan. He wouldn't be able to fit in a live task force gunnery or maneuver. "I can do it if I receive priority on the CCTTs with my task force slice."

"Agreed," COL Bowen replied. "You'll have two days."

LTC Kerr reflected that having an active component brigade HQ to work for was better than a reserve component HQ after mobilization, especially when going to war.

CPT John Davis, the brigade external information officer, had been extensively trained for the type contingency now happening. As one of the key members of the C2W battalion, he was also one of the CG's special staff officers. It was his job to manage and use the Global Information Environment to support the brigade. "Now that we have been alerted for movement, I'll need to implement my media plan. The media pool has been activated and I'll receive teams to escort that will go with us. My challenge will be staying ahead of the "news" and keeping the families and soldiers accurately informed without merely reacting to rumor,"

he reflected. "I'm glad that we now not only recognize that U.S. public opinion is our strategic center of gravity, but actively defend it with our own information operations."

Another member of the Cybernetic Corps in the 533d C2W Battalion was MAJ Chris Jones, chief of the Battlespace Coordination Element (BCE). He was responsible for maintaining robust liaison with adjacent, higher, and supporting organizations. Once he had been notified of the brigade's mission and area of operations, he rapidly acquired off the tactical internet the specific communication systems of the II MEF and the others with whom he would be required to support.

"It looks like I'll need to take the complete package of teams to interface with the MEF operations; intelligence, artillery, engineer, EW, ADA, C2W, and airspace management sections," he informed his commander. "They will all need their own digital communications, since the Marines are still behind us in that. I'll also request additional French and Serbo-Croatian speaking liaison teams from the Reserves as well as a Special Forces Coordination Element from SOCOM."

At Brigade headquarters, MAJ Thomas Clark, the G3 Plans and Exercises Officer, was working on the brigade operational plan. It was based on the concept of operations and commander's intent that BG Armstrong and his orders group had discussed with the II MEF commander via a DISN teleconference. MAJ Clark had then led the METT-T+I(Information) analysis and staff assessments resulting in a estimate of the situation and its nuances. The

threat situation had been rapidly assembled by the 533d Analysis and Control Element (ACE) through the All Source Analysis System (ASAS) by pulling broadcast data off the Intel net. All brigade units had then received this initial burst of information as an action order with preliminary graphics to aid in parallel planning. While the advance party deployed, the staff continued planning using automated decision and wargaming aids to refine courses of action.

"I'm glad the old man scheduled that WARSIM on the Bosnian digital dirt", he remarked. "It showed the need for infantry to control the ridge lines and seize tunnels as well as the utility of taking our National Guard Mechanized Infantry Battalion for clearing and holding all the numerous villages in our area of operations. We also will need at least an air cav troop with Commanches"

"Those guys in Desert Storm back in 1990 and now with III Corps in Morocco are having it easy. They get to operate in near ideal tank terrain, where sensors can see almost everything and engage at long range. We will have far more restrictive Rules of Engagement and will have a greater challenge identifying the real threats from the background clutter."

The Marines didn't wait long to expand the lodgement area. On 22 July, after coordination with the local Croat forces, and attempts to negotiate with the Bosnian-Serbs in the area, the 6th Marines seized the airport south of Mostar. Once a main draw for tourists, Mostar was now a divided city with the besieged

Bosnian IV Corps in hotels.

"We're taking more casualties from mines clearing the 50 km of road from Ploce than we did in the vertical assault to get here." COL Fox, of the 6th Marines, told the Bosnian Commander, BG Ramiz Drekovic. Gen Drekovic explained, "That's because you only faced the Chetnik pigs of the White Eagle Brigade in this area. They are boastful Rambo types. But we have reports that the Serbs have positioned one of their elite armored brigades, the Gavriilo Princep Brigade, just north of here."

1st Squadron, 12th Cavalry had been the first unit of the maneuver regiment to complete its equipment checks and to digitally link all of its vehicles. LTC Bob Baggott, the squadron commander, informed the Brigade forward battlespace integration node by digital burst transmission from his Bradley Command Vehicle that he was moving forward to pass through the 6th Marine lines near Mostar. He was then to begin information operations along Highway E73 to Sarajevo. He had already launched short-range UAVs to provide him additional sensor coverage and had received the latest Marine threat picture by data link through MSE from the BCE located at the II MEF Headquarters. If he needed artillery support before the brigade's organic battalion was ready, he had the Marine Supporting Arms Liaison Team (SALT) with him to provide on call naval, air or artillery support.

"The most difficult part of this operation", LTC Baggott said to his gunner, "Is distinguishing the bad guys from everyone

else. In the Brigade we can determine who is friendly due to the battlefield combat identification system (BCIS), but the Serbs, Bosnians, and UN forces we will need to identify. It becomes a whole lot easier when they fire at us. That's why I had you review the Rules of Engagement and the Serbian thermal signatures we received in the marshalling area. I want to ensure we shoot the right targets."

Baggott also had contact with a Special Forces Team that had infiltrated to a forward Bosnian CP, where using their hand held digital interface systems they could update the squadron with Bosnian locations to preclude unnecessary casualties.

The squadron deployed with two troops abreast, one on either side of the main highway along the Neretva river. While the valley was only 10 km wide, each troop also placed Hunter scout vehicles on the ridges with tanks, mortars, and precision missile systems in overwatch.

LTC Baggott knew his mission was to obtain information; test Serb dispositions, strengths and reactions; and to set the conditions for the decisive engagement to follow. "I know they have heavy elements in front of me from the intel picture II MEF gave me. But it will be several more days before we have a JSTARS in this AO redeployed from Morocco. Now that BG Armstrong has arrived, he can't wait for information, while the main body is still vulnerable conducting link up. Since we can now use C-17s to fly troops directly to Mostar, that may speed things up."

The squadron rapidly moved along the river and made contact

near the village of Jasenjani. The Hunter Scout vehicles picked up Serbian tank signatures scattered in hull down positions along the ridge lines using their Forward Looking Infra Red (FLIR). Before the Serbian T-90s could use their laser rangefinders, their optical sights were destroyed by directed energy beams from Stingrays mounted on selected Hunters. The T-90s were then easy targets once their locations had been digitally transmitted to everyone in the squadron over the Inter Vehicular Information System (IVIS). Enhanced Fiber-Optic missiles, precision 120mm mortars or M1A2 smart target activated fire & forget(STAFF) 120mm rounds were able to destroy the T-90s despite their improved armor and defensive systems.

During the contact, LTC Baggott reported to COL Mike Massar, the Deputy Brigade Commander for Operations at the forward battlespace integration node, "I've made contact with at least a battalion of T-90s. They appear to be in well prepared static defensive positions. We are only getting kills with top attack munitions."

"Continue to develop the situation", COL Massar directed. "See if you can break their cohesion without taking significant casualties. The Old Man is finishing up the plans for decisive operations and we have the lead two task forces almost ready to move out."

BG Armstrong responded to the call from the II MEF Commander, LTG Eric Leifson. "Yes sir, it is a bold plan with some risk involved. But this brigade is capable of operating as

a deep operational maneuver force, if we get the support I've requested."

LTC Leifson replied, "You've got it. But tell me, did you copy this plan from the 3d Army's relief of Bastogne?"

"Not at all", BG Armstrong stated. "It is really more like Task Force Butler's drive to the Rhone in 1944 from the French Riviera. But given the political dimensions, it is most similar to Chaffee's Relief of Peking during the Boxer Rebellion. That was also a joint Army-Marine Expedition."

"Well I'm grateful to have your guys as part of my command on this operation. I was along side the "Tiger" Brigade back in '91 on DESERT STORM. They did a helluva job."

"Sir, the Spearhead Brigade will maintain that tradition of Army-Marine Cooperation," BG Armstrong responded.

The TF 2-33 Armor passed through the digital passage points jointly manned by the 1-12 Cavalry and the local Bosnian militia, north of Jasenjani at 0100 on 24 July. The commander, LTC Dave Deakins, had participated in a teleconference hours before with the senior commanders of the brigade. While moving up the highway in his M1A2 command vehicle he contacted his XO located with the battle staff over the command net, "By BG Armstrong developing his intent in a collaborative manner and asking us for our assessments and solutions, he really solidified our critical actions for this decisive phase and the end states desired. That wasn't how we learned to issue orders and intent at Leavenworth back in '96. But it certainly got us all to buy in."

Deakins' unit had the mission to exploit the situation that 1-12 Cav had developed previously. As the main effort, he was attacking astride the highway to rapidly bypass Jablanica, secure the highway tunnel to its east, and link up with Bosnians at Konjic. He also had committed his Mech Infantry Company to a dismounted night attack to seize Hill 1916 that overlooked the highway using digitally linked dismounted infantry. He looked at his IVIS screen displaying all the platoons making up his powerful task force, even though they were spread over a front of 20 KM and stretched back to Mostar. By selecting another mode, he could view the individual vehicles or dismounted personnel.

"Did we ever get B-33 digitally linked?" Deakins asked his loader/IVIS operator over the intercom.

"No sir, but they stayed back at the mobile unit trains to get that fixed. Didn't want to risk fratricide by not having them appear on our digital screens."

Deakins was glad to see the pale blue icons showing both the Paladin battery from 1-27 FA and the company of engineers that he had attached for this operation.

"With that new Counter Obstacle Vehicles (COV), we should be able to conduct in stride breaches of the Serbian road blocks. While the Serbs normally have surface and subsurface mines and even iron-tetrahedron obstacles, the COV is capable of handling these problems rapidly with their integrated plows, armored box launched line charges, and robotic demolition arms," Deakins told the loader.

"Red Lion 6, this is Alpha 6, contact with T-90s and M980 Infantry Fighting Vehicles, north of Greborica," CPT Smith, commander of Team A reported over the voice command net. "I've taken one tank hit by an AT-11 SNIPER beam riding missile at over 5000 meters. The Serbs are defending the far bank of a stream and the bridge is out."

Deakins responded by issuing verbal orders over his task force voice command net, while simultaneously his loader input additional graphics on the IVIS to be viewed by all. Both transmissions were routed using an integrated controller device to gain non-competitive use of both voice and digital transmissions. Deakins requested immediate suppressive fire from the Paladin 155mm battery with him, while he directed the engineers to move up the heavy assault bridge on a M1 chassis. He then digitally directed a platoon of antitank vehicles to maneuver their line-of-sight missiles for long range shots at the T-90s.

Responding to the contact, the XO and the battlestaff went into action aboard the command and control vehicle (C2V). Equipped with four computer workstations, the C2V was designed to manage the flood of reports and information generated by combat allowing the commander to lead. The XO operated from the main workstation and ensured that all external agencies received digital spot reports of the action. Next to him was the battalion operations warrant who monitored all friendly unit conditions. The battalion FSO was at the adjacent station and used the Advanced Field Artillery Tactical Data System (AFATDS) to rapidly

clear detected targets and to ensure employment of the appropriate delivery means. The intelligence analyst at the fourth station observed enemy positions as well as received direct data feeds from brigade and higher sources. All the workstations shared information on a local network and could send the commander critical information by digital burst to his IVIS aboard his M1A2.

"Not even the defensive measures of a T-90 behind a berm could stop one of the LOSATs kinetic energy missiles," Deakins remarked to his loader after observing a T-90 turret flung into the air at over 6000 meters from the LOSAT that killed it.

TF 2-33 completed the destruction of the immobile Princip Brigade with rapid maneuver and precision fires and closed on the town of Konjic by noon.

Tucked up behind TF 2-33 was BG Armstrong in his Battle Command version of the Bradley with his G3 and Information Warfare Officer (IWO) aboard. BG Armstrong was pleased with his brigade's performance so far as they added new lore to the rich battle history of the old Third Armored Division. They had not only alerted and deployed from Ft. Riley and linked up with afloat equipment, but had also been able to commence information operations before completely closing. Launching TF 2-33 to Konjic had been a prudent risk to exploit the Serbian weakness 1-12 Cav had found. But now the resistance and the terrain would be tougher. The 80 KM from Konjic to Sarajevo was all uphill and in close terrain. Now was the time to use information warfare to

prepare the battlefield for decisive operations.

LTC Kristan Lewis was the brigade IWO and senior member of Cybernetic Corps in the brigade. This position resulted from the merger of the Military Intelligence Branch with the Signal Corps. The IWO was a combination G2, CESO, and headquarters battalion commander.

"We've been monitoring Serbian communications for several days now," LTC Lewis informed BG Armstrong. "I have a net analysis of their critical nodes that we can exploit with selective jamming. We also have the theater PSYOP leaflet and broadcast products available and our tactical deception element is in position to provide sound and electronic signatures of assembly area operations south of Konjic. She continued, "While we can't use the EMP generator due to the close proximity of the Serbian HQ in Pale to our own UN HQ in Sarajevo, we can electronically transmit a computer virus into their unprotected computer systems."

"Approved Kristin", BG Armstrong replied. "But do we have a laydown on the remaining Serbian Armored Brigades? I want them detected and designated high payoff targets as Mladvic's operational center of gravity."

"Yes, Sir", LTC Lewis responded. "As you know we destroyed the Princep Bde enroute to Konjic. But they have the Dusan Brigade defending between there and Sarajevo, and two brigades blocking the Croatian approaches at Tuzla and Banja Luca. Three of the four other brigades are participating in the assault on

the Bosnian and UN positions around Sarajevo while the Nemanja Brigade is still carefully infiltrating up from Foca toward the Sarajevo International Airport. We are not picking up good locations of that unit due to their skillful use of terrain."

"I want you to focus your efforts on the Nemanja unit." General Armstrong declared. "Also let's step up the loudspeaker teams use of your actual EPW interrogation voice tapes about how easily we destroyed the Princip Brigade. Let's get the theater special operations aircraft to focus leaflet drops on those units. During the next phase of the operation, don't jam all the comms to the Nemanja Brigade. I want to get him on the move."

"Also", BG Armstrong continued to LTC Lewis, "I want you to ensure we maintain unified staff action even while we are on the move. I need to maintain the initiative by regulating the tempo of this operation to exploit the opportunities we derive from our enhanced situation awareness."

Lewis replied, "Roger, sir. We are completely tied in with COL Massar at the Forward Node and the other commanders on the Warfighter voice net. He and his small staff are controlling the close fight from their two C2Vs. My signal company is providing integrated system control for the brigade wide area network over MSE and EPLRs with help from the long endurance relay UAVs as far back as COL Santo's rear battlespace node."

