THE HIGH TECHNOLOGY TEST BED

and

THE HIGH TECHNOLOGY LIGHT DIVISION

Inception Through 30 September 1983

by

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FORWARD

This monograph is intended to capture the concept behind the organization now known as the Army Development and Employment Agency (ADEA). Further, it outlines the successes and disappointments that surrounded the formation of what was ADEA's predecessor, the High Technology Test Bed (HTTB). By its very nature, cutting across command lines and violating and circumventing policies, the concept was controversial and the organization suspect. The result was an organ that was both brilliant and painful.

Until HTTB became ADEA, in 1983, its focus was primarily on the High Technology Light Division initiated as a part of the Army '86 studies. This resulted in the development of the Army's only motorized division, and was a peripheral part of the continuum which resulted in today's light infantry divisions. Today, ADEA's mission is Army-wide.

The author is indebted to a succession of military and civilian members of the HTTB/ADEA command and staff for the privilege of screening their files annually. The richest sources, however, were the participants who submitted themselves to oral history interviews. Their candor has allowed the organizational efforts and miscalculations to show, from which we learn our greatest lessons.

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TABLE OF CONTENTS

BOOK 2

THE HIGH TECHNOLOGY LIGHT DIVISION

CHARTS

PROLOG

> To my mind, we professional soldiers are traditionally laggard in facing and adopting changes, especially radical changes that upset proven methods and the ways in which we have been doing things for years past.
>
> James M. Gavin
> Airborne Warfare, 1947

On the 19th of June, 1980, the Commander of the 9th Infantry Division received a telephone call informing him that he was to form a High Technology Test Bed at Fort Lewis, Washington, and that his division was to be the vehicle by which the Army developed a new light division. This directive was largely the product of the mind of one man. General Edward C. Meyer, Chief of staff of the Army from June 1979 until June 1983, had developed strong feelings about light forces over a period of years.[1]

While serving as Assistant Commandant at the Army War College in 1972-73, then Brigadier General Meyer had received a call from General Creighton W. Abrams, who was Chief of Staff of the Army at the time. General Abrams, upon withdrawal of the U.S. from Vietnam, was faced with justifying the existence of a standing army to a disillusioned nation. His question to General Meyer, and doubtless to others, was in essence, "In fifty words or less, why do we need an army?" The conclusions drawn from the answers to that question were to provide the direction of the U.S. Army for the next six years: "We need an army to face the Russians in Central Europe." Heavy, tank-killing forces were to be the focus.

General Meyer left the War College to assume several positions in Germany. During the same time period, the newly-formed Training and Doctrine Command (TRADOC) was evolving doctrine and training policy to support overseas commands. General Meyer, as a Plans and Operations Officer in Heidelberg, and later as Commander of the 3rd Infantry Division, was peripherally involved with that doctrine development.

As this heavy force evolved in Europe, General Meyer became convinced that it was overstated. It made no sense to put tanks in stationary positions while on the defense. Expanding urban sprawl and a growing infrastructure of roads, dikes and canals all limited the ability of armored and mechanized forces to move freely. Light forces would

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[1]Except where otherwise noted, this section is based on: Interview, author with General (Ret) Edward C. Meyer, 13 Jun 84. (Hereinafter: Meyer Interview, 13 Jun 84.)

be more efficient in the forests, towns and cities. They could fix the enemy while the armored and mechanized forces took advantage of their mobility to maneuver. General Meyer became convinced the Army needed a more balanced mix of light and heavy forces.