Turning to his G3, LTC Motz, as he was monitoring the unfolding operation from his workstation, Armstrong said, "John, get me the 2d Marine Division Commander on his net. I'm going to

need him to chop me that infantry battalion OPCON for a vertical assault during this next phase. Also, has that air cavalry troop from the XVIII Corps Attack Aviation Brigade that I had requested in our preliminary plan completed its air deployment to Mostar yet?"

LTC Motz assessed the information from his workstation and replied, "They will have eight RAH-66 Comanches operational by 1800 today. MAJ Clark, at the central node, has finished the action order for that phase of the operation and I've reviewed it. Do you want to see it now, sir?" asked Motz.

"No, let me talk to the Marines first", said BG Armstrong as he stored the plan at his computer station.

At that moment, COL Santo, Deputy Brigade Commander for Support, was deeply involved with a facet of 21st century warfare, the potentially overwhelming volume of information available. While the brigade's air movement and equipment linkup was just about complete, he was now concerned about setting up a support structure for the brigades fluid operations already underway and establishing the forward theater army log base. Additionally, as his rear battlespace integration node was located in the middle of the II MEF's beachhead, he was dealing with many of their logistical concerns.

"I know you can't furnish our brigade much more than food, fuel, common repair parts, and limited ammo." Santo informed the II MEF FSSG commander. "Besides the base support elements, I have our own multifunctional support battalion to take care of

us. It is really a scaled down version of the old DISCOM and provides us our medical, maintenance, supply and transportation capabilities", Santo continued. "I've even got the Material Management Center operating now with direct requisition links back to the Army Material Command using the Combat Service Control System and my clearing station with telemedicine links to Walter Reed."

Finishing his conversation with the FSSG commander, Santo turned to LTC Dan Thomas, 503d SB. "I want you to set up the Operational Sustaining Base at the Mostar Airfield behind Marine lines with the modular assets not required forward. Form a Logistics Task Force (LTF) out of the remaining battalion assets, especially forward repair teams and Palletized Load Systems with ammo and the battalion sustainment elements not forward in their Mobile Unit Trains. We'll need to rapidly displace the LTF behind the three lead Task Forces to keep them sustained while on the move."

That night, 2d Battalion, 8th Marines, accompanied by a brigade liaison team with digital communications, made a night vertical assault to seize Hill 2067 overlooking the Sarajevo International Airport and the far side of the 3 KM long highway tunnel between Konjic and Sarajevo. The Chetnik partisans defending those sites that survived the short but intense air and artillery preparation, died violently as the RAH-66s of the newly arrived C Troop, 3d Squadron, 17th Cavalry made final passes over the LZs before the troop carrying MV-22s touched down.

CPT Bruce Davis, the troop commander, controlled the operation from a UH-60 he obtained from squadron headquarters. It was outfitted with an Airborne Command and Control System. While enroute in the C17s, he had been able to use this C3I console to rapidly conduct a terrain analysis, develop a fire support plan, and optimize routes for his escort mission and transmit it to the 3d Armored Brigade Central node for approval. Additionally, it provided him the communications interface capability to stay in touch with the Marine MV-22 Flight Leader, the II MEF Tactical Air Control Center, the Brigade Central Node, and even the JSTARS overhead.

"Black 16, this is Commanche 6," CPT Davis called one of his platoon leaders on the voice net. "Standby for a Airborne Target Handover from the JSTARS on a suspected tank platoon moving toward the highway tunnel."

"Roger," 16 responded.

With a digital burst CPT Davis sent his 1st platoon leader the JSTARS target information. Minutes later he could see the red icons indicating the Serbian tanks on his situational awareness screen turn black as their kills were confirmed. After the Marines were safely on the ground, the Comanches loitered in the area to suppress residual resistance, confirm enemy battle damage, and to report back to brigade.

The next morning, CPT Bill Sackett, the Brigade Provost Marshal, had his hands full. Not only were his 14 MP teams stretched thin escorting convoys of equipment from the port in

Ploce to a new staging area near the Mostar airport, but now he had one platoon involved with processing Serbian POWs. The lead task forces and the 2d Bn, 8th Marines were now generating hundreds of prisoners from the Dusan Brigade, hit last night, as well as surrendering Serbian militiamen. Most had been demoralized by their own comrades on loud speakers and the precision fire storm that had swept through their positions. They sought out Americans, rather than let the Bosnians take them.

SFC Miller, his Operations NCO, turned to him and said, "Sir, the movement control cell at the 503d Support Operations is diverting another section of 5T trucks to our forward EPW Collection Team as we requested. I'll have 2d Platoon coordinate with them to rapidly load them and escort them back to the Marines' main holding area near the port."

CPT Sackett replied, "I was concerned before we deployed that our teams would be vulnerable to Serbian partisans. But since Patrol 21 took on a Serbian Partisan platoon with its Mk 19 40mm and then made a digital fire request to get artillery support, we have taken only a few sniper rounds."

That same night, along Highway E762 to Sarajevo, the Nemanja Brigade of Serbian armor was dying. Earlier, as the Marine air assault went in, Gen Mladic was able to get through the jamming and order the brigade to move rapidly to the airport. Unfortunately for the Nemanja Brigade, the Spearhead Brigade had maximum Marine and Navy air, as well as organic MLRS to inflict long range punishment on them. LTC Fitzpatrick, the 1-27 FA

commander and Brigade FSCoord, had orchestrated this symphony of destruction through the BCE at II MEF HQ and the ANGLICO Brigade Support team located with his fire support element at the brigade's central integration node. He briefed the Brigade Chief of Staff, COL Bowen, as he stopped by his C2V. "After blocking their lead elements with a wide area minefield, I've maximized every target acquisition system we had available. Now the automated systems are rapidly clearing the targets and allocating delivery systems." He continued, "We've blocked out no fire areas due to either friendly troops or prohibited targets. Now we are getting laser designations on Serbian vehicles from the Special Forces surveillance team that infiltrated along their route and from the brigade's UAVs, as well as the theater JSTARS radar tracks downlinked to the brigade's ground station. I've also obtained GS fires from 2-9 FA Battalion (MLRS) that deployed with the Marines to provide them long range support under Interservice agreement with the Army."

"Keep me posted," COL Bowen told LTC FitzPatrick as he left the artillery C2V and returned to his own vehicle. While it was called the central battlespace integration node, he still thought of it as the main CP. From here the Chief of Staff using four C2Vs could plan future operations, execute deep attacks, and synchronize activities and operations throughout the entire brigade's fluid battlespace.

Early on the morning of the 25th of July, in a desperate attempt to strike back at the Americans, Radovan Karadzic ordered

the launching of six SCUDs at the crowded and busy Mostar Airfield. "If we can hit one of those large transports full of American troops we can give them the casualties they have been asking for. I've kept these missiles carefully hidden for just such a purpose," Karadzic told GEN Mladic.

While it only took a few minutes to pull the SCUDs out from the buildings they had been hidden in, a brigade UAV from the cavalry squadron picked up the heat signature of the battery as it prepared to fire. The operator, realizing that SCUDs were on the high-pay off target list, activated the direct sensor-to-shooter link established to expedite engagement of such targets.

"Looks like we've spotted a SCUD battery," one of the automated systems NCOs reported to COL Bowen on his C2V. "I can only engage it with an ATACM from D/1-27. They already have the data."

"Shoot it", stated the Chief. He called II MEF on the MSE direct link to ensure they knew. Within minutes the SCUD battery received a lethal dose of bomblets as the ATACMs detonated above it.

After receiving updates on the night's activities from COL Bowen, BG Armstrong now sensed the time was ripe to unleash TF 1-33 and to keep up the tempo of the action. As his command vehicle had pulled back to COL Massar and the forward node for rest and resupply, he went to find his Operations Deputy.

"Mike, get TF 1-33 moving through TF 2-33 Armor and scoot through that highway tunnel the Marines have. I don't want them

to stop until they get to the International Airport. That Serbian Armored Brigade will be forced out in the open to defend it. Make sure 1-36 Infantry is tucked up close behind them to clear any bypassed pockets of resistance. Monitor the battle for me, I'm getting some rest."

At this moment, COL Massar appreciated the robust structure of the Brigade's Command and Control apparatus for continuous operations with multiple task forces like they had been conducting since arrival in theater. "A smaller headquarters with only one Colonel wouldn't be able to maximize the potential of this digitized self-contained unit," he said to himself as he transmitted instructions to TF 1-33.

LTC Bill Buhl, Commander of TF 1-33 Armor, was completing a refuel on the move triggered by automatic reporting along Highway E73 when COL Massar contacted him.

"Bill, retrieve FRAGO 48 from the ops file and execute it not later than 0700. C/23d Engineers will remain attached for mobility operations. You have brigade priority of fire upon passage."

By 0715, TF 2-33 was roaring up the narrow valley astride highway E73 with M1A2s in the lead followed closely by Bradley M2A3s. Concerned about his right flank as he approached the airport, he contacted the commander of the Brigade Engineer Battalion on the Warfighter net. "Do we have remote sensors on the wide area minefield?"

"Roger", LTC Patten replied, "I'm now controlling an

Intelligent Minefield across Highway E762. Access your digital obstacle overlay and you'll see their locations."

TF 1-33 made short work of the Petrovic Brigade as it fought to retain the open area of the International Airport. Whenever Serbian artillery opened fire on the US Task Force, devastating counter battery fires controlled by the brigade's firefinder radar rapidly silenced the Serbs. At the edge of the airport, TF 1-33 linked up with a 173d Air Assault Brigade position. The siege of Sarajevo was over by 1200, 25 July.

That evening, BG Armstrong visited MG Turner at the shell damaged hotel serving as UN and 11th Air Cavalry Division Headquarters. "Jack, looks like the cavalry has arrived!" General Turner exclaimed. "We had it kind of rough for the past week with Serbian shelling and attacks. The ground attacks though diminished to mere probes two days ago as your troopers charged up from the coast."

"We're more like 'Wilder's Lightning' Brigade with the technological overmatch we enjoy. But we aren't finished yet. I'm going for the Bosnian Serb Headquarters at Pale. That should smoke out some more of Karadzic's modernized armor, or force him to ignominiously abandon his capital", Armstrong responded.

Commencing at 0300 the next day, TF 1-36 Infantry made the Brigade main effort with the 2-136 Infantry, Minnesota NG following and supporting. LTC Chris Chamberlain led with his digitized dismounted mechanized infantry to secure routes through the southern Sarajevo suburbs overwatched by their Bradleys and

M1A2s. As a result of the psychological operations, resistance was minimal and easily overwhelmed. Simultaneously, a Marine infantry company seized the top of Mt. Jahorina and the Olympic skilift overlooking Sarajevo and Pale from the southeast. As resistance stiffened in Pale from scattered Serb T90Es from the Kosovo Brigade, LTC Chamberlain requested pre-planned Paladin 155mm artillery and air strikes. By evening, Radovan Karadzic's capital had been taken by the Spartans of 1-36 Infantry and General Mladic lay dead in the rubble.

Since Radovan Karadzic graciously agreed to a ceasefire from his new capital of Zvornik on 27 July 2005, CJTF Bosnia (V Corps) began its overland advance from Croatia ahead of schedule. The 3d Armored Brigade (Separate) consolidated in the vicinity of Sarajevo and initiated security operations throughout its non-linear battlespace. The brigade also received a change of mission and was detached from CJTF Adriatic (II MEF) and attached to CJTF Bosnia (V Corps). It was further placed OPCON to the 11th Air Cavalry Division to assist in peacekeeping. The 11th needed its firepower and dismounted infantry until replacing it with the 2d Cavalry Brigade (Light), with its M8 Armored Guns, and the 12th Corps Aviation Brigade being flown into the reopened Sarajevo International Airport.

BG Armstrong discussed this change with his Chief of Staff, COL Bowen. "Have MAJ Jones and the BCE pack up and relocate to Sarajevo with the 11th until V Corps HQ arrives. We will need digital connectivity to keep us tied in for this peacekeeping

mission. Also get the G-5 to set up a Civil Military Operations Center. We'll need to request additional CA teams from the reserves to augment it. Have the G-3 and Brigade SJA review our Rules of Engagement and ensure that it is appropriate to our new peacekeeping mission."

As he returned to his C2V to make those arrangements, COL Bowen reflected that before the US Army and Force XXI became brigade based that the advantages of Information Age Warfare were not optimized. But since the mid-1990's, when the Army realized that the brigade level needed additional emphasis, results at the Combat Training Centers improved. Brigades not only received digitized equipment, but the experienced and robust staff required to employ that equipment. Additionally, by organizing separate brigades like the 3d with proud unit histories, we now had units that trained under the same chain of command with which they would fight. Institutional training had changed as well, as CGSC focused on producing field grade officers expert at brigade level combined arms synchronization. These factors, plus utilizing Brigadier Generals as commanders, had enabled the U.S. Army's Force XXI to maintain flexibility in its role as a decisive strategic force by having brigades capable of operating independently.

The success of Operation Balkan Shield by the 3d Armored Brigade conducting an operational maneuver with strategic consequences was also the result of the overlapping and flattening of the levels of war. As the Army fielded fewer, but

digitally enhanced brigades they approached divisions in importance and capabilities. It seemed only logical that brigades had now replaced divisions as the basic building blocks of the Army's Force XXI.

CHAPTER V  
CONCLUSION

With the decreasing size of the Army, the internal lobby for retaining maximum divisional designations has been strong. Divisions have been the "coin of the realm" in calculating Army combat power since World War I and the Army's division commanders and ex-division commanders are an extremely powerful group. While almost all soldiers have served in at least one division, few soldiers have even served in a separate brigade and therefore most soldiers don't understand the differences. Consequently, there is not the vocal lobby that both divisions and ACRs generate. As an example, in 1994 the 177th Armored Brigade (OPFOR) at the NTC was redesignated as the 11th ACR to retain that proud designation at the expense of the next to last SAB. As separate brigades have been formed out of down sized divisions, they either retained old divisional designations, such as 1st Bde, 6th Infantry Division in Alaska, or have been referred to as a regiment, such as the 9th Infantry Regiment at Fort Lewis. In Italy, a new brigade formed there has only been referred to as the SETAF Infantry Brigade despite requesting an official designation.

This lack of understanding of the unique differences in separate brigades, compounded by their low overall prestige, has resulted in separate brigades being viewed as irrelevant.

Consequently, Regular Army separate brigades are no longer seen as a required element in the force mix. This has allowed creation of the 10 division force, but with seven out of 10 divisions having brigades 'separated' while not being properly configured to operate independently.

At the same time, the Army training and deployment focus has dropped to brigade level but without corresponding institutional support. Due to cost, brigades will be the largest echelon to train 'live'. Brigade headquarters and their combat teams will conduct rotations to NTC, JRTC, and CMTC. Equipment modernization, such as for the lead brigade of the 2d Armored Division for the Experimental Force (EXFOR), will be by brigade set. The Army has also enhanced its strategic mobility by the prepositioning of brigade sets around the world and afloat as previously mentioned. But concerns have been raised about our brigades ability to handle the current levels of complexity. Division commanders have indicated that while brigade commanders must have "about the same depth of technical competence (as) the division commander" we give them "the poorest doctrinal guidance" and "focus on brigade operations out at the NTC has identified weaknesses in brigade staffs and brigade commanders."<sup>147</sup>

Besides armor support to the Marines or Army Prepositioned Afloat, heavy brigades now must be ready to respond as rapidly as the Airborne Community. Both the 24th Infantry Division (Mech) and the 1st Cavalry Division maintain "Division Ready Brigades" that must be ready for deployment within 24 hours. These

brigades are configured as Brigade Combat Teams with full CS/CSS slice. The 24th Infantry Division has exercised this concept twice, first to Somalia in October 1993 and later in October 1994 to Kuwait. Heavy brigade combat teams have now become true 'fire brigades' with a worldwide range, but lack the structure or institutional focus to correspond with these demands.

The structure for a Force XXI brigade based organization presented in Chapter III was an attempt to apply the lessons learned from our rich operational history of employing combat units smaller than a division to the challenges offered by information age warfare. The fictional employment of the 3d Armored Brigade in the relief of Sarajevo in Chapter IV was designed to employ the unit in a complex operation involving several potential facets of future warfare. Not only may combat be non-linear, but also in less ideal terrain for heavy units than Iraq. Additionally, due to the expense of Force XXI units we should not anticipate their employment as divisions exclusively. While the Spearhead Brigade was perhaps unrealistically successful in my scenario, this resulted from numerous optimistic changes in equipment, training, and administration that I alluded to in addition to its revised organization.

In the present and future world of violence and uncertainty, no single divisional structure can be universally configured for the complete range of military operations from war to Operations Other Than War. Most NATO countries have abandoned the division as a fixed structure, and instead have shifted to nationally

standardized and self contained brigades with divisions and corps frequently being multi-national. In the next century, Force XXI will need independent combined arms units smaller than current divisions in order to achieve its goals of strategic mobility, modularity, and tailorability. These goals can be achieved by configuring as a minimum the seven 'separated' brigades in the active Army with the full capabilities of a Force XXI separate brigade as described above. Retaining divisional designations for functionally separate brigades is not new, but would require the entire Army to understand the concept. Alternatively, if separately designated brigades are again to be used, care must be given to provide them historic and morale building titles equally as significant as with divisions and ACRs. This may now be the time that Generals Meyer and Sullivan were awaiting; for the U.S. Army to "break free of old concepts" and to refocus on the brigade level in Force XXI restructuring or to develop a completely brigade based Force XXI Information Age Army.

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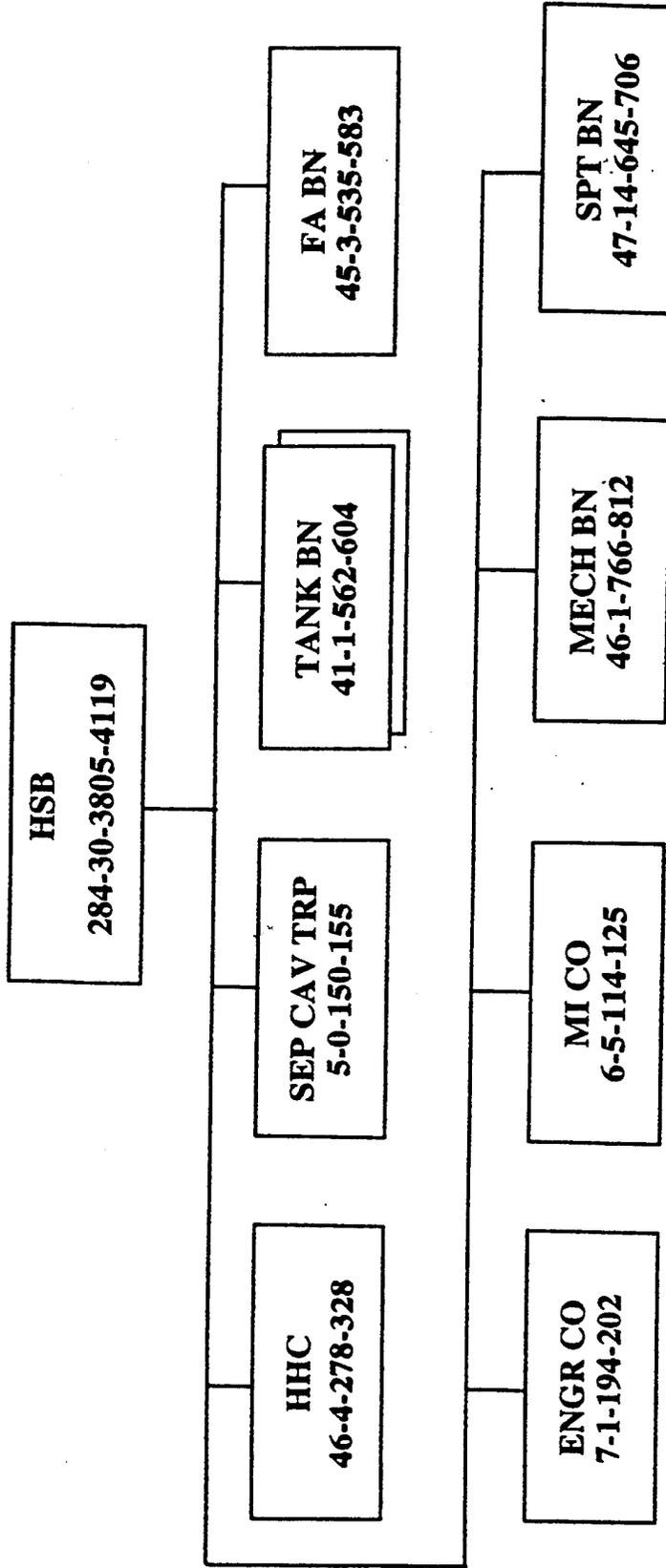
145. Systems discussed in this chapter are either projected to be fielded by the year 2005 or are possible to obtain by that year. Key references that I consulted for this information include: "Army Weaponry and Equipment," Army, vol 44, no 10, October, 1994; Report of the Secretary of Defense to the President and Congress, February 1995; and Weapon Systems, United States Army, 1994. Insights into Force XXI were primarily obtained from "Force XXI: A Concept for the Evolution of Full-Dimensional Operations for the Strategic Army of the Early Twenty-First Century," TRADOC Pam 525-5, August 1994, and "Tactics, Techniques, and Procedures for the Digitized Brigade," ST71-3, February 1995.

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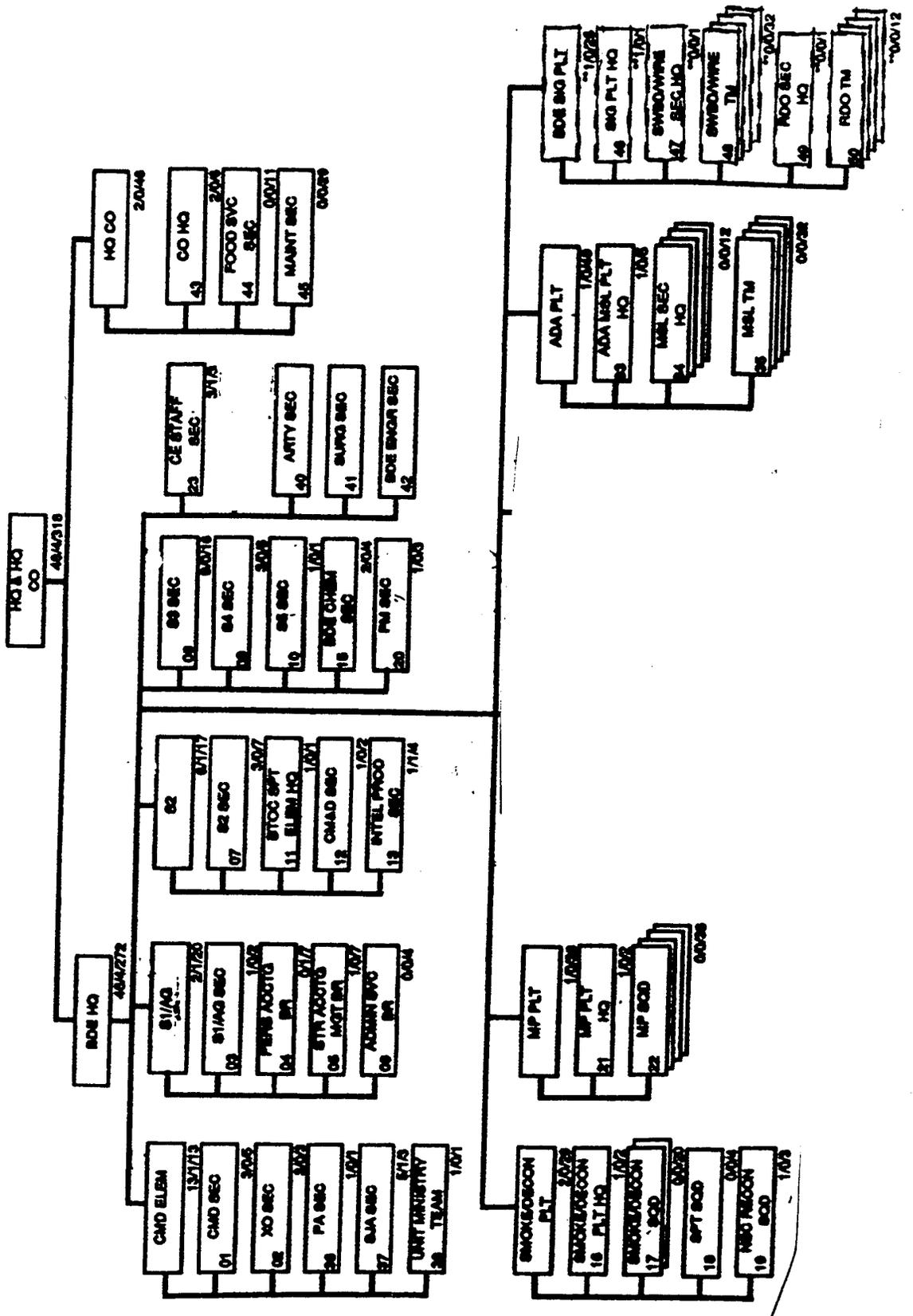
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# CHART I