General Meyer returned to the U.S. to become the Assistant Deputy Chief of Staff for Operations at Department of the Army. He found the office of the Secretary of Defense using a method called Weapon Effectiveness Indices/Weighted Unit Values III for estimating static measures of force potential. This method used weapons' characteristics to estimate performance, which in turn was used to calculate firepower, mobility and survivability scores. The result was that all units were measured against armored division equivalents. The thrust from the Office of the Secretary was clearly to have more and more heavy armored and mechanized divisions. The 5th Infantry Division at Fort Polk, Louisiana was mechanized, as was the 4th at Fort Carson, Colorado. All divisions were to be made heavy, and the only need for an army was in Central Europe.[2]

While in the position of Assistant Deputy Chief of Staff for Operations, General Meyer became familiar with two studies dealing with future needs of the Army. One had been compiled by the Army Concepts and Analysis Agency, the other by the Strategic Studies Institute. Using different methodologies, the two studies reached the same conclusion: By the mid-1980's, the need for light, quickly deployable forces was going to equal the need for heavy forces.

General Meyer became dedicated to halting the trend toward heavy forces. He believed that the only place in the world where the American people would tolerate an extended, all-out war was in Europe. For conflicts in Central America, Africa, the Middle East, and the rest of the world, the U.S. needed powerful, highly mobile forces that could deploy, win quickly and be extracted. No heavy force would be able to reach the conflict in time.

General Meyer became Chief of Staff of the Army in June 1979. The Army was in the midst of a number of force structure actions.

For nearly a year, the Army Training and Doctrine Command (TRADOC) had been developing Division 86, an armored division which was to optimize the new equipment programmed to enter the force by 1986, and to execute the emerging AirLand Battle operational concept. A follow-on to Division 86, as part of the Army 86 studies, was to be the development

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[2]Memo, Concepts and Analysis Agency for Assistant Director Requirements and Resources Directorate, 7 October 1982, sub: Analysis of Force Potential.

of three types of light divisions--infantry, airborne and air assault. Infantry Division 86 was to come first, and was to be a complementary companion to Division 86. The light division study was announced at a Division 86 workshop, on 22-23 August 1979. Mention was made at this workshop that the 9th Infantry Division at Fort Lewis, Washington, might serve in an as-yet unspecified way as an organizational model for the effort. Work began in the Combined Arms Center (CAC) at Fort Leavenworth, Kansas, on 5 October.[3]

Meanwhile, General Meyer was faced with presenting and defending the 1980 Army Program to the Secretary of Defense, Dr. Harold Brown. Knowing that the Office of the Secretary of Defense (OSD) had every intention to mechanize the 9th Infantry Division at Fort Lewis, General Meyer went into the meeting armed with all the reasons why the 9th should not be converted. As he argued his case before the Secretary and his staff, General Meyer sensed that he was losing. The final decision was about to be made to "heavy-up" the 9th. On the spur of the moment, General Meyer proposed to Secretary Brown that instead, he could give the 9th many of the characteristics of a heavy division through the infusion of high, or emerging, technology. It would remain light in the sense of strategic deployability. General Meyer had toyed with the idea of strengthening forces by the use of technology, but had never seriously studied the issue. Apparently the idea appealed to Secretary Brown, for he agreed to it. General Meyer and his staff began work on how to implement this infusion of technology.

The soundness of the Secretaries' decision was quickly reinforced. In November 1979 the Iranians took a number of Americans hostage, and in December, the Soviets invaded Afghanistan. Both actions presented a potential need for strategic quick-reaction forces.

Fort Lewis and the 9th were selected as the site of the effort not solely because the 9th happened to be next on the OSD list to be heavied up. The 9th was selected because it had previously had two commanders whom General Meyer knew had focused on light infantry tactics, Major Generals Volney F. Warner and Richard E. Cavazos. General Cavazos, in fact, was still in command, and would be until January 1980. In the fall of 1979, the 9th was as well, if not better, oriented to light infantry as any division in the Army.

A second factor in General Meyer's decision was strategic location. Fort Lewis is roughly equidistant from Europe and Asia.

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[3]John L. Romjue, A History of Army 86, 2 vols, (Fort Monroe, VA: TRADOC Historical Office, 1982), 2:26-27.