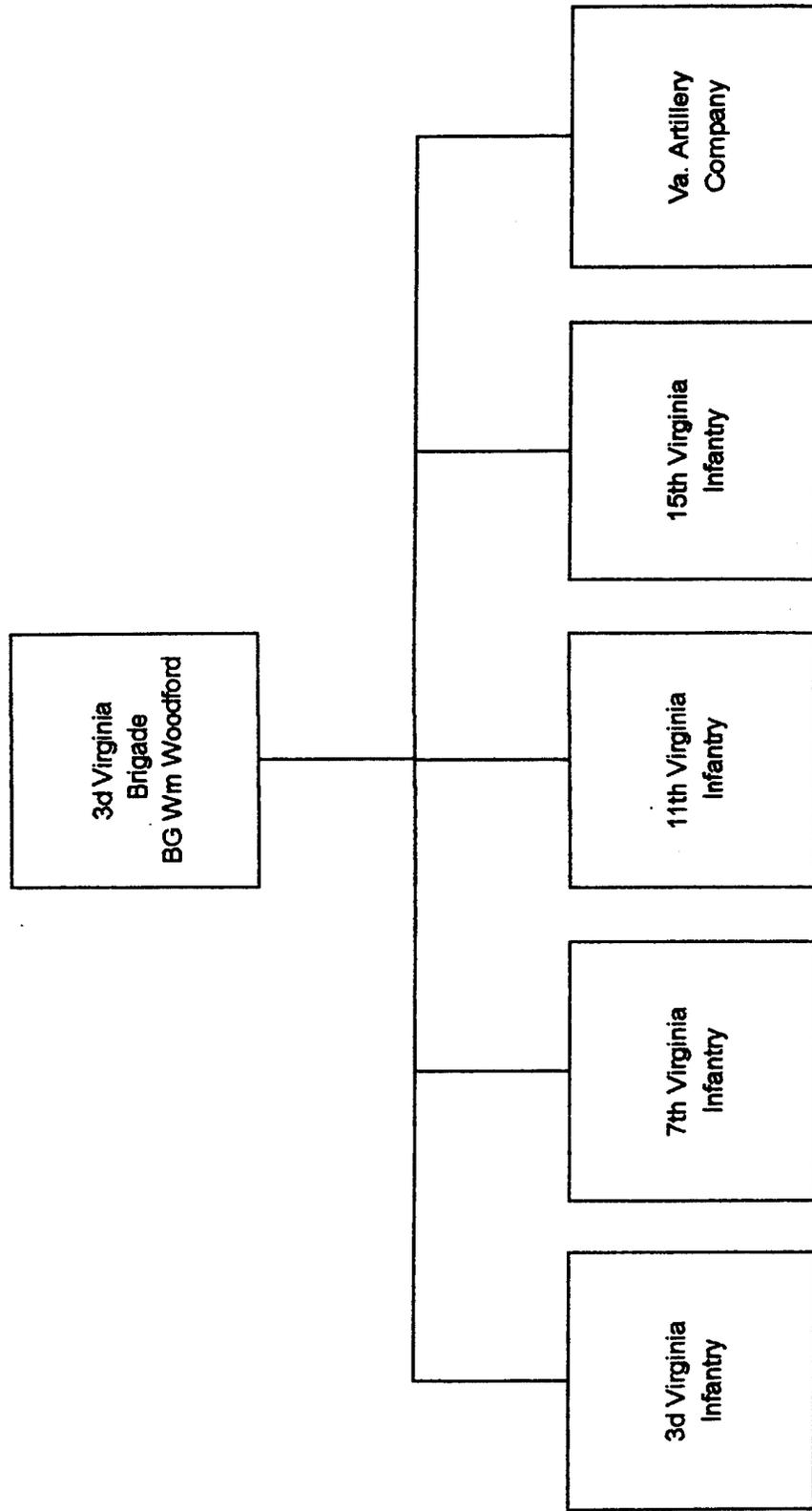
## HEAVY SEPARATE BRIGADE



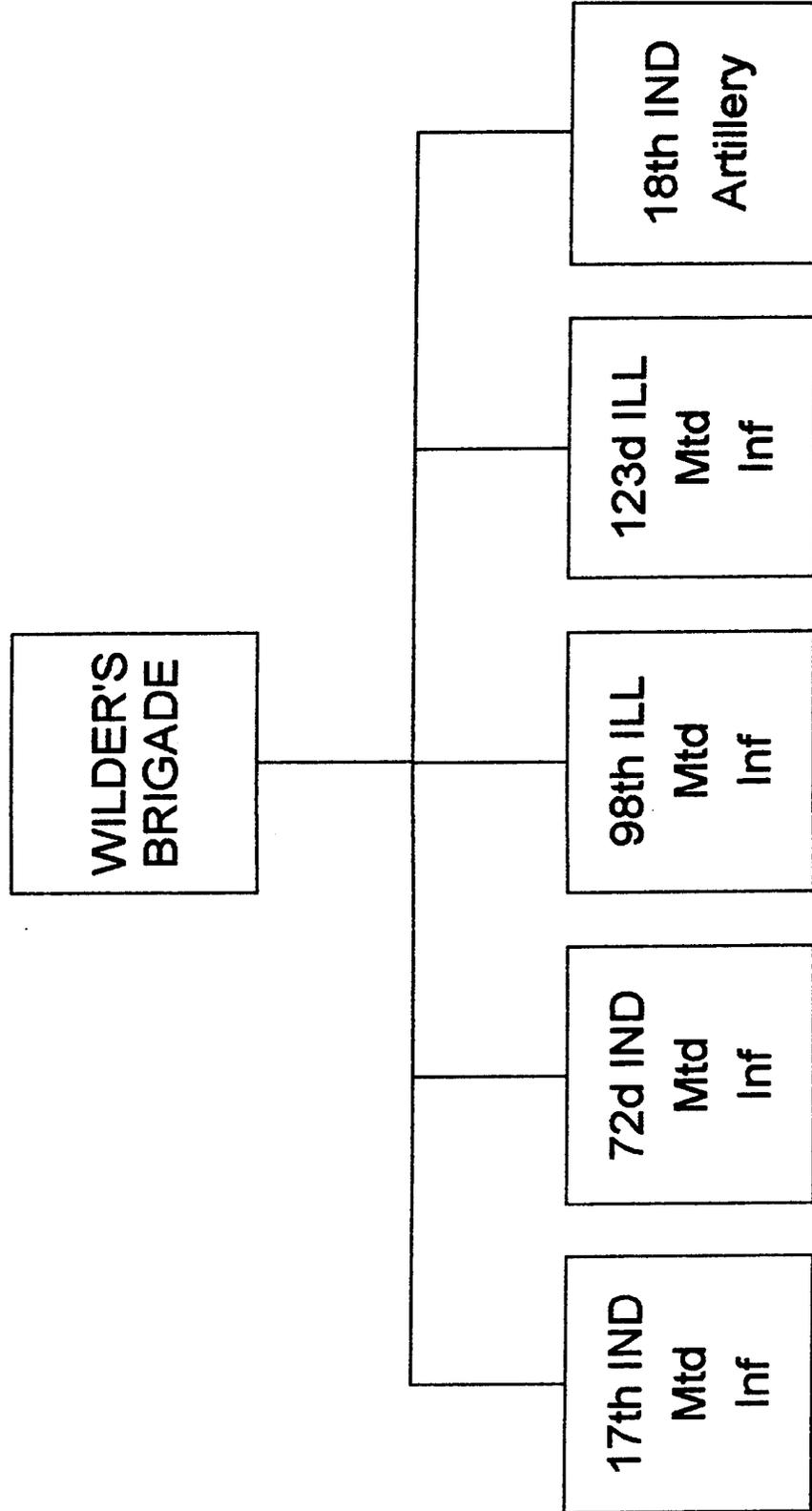
# CHART II



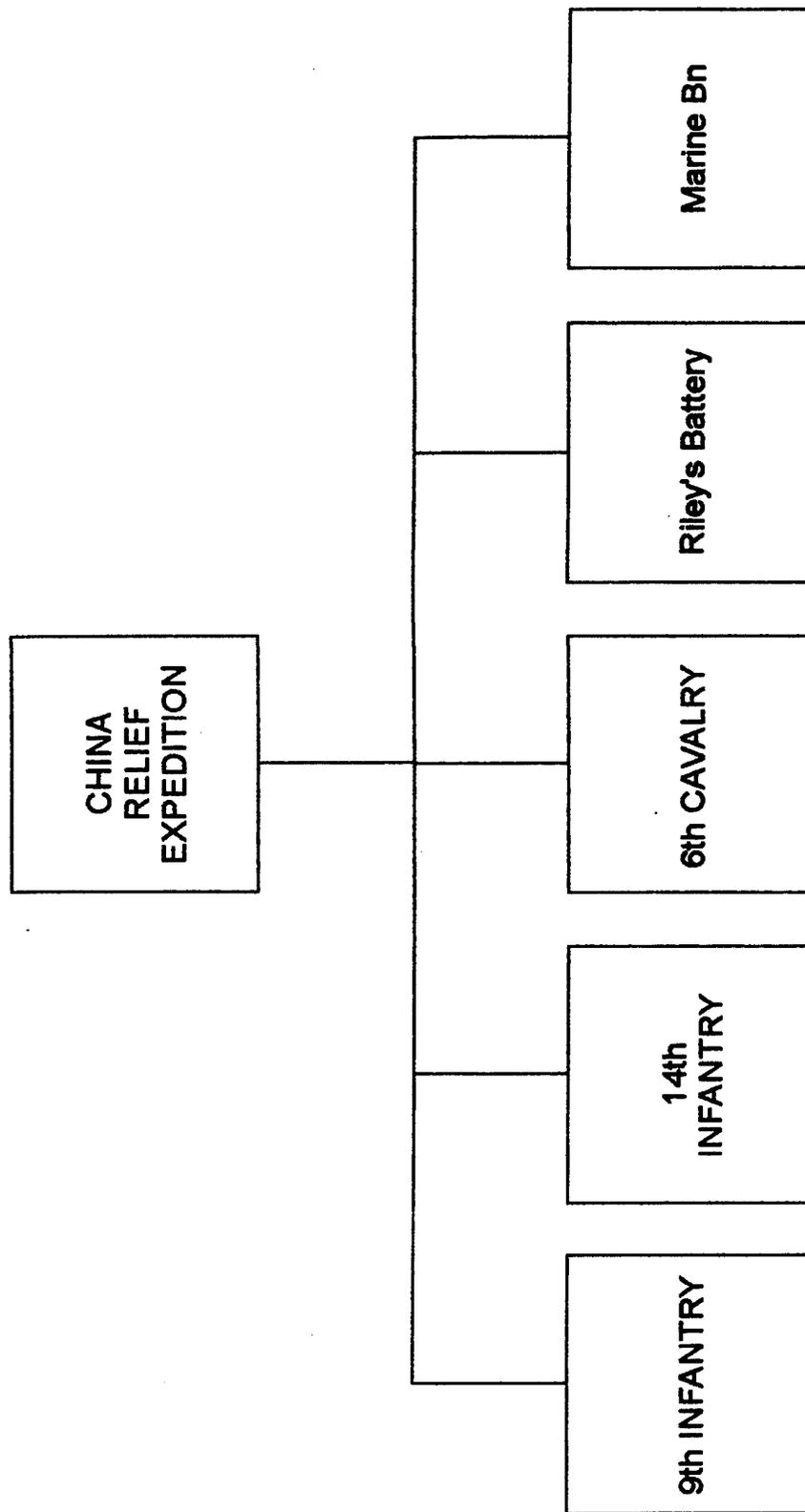
# CHART III



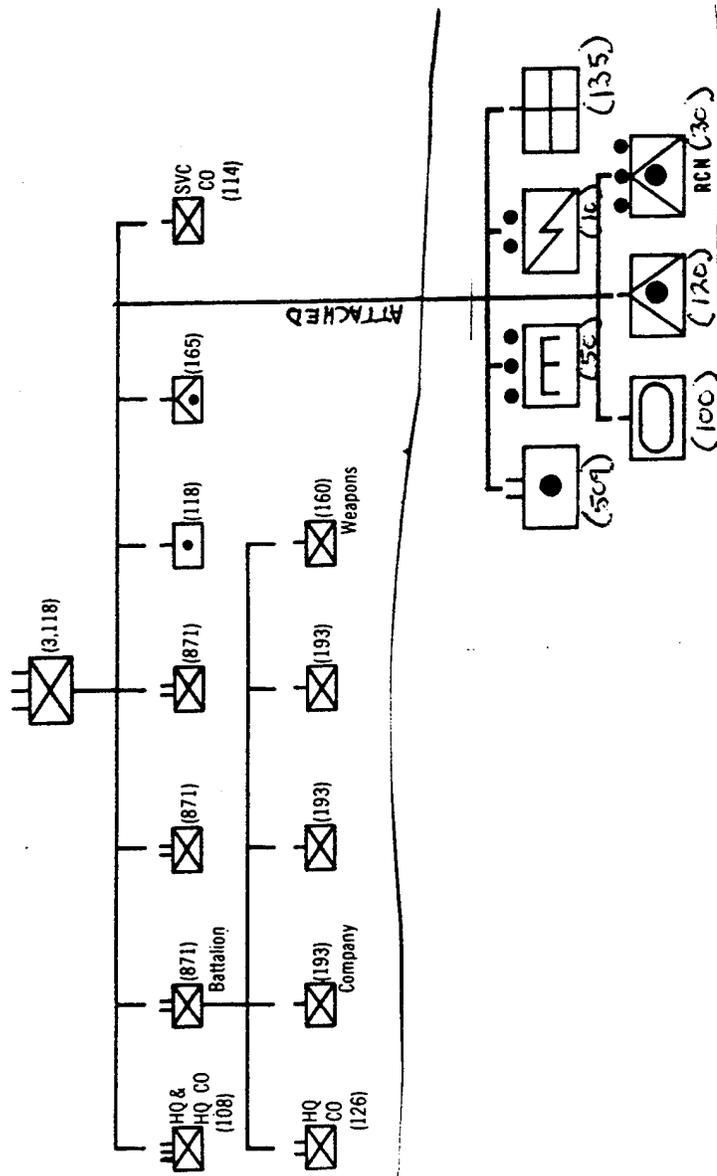
# CHART IV



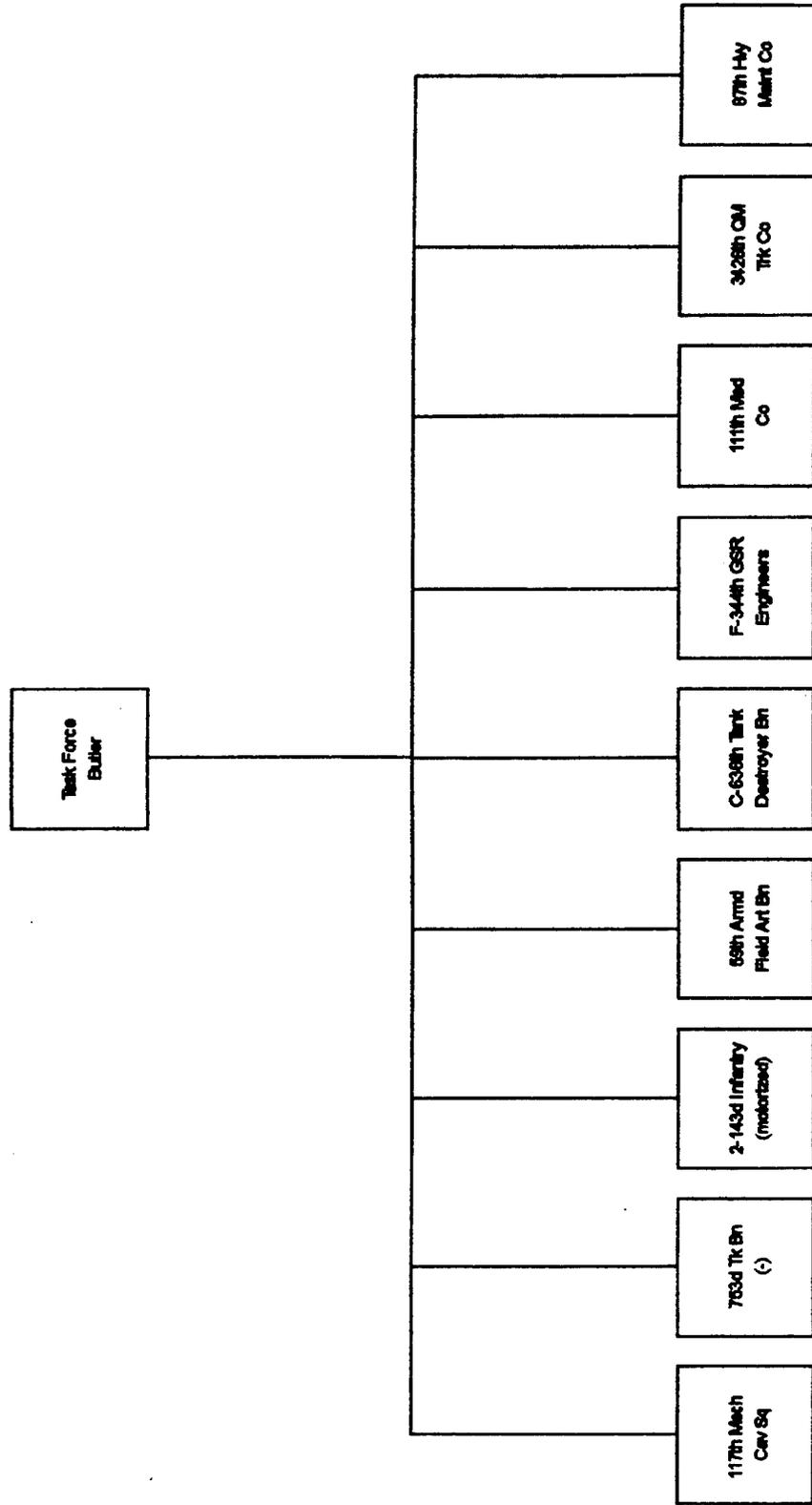
# CHART V



# CHART VI REGIMENTAL COMBAT TEAM

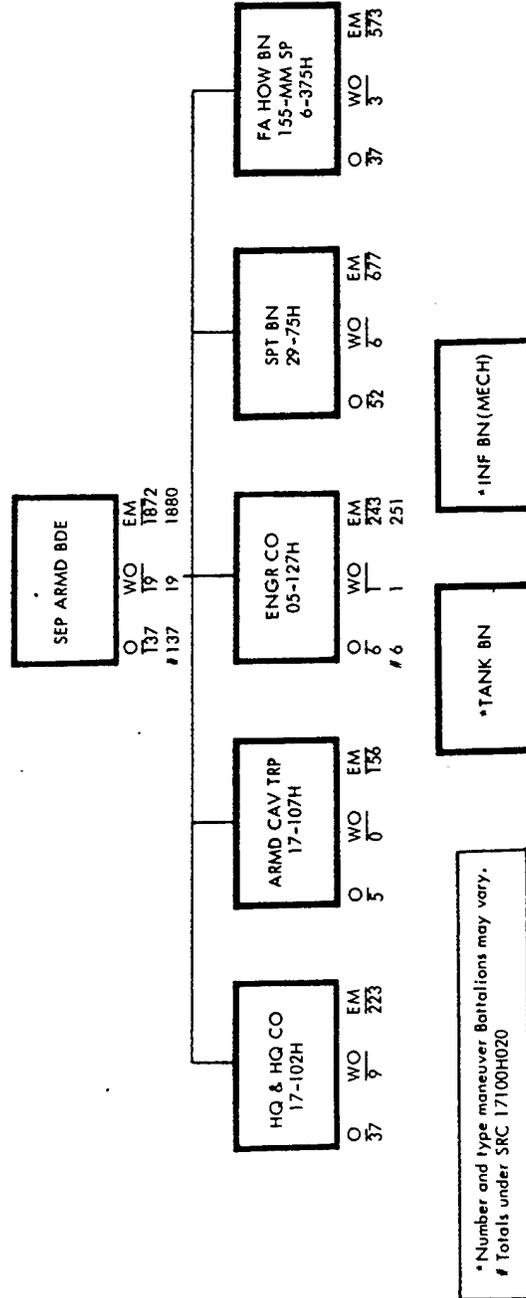


# CHART VII



# CHART VIII

TOE 17-100H SEPARATE ARMORED BRIGADE  
30 NOV 70

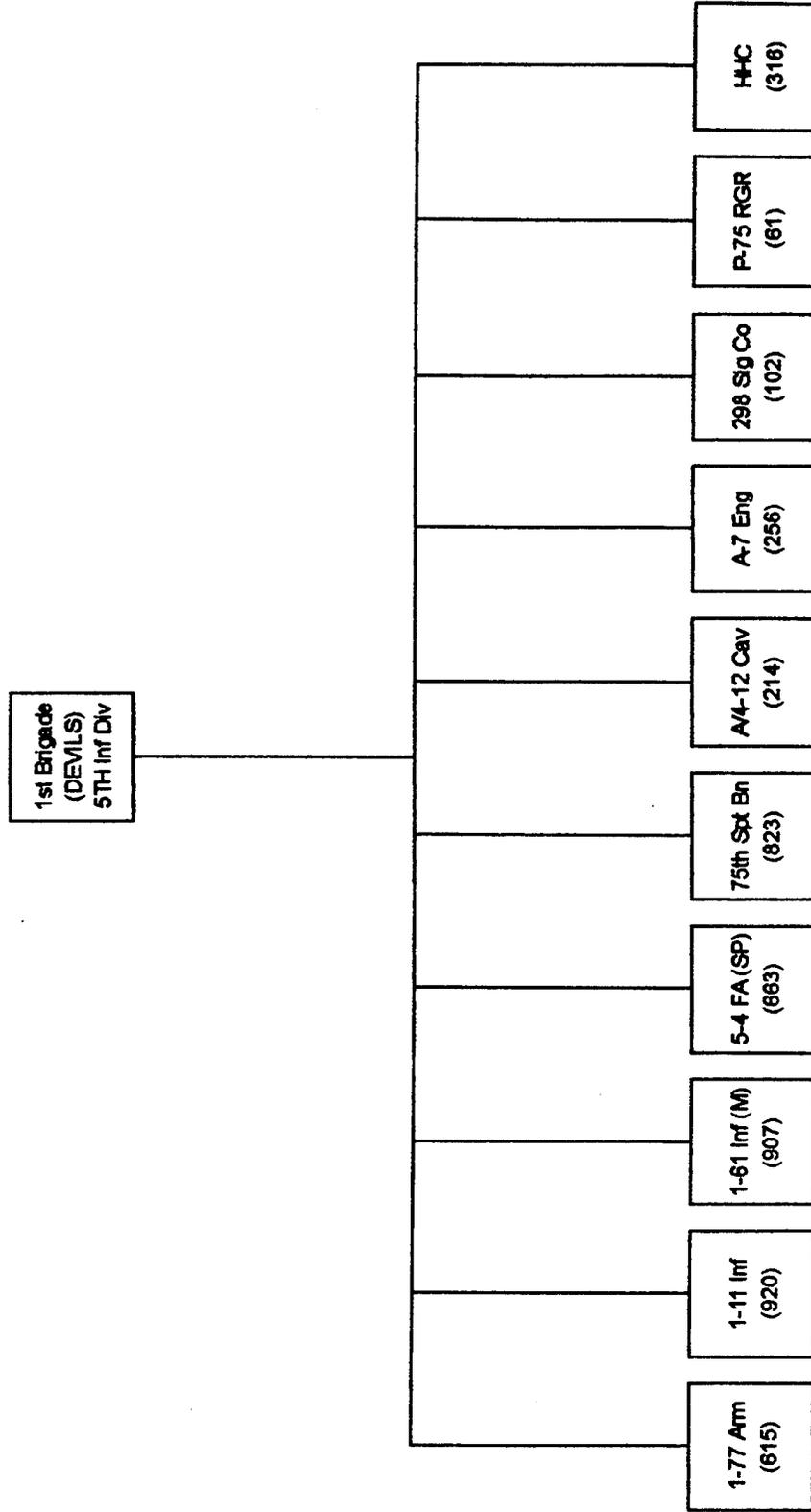


- MISSION:** To destroy enemy military forces and to control land areas including populations and resources.
- ASSIGNMENT:** As determined by Department of the Army and Theater Commanders.
- CAPABILITIES:**
  - Conducts independent offensive and defensive operations in nuclear and nonnuclear warfare.

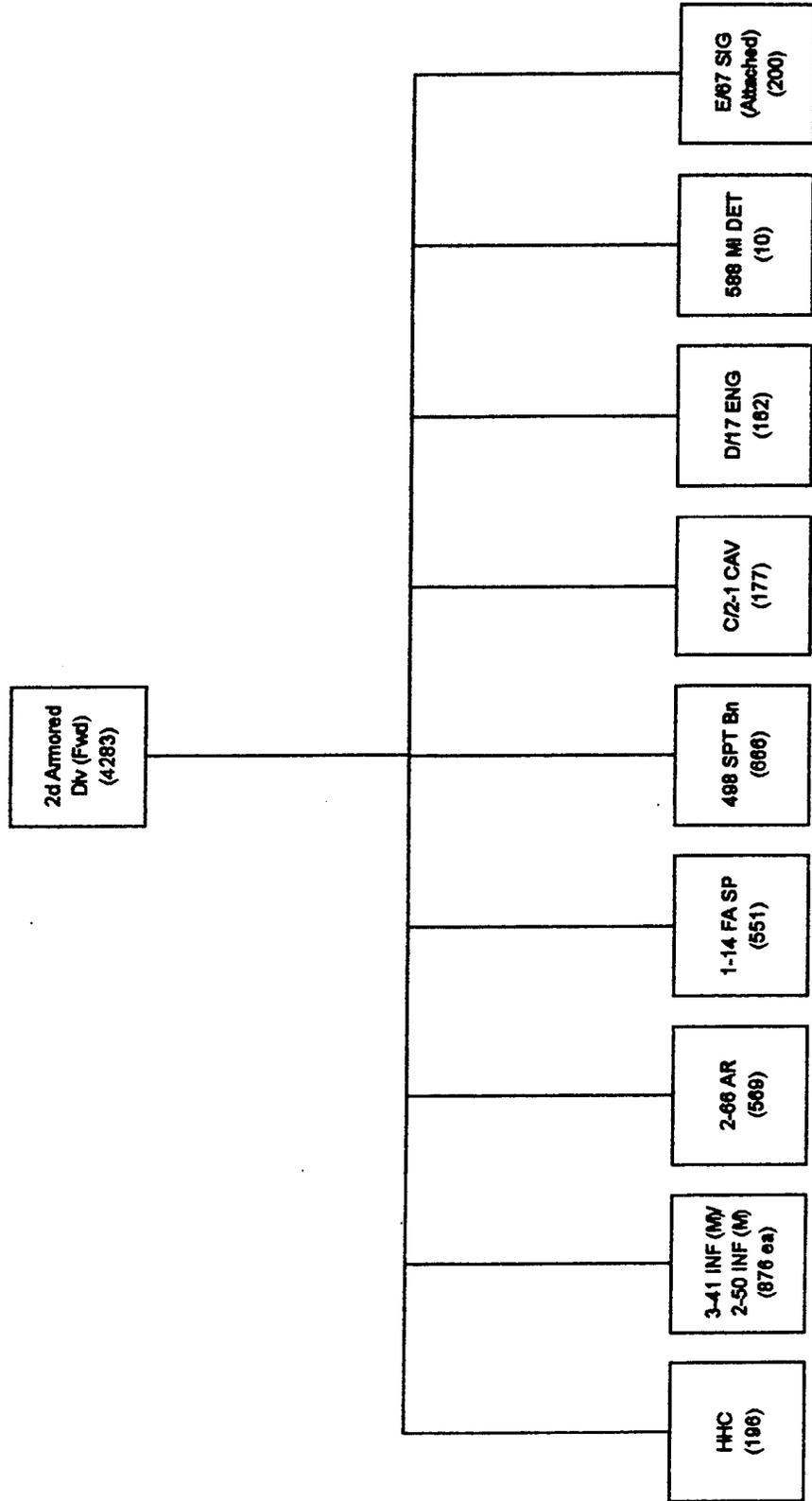
- Conducts sustained combat operations against any type of opposing ground forces in areas where a military force of less than a division size is required, or as part of a larger force.
- Conducts mobile offensive operations characterized by rapid movement and wide dispersal to include deep penetration, exploitation, and pursuit.
- Conducts operations requiring armor shielding against small arms, tanks, artillery and nuclear fires.

- As part of a larger force performs covering force operations and/or acts as a mobile counterattack force.
- Operates as a part of a joint amphibious force.
- Controls enemy populations and restores order.
- May be attached to and operated as part of a Division.
- MOBILITY:** For mobility of the components of this Brigade. See Section I, General, of each applicable TOE.

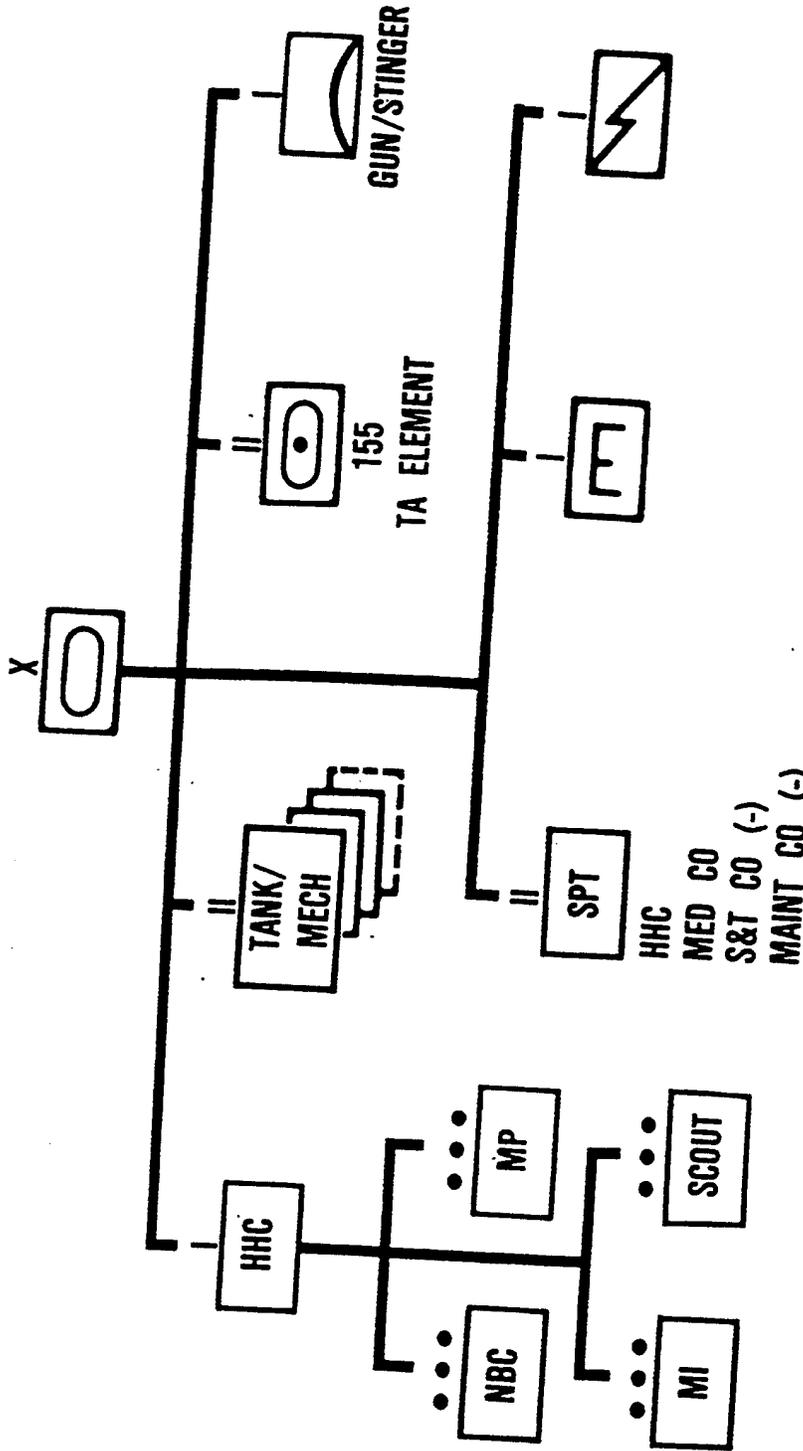
# CHART IX



# CHART X

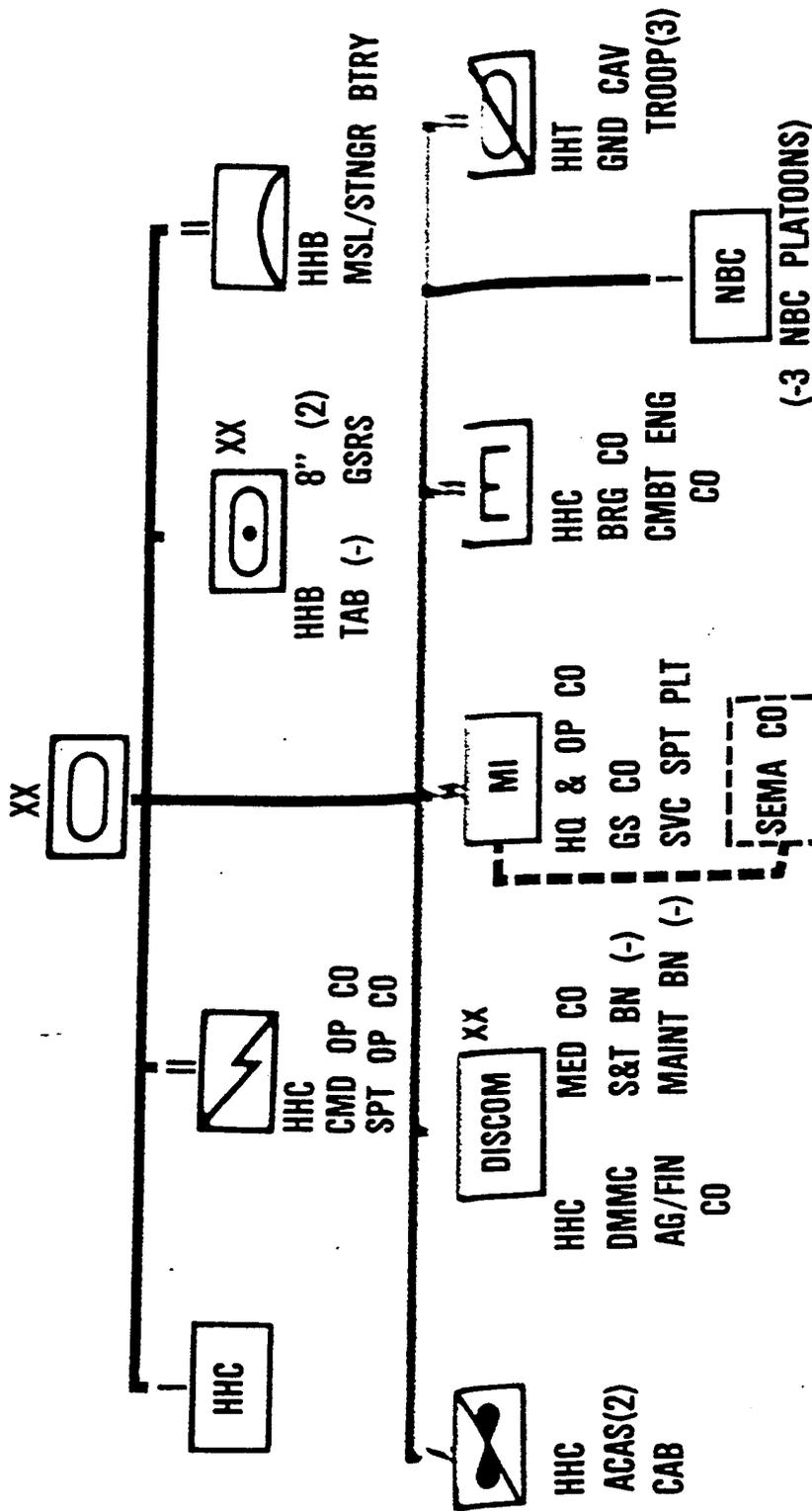


# CHART 11 - FIXED BRIGADE



SOURCE: BRIEFING PRESENTED AT DIVISION 86 GENERAL OFFICERS WORKSHOP III,  
 22-23 AUG 79, ORGANIZATIONAL IMPACT OF TASK FORCE SPECIAL STUDIES.

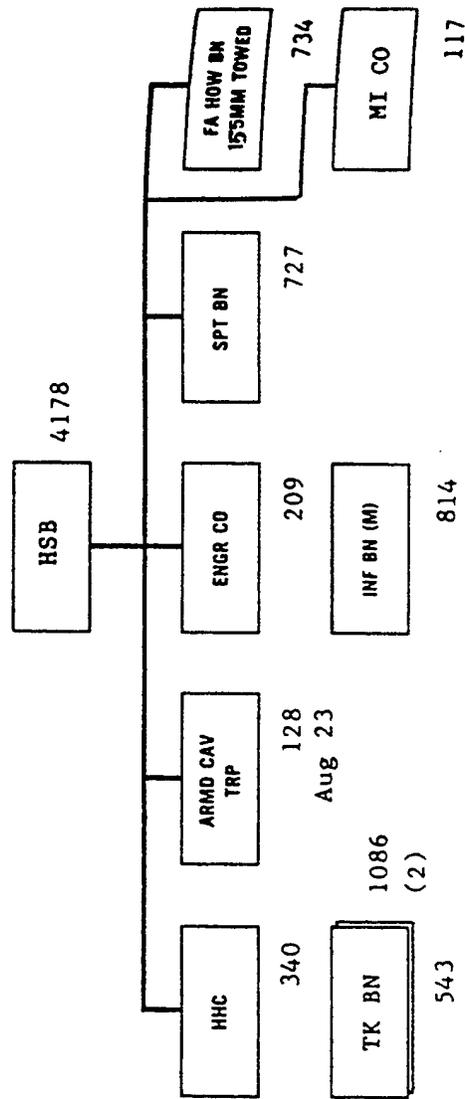
# CHART 12 - FIXED BRIGADE - DIVISION BASE



SOURCE: BRIEFING PRESENTED AT DIVISION '86 GENERAL OFFICERS WORKSHOP III, 22-23 AUG 79, ORGANIZATIONAL IMPACT OF TASK FORCE SPECIAL STUDIES.

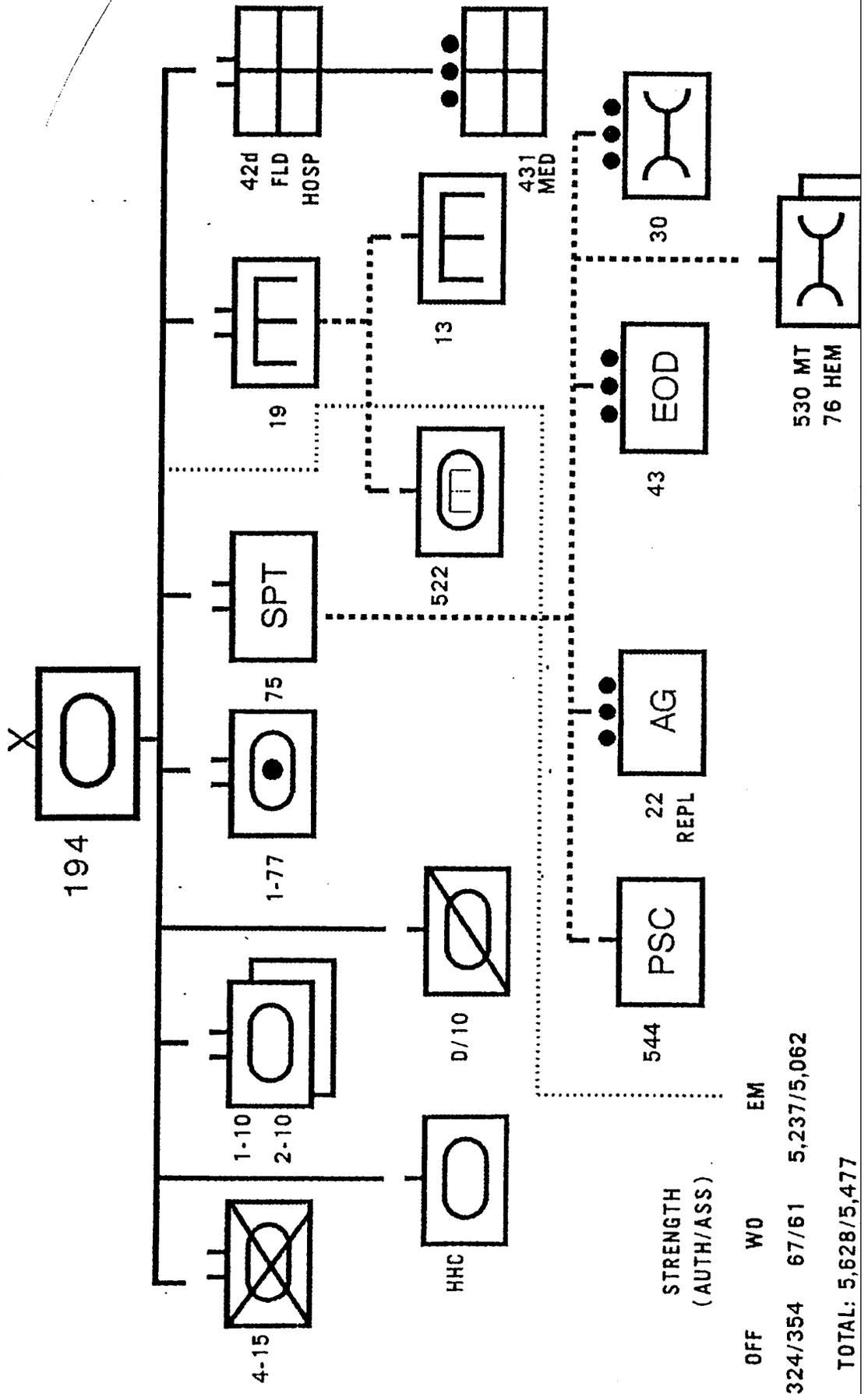
# CHART XIII

## AOE HEAVY SEPARATE BRIGADE 1986



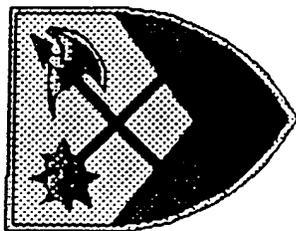
Source: TOE 87100L300, Heavy Separate Brigade, Armor Version,  
1 Oct 86.