Third, General Meyer intended to put a corps headquarters at Fort Lewis as quickly as he was able. This would relieve the 9th Division Commander of responsibility for managing the installation.[4]

Finally, the climate and geography of Fort Lewis and its huge subinstallation, Yakima Firing Center, were unique in their variety. Yakima was high, semi-desert terrain, similar to the Middle East. Fort Lewis had a climate and vegetation similar to Germany. Puget Sound and the Cascade Mountains offered the opportunity for amphibious, mountain and cold weather training.

General Meyer's other possible choices were the 82nd Airborne Division and the 101st Airborne Division (Air Assault), both of which were quickly eliminated because of their unique capabilities. That left the 25th Infantry Division in Hawaii, the 7th at Fort Ord, and the 9th. The 25th was also quickly eliminated because of distance and command arrangements. Between the 7th and the 9th, the 9th was the obvious choice for the reasons stated above.

General Meyer and his staff also wrestled with some very basic questions about the parameters of design that would be established for the new division. If Meyer had been unconstrained, he would have preferred to have designed a very light unit. However, to satisfy his commitment to OSD, he had to ensure that the division would have utility on the European battlefield. This meant the unit had to have a significant tank-killing capability. As time went on, the Middle East came to the forefront. Pressure from OSD to focus on Europe eased. In the Middle East, the new unit would still face Soviet armor, but operational concepts would be different than in Europe, because of the differing terrain and weather.

As these basics were being developed, the Infantry Division 86 (ID86) study was marching forward. General Meyer and General Donn A. Starry, the TRADOC Commander, agreed in a 28 September 1979 meeting that the light division should be able to deploy rapidly to reinforce NATO forces. It should also be capable of worldwide contingency operations to destroy enemy forces and control land areas, to include population and resources. On 4 October 1979 the design mission was given the Army 86 task force. Early consideration of some innovative weaponry and equipment began at this stage. The struggle to exclude out-sized equipment that was too large for C-141 aircraft also began here. The goal was a division of 14,140 men.

A preliminary design was presented General Starry in January 1980. He rejected it. Among other things, it was over 4,000 men overweight.

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[4]Interview, author with General (Ret) Edward C. Meyer, 19 Feb 85.

Starry sent the planners back to their task with the admonition to study the historical use of infantry, including consultation of such works as Rommel's Attack. Again the 9th Division was mentioned as a structuring and modernizing vehicle for the emerging light division.

The second design was presented to General Meyer on 3 April 1980, totaling 15,593 men. He rejected it. It lacked mobility and firepower and was still too heavy. The planners were sent back for a third try.[5]

As a part of the effort to develop the light division at Fort Lewis, a message went out from Department of the Army Headquarters on 15 May announcing the Army Science Board 1980 summer study. The message stated, in part, "The Army Science Board will conduct a summer study to determine if the effectiveness of the 9ID can be increased over the next three year period. The study will focus on initiatives to facilitate the transition of 9ID to a high technology division with increased killing power (especially antitank), enhanced electronics, increased survivability and improved tactical mobility and strategic deployability." The message went on to discuss organization of the board, and to direct that the Board have a final meeting at Fort Lewis "...21-25 July 1980 to view the 9th ID firsthand and to prepare the group report."[6]

Another major DA effort was the development of a memorandum of understanding (MOU). This document would outline the roles to be played by the major commands involved. These were: The U.S. Army Forces Command (FORSCOM), to whom the 9th ID was assigned; the U.S. Army Development and Readiness Command (DARCOM), the Army's materiel developer and supplier; and the U.S. Army Training and Doctrine Command (TRADOC), which developed force structure and doctrine for the Army.

The Memorandum addressed problems of staffing, funding, command relationships and the roles the three commands were to play in the High Technology Test Bed (HTTB), as it was called. Where the name originated is unknown. It is noteworthy that the MOU gave no guidance to the 9th ID, and that the 9th ID was not required to sign it. Presumably this was because their senior headquarters (FORSCOM) was to sign.[7]

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[5]Romjue, A History of Army 86, 2:26, 31-40.