# CHART XIV

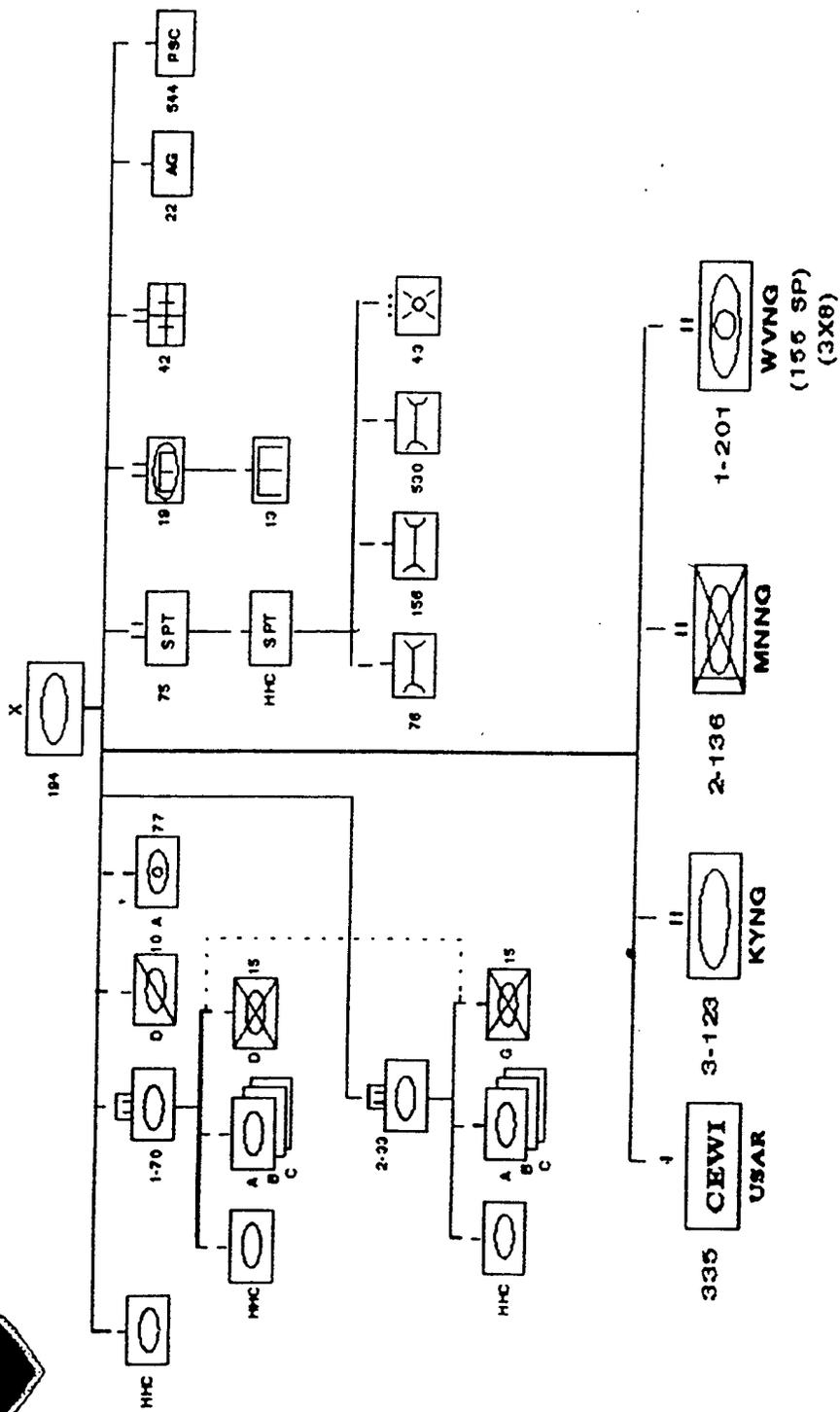




# CHART XVI



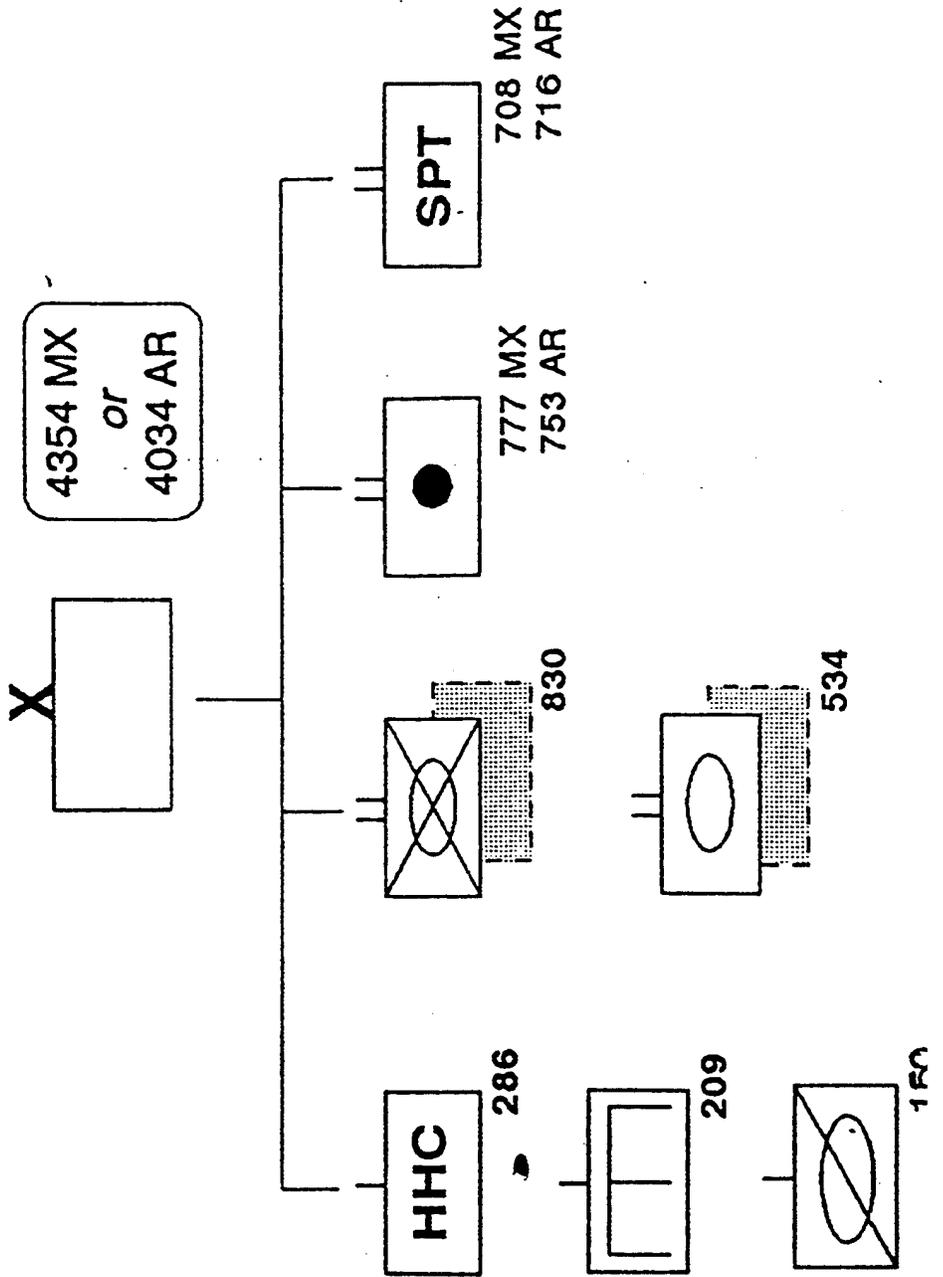
# BRIGADE STRUCTURE



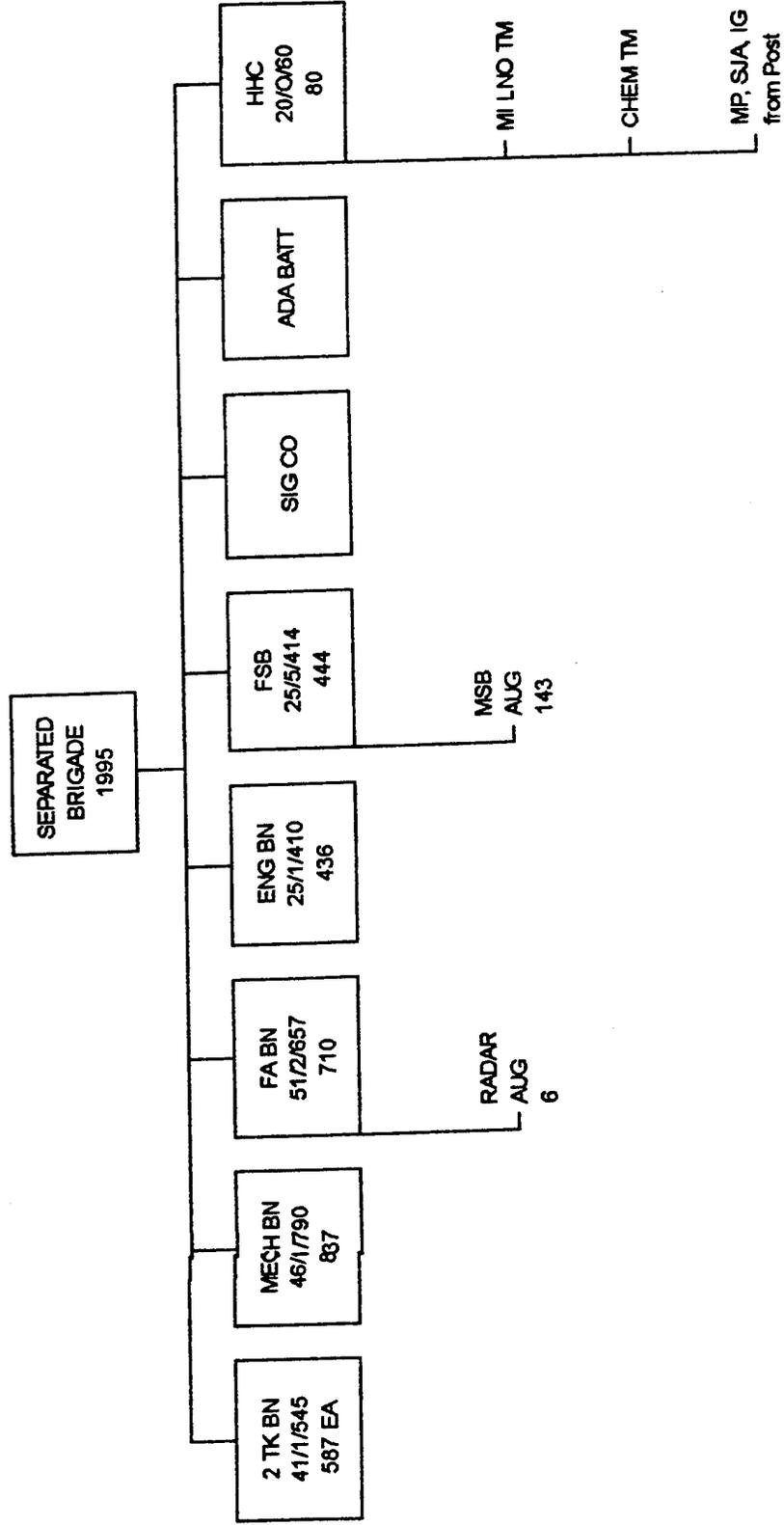
# CHART XVII

## ENHANCED

### HEAVY BRIGADE



# CHART XVIII



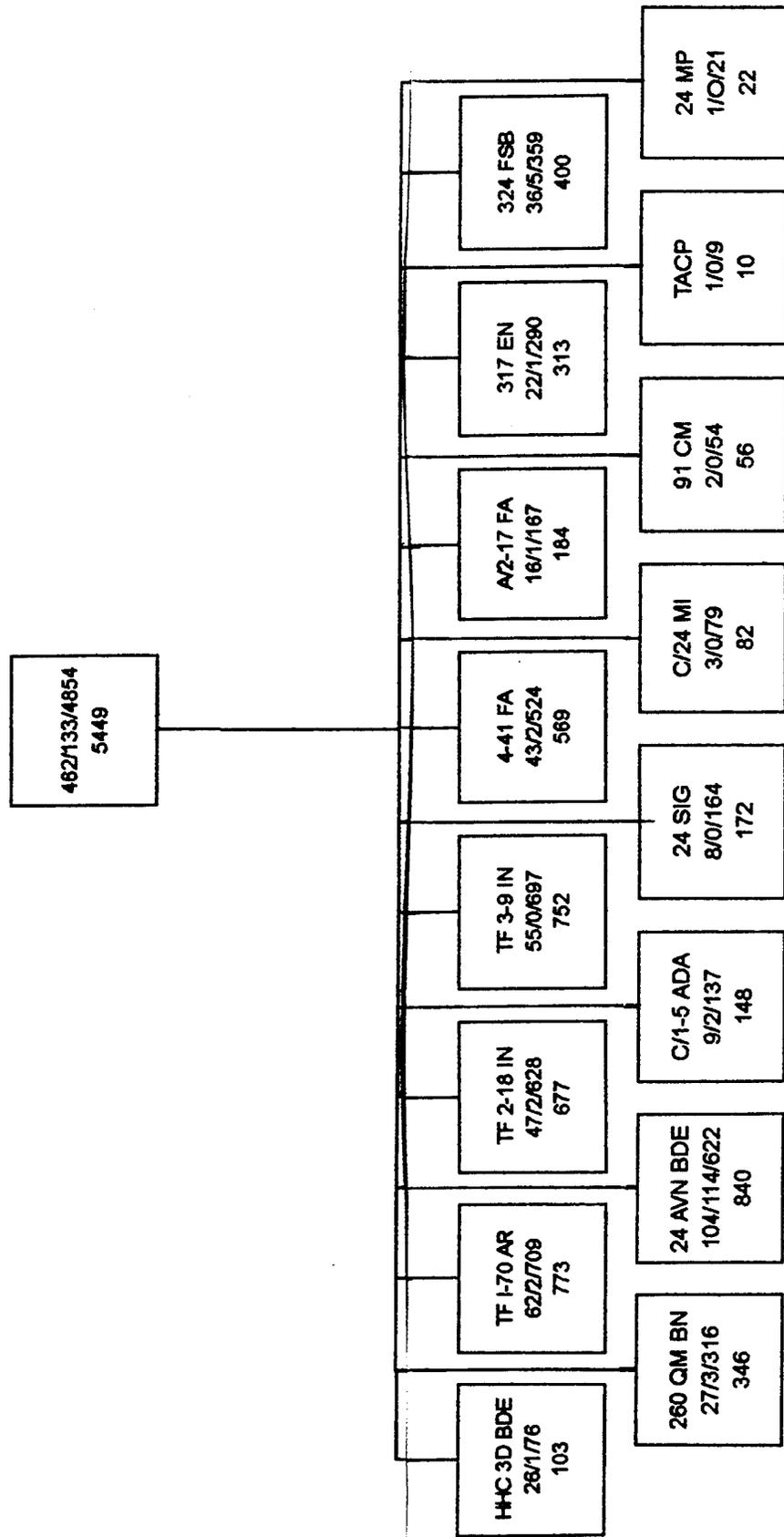
# CHART XIX

## NTC MODEL BDE

HHC BDE	91
INFANTRY BN (MECH)	828
ARMOR BN	544
ARTILLERY BN	666
MET SEC	7
Q36 RDR	8
FSB	426
MSB AUG	245
ADA BATT	143
EN BN (-)	330
MI CO TM	101
MP PLT (DS)	21
CHEM CO (-)	63
SIG CO (MSE)	155
ALO/SWO (USAF)	18
AVIATION TF	451
LT INF TF	817
TOTAL	4914

# CHART XX

## 3d BDE, 24th DIV

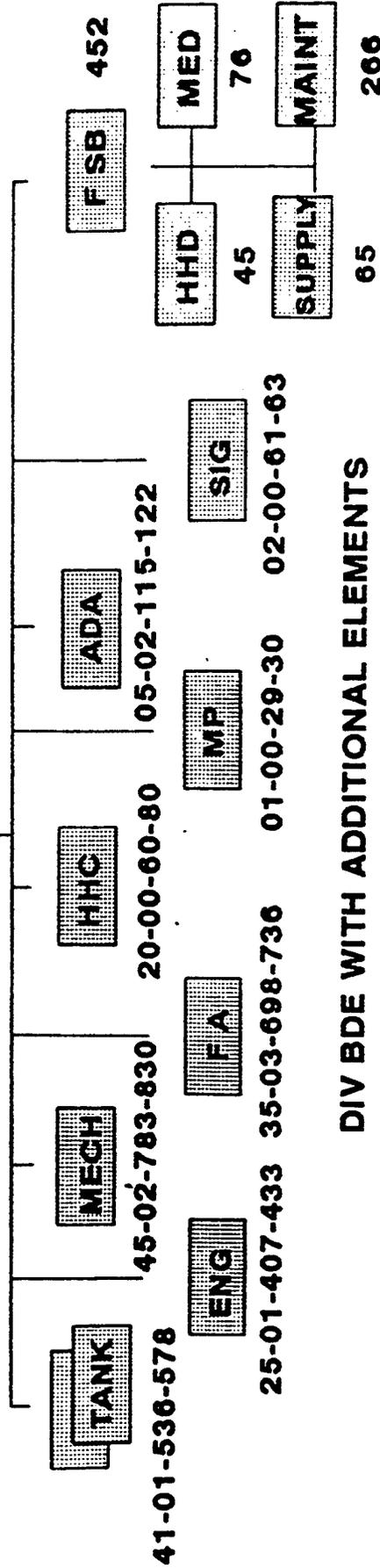
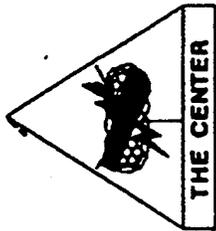


# CHART XXI

## ARMY ARMOR SUPPORT TO THE USMC

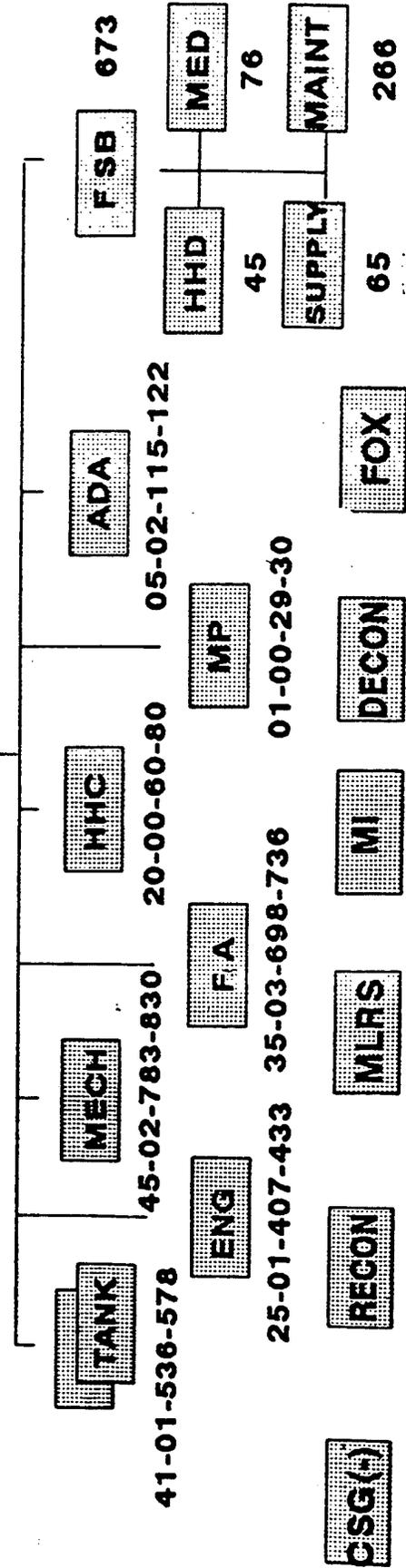
DIVISIONAL BRIGADE ORGANIZATION

215-10-3225-3902



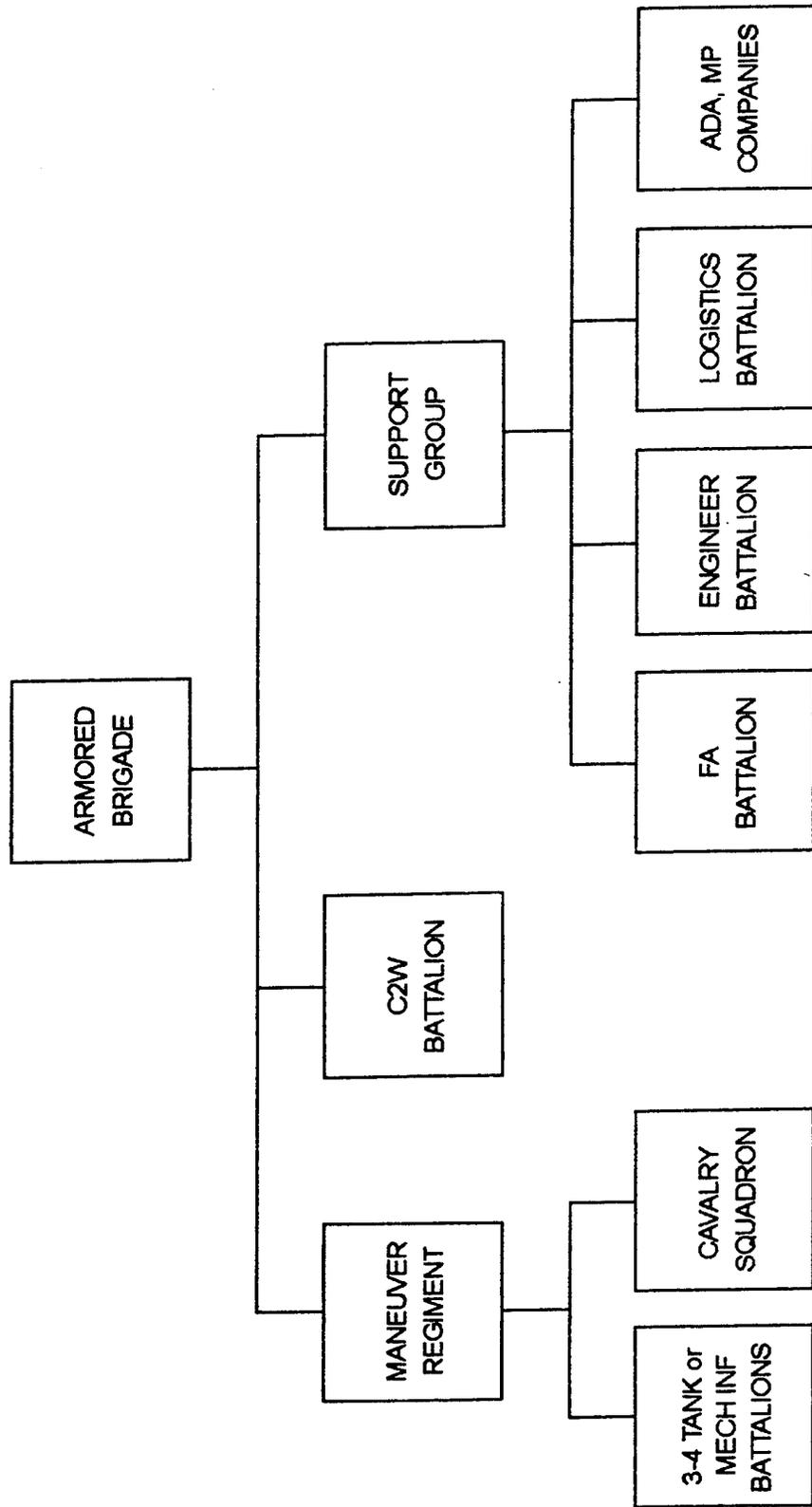
DIV BDE WITH ADDITIONAL ELEMENTS

237-10-3516-4903

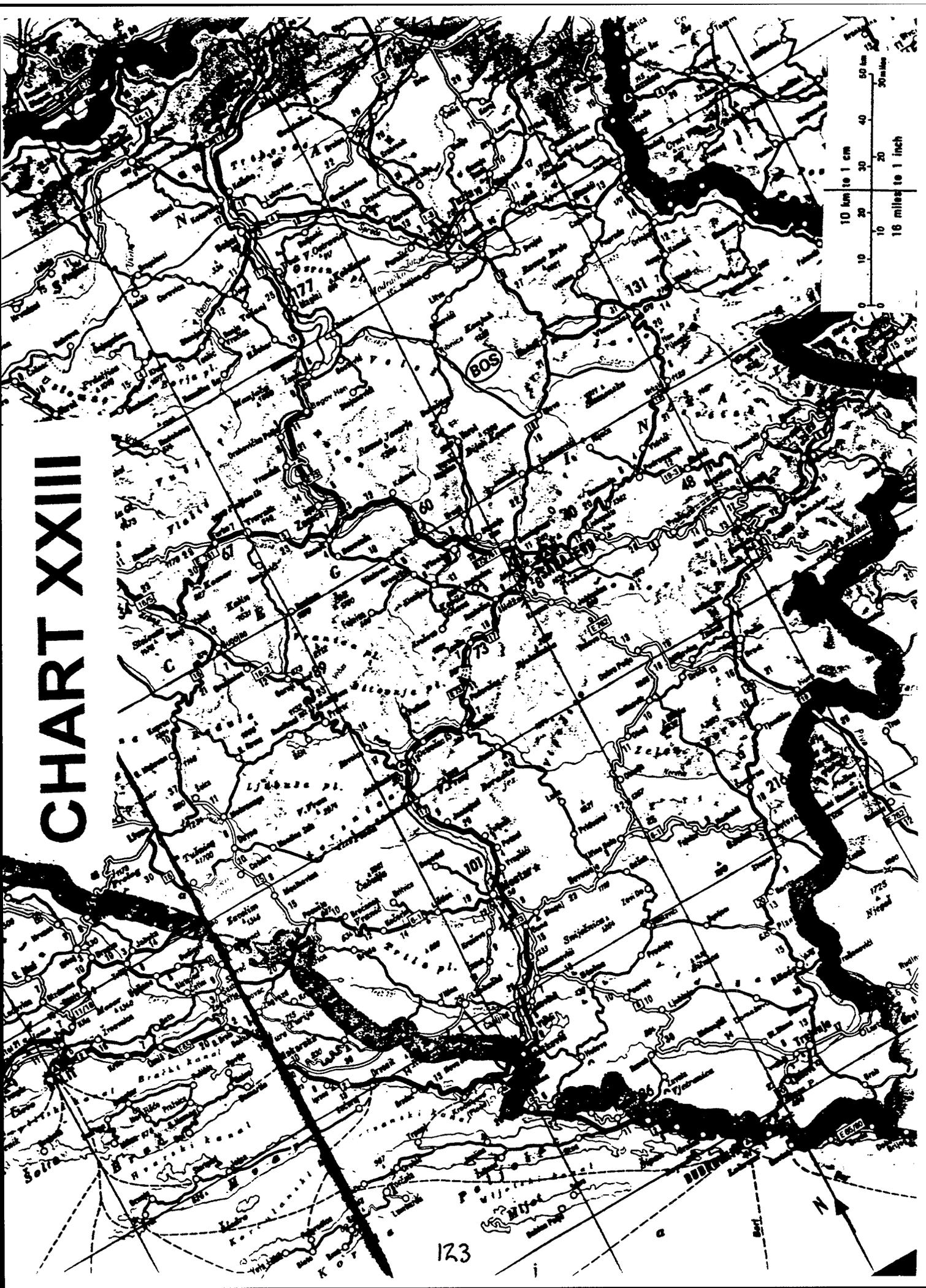


467 06-00-125-131 06-00-112-118 00-00-13 01-00-19-20 00-00-08-08

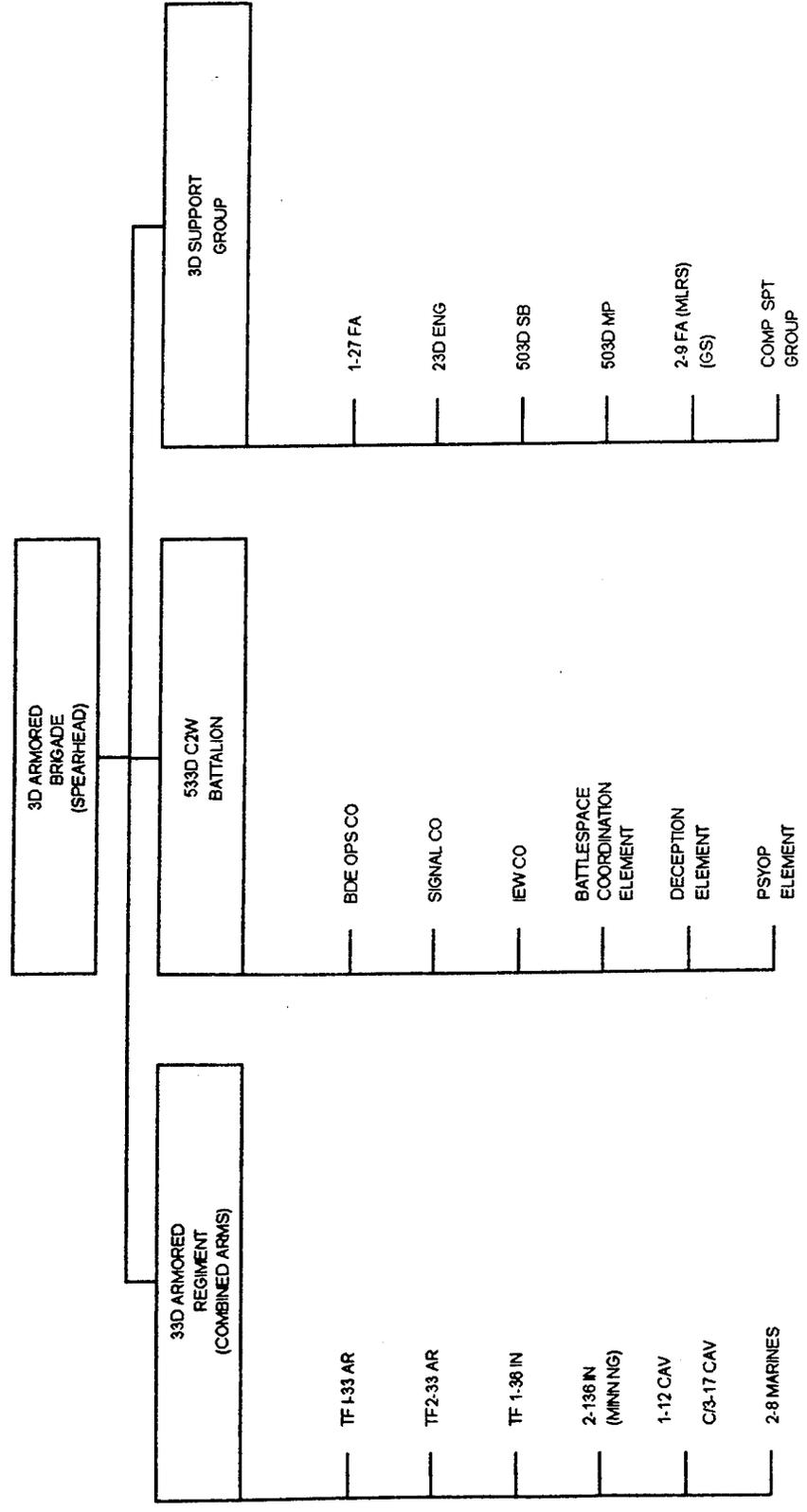
# CHART XXII PROPOSED FORCE XXI



# CHART XXIII



# CHART XXIV



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