[6]Msg, HQ DA to dist, 151630z May 80, sub: Army Science Board Summer Study--High Technology Division.

[7]Memorandum of Understanding between FORSCOM, DARCOM, and TRADOC, sub: The 9th Infantry Division High Technology Test Bed, signed by MG John W. McEnery, CofS, FORSCOM, 18 Aug 80; BG William H. Schneider, CofS, DARCOM, 8 Oct 80; MG John B. Blount, CofS, TRADOC, 25 Aug 80. (Hereinafter: MOU, 8 Oct 80.)

These and many other converging factors resulted in the 9th Infantry Division Commander being told to establish a High Technology Test Bed at Fort Lewis.

BOOK ONE

THE HIGH TECHNOLOGY TEST BED

CHAPTER 1

FORMATION OF THE HIGH TECHNOLOGY TEST BED, 1980

> No one really knew what a High Technology Test Bed was.
>
> COL Joseph H. Felter
> Chief of Staff
> 9th Infantry Division[1]

In April of 1980 movement began toward forming the High Technology Test Bed (HTTB). On April 30, the Commander of the 9th Infantry Division, Major General Howard F. Stone, sent a letter to his next higher headquarters, the Army Forces Command (FORSCOM) addressing HTTB management architecture. FORSCOM responded with a proposal to the 9th containing four different structures, and soliciting comments. Addressed in each proposal was how, under that plan, FORSCOM would control the 9th's readiness status. This was to prove a continuing theme.

In a prompt reply on 9 May, General Stone strongly advocated alternative three, which stated:

> 1. DA provides initial guidance, assigns responsibilities, and actively monitors execution of test through High Technology Test Bed Coordination Office. Latter provides a channel for providing CSA [Chief of Staff of the Army] guidance to MACOMs [Major Commands] as test evolves. Serves as a formally established HQDA [Headquarters, Department of the Army] Staff POC [point of contact] for test matters. Potentially significant role for HQDA.
>
> 2. TRADOC [Army Training and Doctrine Command].
>
> a. Develops test plan and O&O [Organizational and Operational] concepts.
>
> b. Provides combat development support team to test director.

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[1]Interview, author with Colonel Joseph H. Felter, 4 Dec 82. (Hereinafter: Felter Interview, 4 Dec 82).

3. DARCOM [Army Materiel Development and Readiness Command].

a. Provides materiel development support team to test director.

b. Provides required systems through expedited procurement procedures, particularly in the case of low-density or unique items.

c. Responsible for maintaining test equipment in conjunction with using unit and for arranging related contract support as appropriate.

4. FORSCOM is test agency.

a. Provides test director.

b. Establishes test cell.

c. Provides admin/log [administrative/logistic] support as required.

d. Focal point for reporting test results.

e. Manages test funds.

f. Formulates and coordinates MOU [Memorandum of Understanding] between MACOMs and their key players.

5. Test cell assigned to test director.

6. Readiness given maximum emphasis by giving FORSCOM responsibility for testing.

While the completed HTTB architecture would vary from the proposal significantly, a framework had been put forward. In his response, General Stone included the statement "a definitive mission statement is much needed and will help clear the air." As with readiness, "a definitive mission statement" was to be something the 9th was to grapple with for almost a year.[2]

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[2](1) Msg, Cdr FORSCOM to Cdr 9th Inf Div, 061745z May 80, sub: High Tech Test Bed (9th ID) Management Architecture. (2) Msg, Cdr 9th Inf Div to Cdr FORSCOM, 090300z May 1980, sub: High Tech Test Bed (9th ID) Management Architecture.

The Army Science Board

The Pentagon also had high technology on its mind. On 15 May, the Department of the Army (DA) sent out a message announcing that the Army Science Board summer study for 1980 would focus on the high technology division. Specifically, it would: "...determine if the effectiveness of the 9ID can be increased over the next 3-year period. The study will focus on initiatives to facilitate the transition of 9ID to a high technology division with increased killing power (especially antitank), enhanced electronics, increased serviceability and improved tactical mobility and strategic deployability."[3]

To increase tactical mobility meant that provision had to be made to give every soldier motorized transportation, along with all his equipment and supplies. This demanded an increase, over a walking infantry division, of a considerable number of vehicles, and the repair parts and mechanics to support them.

To increase lethality, particularly in the antitank area, was also accepted to mean increased weight. The relatively lightweight antitank missiles available had to be sight guided throughout a comparatively long flight time. This was satisfactory in the defense where tanks could be ambushed at long range from a prepared position, but not so satisfying to the attacking soldier who crests a ridgeline to find a tank gun being trained on him from short range. In the latter situation, armor's old adage that the best weapon against a tank is another tank, is true.

In sum, both the mobility and the antitank requirement worked to the detriment of strategic deployability. This was understood to mean deployable by air, preferably in the more plentiful C141-B aircraft, rather than the huge C5-A.

The 15 May message called for an organizational meeting of the Science Board in the Pentagon on 23 May. At that meeting, panels were to be formed to address armor/anti-armor, mobility, survivability, and firepower. A letter from Dr. Percy A. Pierre, the assistant Secretary of the Army for Research, Development and Acquisition dated 16 May formalized the four areas of the study for the Board. Later, a fifth panel was formed to address counter command, control and communications questions.

The different panels met independently after the organization meeting until 21-25 July 1980, when the entire group was assembled at Fort Lewis. The appointed Board was a mix of subject matter experts

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[3]Msg, HQ DA to dist, 151630z May 80, sub: Army Science Board Summer Study--High Technology Division.

from industry and active and retired military. Many of the 9th Division's key officers also contributed.

The results, presented to General Meyer and Dr. Pierre on 31 July, gave some needed direction to the concept and formation of the HTTB, and to what had become known as the HTLD (High Technology Light Division). Key findings were:

- System Trends. A statement of where evolving technology was leading the development of new hardware (commonly called "systems," as in weapons system, communication system, etc.). This considered both friendly and enemy systems.

- Low Cost/Near Capabilities. An exploration of those items that could be purchased "off-the-shelf" from industry and allied nations to upgrade the 9th in the near term. These were items that could be rapidly tested by HTTB and quickly accepted or rejected.

- Key Program Accelerations. Addressed the rapid integration into the 9th of newly emerging systems already under development.

- Critical Development Initiatives. These were programs or systems essential to the full realization of true "high technology" which were so new or complex that they would have to go through the full Army test and evaluation procedure.

The final item, which was particularly helpful to the 9th, was entitled Management Issues. In it, a number of points were made:

- ...the most critical management issue perceived is how serious--in the real world of dollars, equipment, and key manpower--Army management is about the HTLD both in its test bed and its major new force component roles.

- In addition to the expected military staff, the Test Bed would need civilian technical experts in a number of fields. DA civilians from various commands, and others working under government contract in the areas of engineering, automation, testing and research

would be required. The objective was a division that did more than rote testing. It should conceive, implement and test capabilities and applications of hardware as well.

- The test bed would need its own integral innovative engineering shop, commonly known as a "Skunk Works." The Skunk Works would design and supervise the construction of hardware, and the modification of existing hardware for testing.

- A system would need to be developed whereby the Test Bed could accelerate the time needed to get an item from the laboratory to the field.

- There would need to be a method of liaison established to allow an inter-service interface and an interface with allied nations in order to keep the Test Bed informed as to what was available worldwide.

The Army Science Board recommended that the Test Bed look at a number of specific items of hardware, such as various missiles, night vision devices, and radios, for example. It also surfaced some other topics of special interest that should be considered from a hardware, organizational, or operational concept view:

- Requirements for a new light tank armor component.

- Aviation component structures.

- Military operation in urbanized terrain and forest operation capability.

- Personnel implications of a HTLD and test bed concept.

- Organic electronic warfare and intelligence, surveillance and target acquisition capabilities.

- Autonomous weapons, defined as remotely piloted or unpiloted aircraft.

- Interservice planning.

- A material acquisition policy.[4]

In the opinion of both the 9th Division G3 and Chief of Staff, the Army Science Board visit to Fort Lewis, and its report, were the true start point for the High Technology Test Bed.[5]

Final Planning

HTTB marks its beginning from 19 June 1980. In the recollection of the Test Director/9th Infantry Division Commander, General Stone, he received the word he was to establish the HTTB telephonically.[6]

Doubtless the phone call was the result of a meeting held on the 19th in which a number of key decisions were agreed upon. The meeting was attended by the Chief of Staff of the Army, General Meyer; the Commander, FORSCOM, General Shoemaker; the Commander, TRADOC, General Donn A. Starry; the Commander, DARCOM, General John R. Guthrie; the Vice Chief of Staff of the Army, General John W. Vessey; the Deputy Chief of Staff for Operations, Lieutenant General Glenn K. Otis; and the Deputy Chief of Staff for Research, Development and Acquisition, Lieutenant General Donald R. Keith. The objectives of the meeting were "...to discuss the purpose, objective and management of the 9ID Test Bed." The following conclusions were reached:

- The Test Bed objectives would emphasize enhancing strategic mobility and preserving the readiness of the division.
- The deployment criteria for the 9th to meet its rapid deployment force missions would be determined on a phase-by-phase basis.
- The purpose of the Test Bed was to provide a means to optimize the 9th and its subordinate units, with the approved results to be applied to other divisions. It was not intended to create another testing agency.

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[4]Report of the Army Science Board, 1980 (SECRET--Info used is UNCLASSIFIED).

[5](1) Interview, author with Colonel Stephen L. Arnold, 16 Nov 82. (Hereinafter: Arnold Interview, 16 Nov 82). (2) Felter Interview, 4 Dec 82.

[6]Interview, Elaine M. Pospishil, Command Historian, US European Command, with LTG Howard F. Stone, 9 Aug 84. (SECRET--Info used is UNCLASSIFIED). (Hereinafter: Stone Interview, 9 Aug 84).

- DCSOPS, through DARCOM, would insure adequate funds were available from research, development, test and evaluation; other procurement, Army; and operations and maintenance Army sources.

- Near-term enhancement items for the 9th would be reviewed by the MACOMs to insure the items were attainable and that the objectives of that action did not limit Test Bed activity.

- The Test Bed would initially focus on command and control, electronic warfare, intelligence, target acquisition, antitank capability, logistic support, air defense and air cavalry attack brigade implementation.

- Allied involvement would be encouraged.

- A decision on whether or not the 9th should receive a higher position on the DA Master Priority List would come later.

- The size of the 9th would not be increased as a result of Test Bed developments.

- Short, simple test reports would be encouraged, but they must be adequate to justify conclusions.

- FORSCOM would continue to command the 9th. Test activities would be controlled through TRADOC to the Test Director, who would be the Commander, 9ID. The test group would be permanently stationed at Fort Lewis, and the Test Director would have operational control of them. The TRADOC Commander would have direct tasking authority to the Test Director, but must keep FORSCOM informed. DARCOM would provide a Deputy Test Director to head a materiel support team.

- The Test Director had authority to vary from the outline test plan in order to follow up on ideas developed during testing.

- The 9th would receive additional personnel, but not another general officer. A scientific advisor would be assigned later if one was needed.

- The draft MOU would be altered to include the above points.

General Stone was notified of the particulars of these decisions by message on 30 June.[7]

Of course, the 9th had been aware that this was likely to happen for some time. Work and coordination on a Memorandum of Understanding (MOU) between FORSCOM, DARCOM, and TRADOC had been underway. In June 1980, the Test Bed consisted of one man, MAJ(P) David T. Jones. He was a G3 Operations Officer, and had been the HTTB Project Officer since there had been a need for one starting in April.

The other commands were also becoming aware that this action was growing. On 3 June, DARCOM had announced the formation of a HTTB Task Force under the Director of Readiness. It requested that all actions relating to HTTB be addressed to that task force.[8]

On 12 June, General Shoemaker, the FORSCOM Commander, sent a message to the DA Deputy Chief of Staff for Personnel (DCSPER) requesting his assistance in establishing an additional brigadier general position in the 9th. The brigadier would carry the title Assistant Division Commander (Evaluation) (ADC[E]). The ADC(E) would handle HTTB actions in the 9th for one year, at which time the need for a general officer would be reevaluated.

The DSCPER's response is unknown, but the matter was settled in the 19 June meeting, where it was decided no general officer would be provided.[9]

Work on the MOU began to accelerate.

The Initial Memorandum of Understanding

On 13 June FORSCOM sent the 9th a copy of TRADOC's draft of the MOU. FORSCOM asked for the 9th's comments.

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[7](1) Msg, DA DCSOPS to Cdr, 9th Inf Div, 301100z Jun 80, sub: High Technology Test Bed (9ID). (2) Msg, Cdr FORSCOM to VCSA, 301305z Jun 80, sub: High Technology Test Bed (9ID).

[8]Msg, DARCOM to dist, 032030z Jun 80, sub: DARCOM POC for All Actions Relating to the High Technology Test Bed.

[9]Msg, CG FORSCOM to DA DCSPER, 121212z Jun 80, sub: High Tech Test Bed - 9th Infantry Division.

General Stone had a strong negative reaction to this draft. He replied that he did not agree with it. Under it, he would have no control over planning, testing, funding, or the test reports. He repeated his request of May for a definitive mission statement, since he believed that was an essential preliminary to finalizing the MOU. He also expressed concern over his capability to maintain division readiness, which was a preeminent topic of the time as the Joint Rapid Deployment Task Force was taking shape.[10]

A flurry of messages, letters and meetings concerning the MOU followed. A meeting was held at Fort Lewis on 9 and 10 July to coordinate the draft MOU. Further guidance was received in the form of a DA message sent on 18 July, which was of singular importance to the Test Bed.

The message "announced" the High Technology Test Bed to the major Army commands. It started with a statement of the Chief of Staff of the Army's approval of the implementation of the project. It contained the statement: "Given the standard infantry division as a base, and employing the emerging results of the Light Division 86 study effort as a guide, the activities associated with the High Technology Test Bed will be directed toward developing a light division designed to facilitate rapid deployment, exploit technological opportunities, and meet the requirement for lean, hard-hitting forces."

This was a very meaty sentence which contained the seeds of much discontent: was HTTB to employ "...the emerging results of the Light Division 86 study...", or was it to develop "...a light division..."? Was HTTB to test ID86, or was it to design a different light division?

Two immediate actions were directed relative to the 9th: its capabilities were to be increased through "near-term enhancements," and the Test Bed, to include a test group, was to be established at Fort Lewis. The HTTB was to, through tests and supporting analyses, evaluate doctrine and concepts in many areas, with emphasis on improving strategic deployability. Good results were to be permanently incorporated into the 9th and exported to other divisions. The 9th would begin to transition into a high technology division.

Command arrangements would be as agreed upon during the 19 June meeting, which meant the commander of the 9th would work for the FORSCOM

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[10](1) Msg, Cdr FORSCOM to Cdr 9th Inf Div, 131700z Jun 80, sub: 9ID High Technology Test Bed. (2) Msg, CG 9th Infantry Division to Cdr FORSCOM, 172000z Jun 80, sub: TRADOC Draft MOU (9th ID High Technology Test Bed).

Commander on divisional and Fort Lewis matters, and for the TRADOC Commander on Test Bed matters. It meant the Chief of the Test Bed, now determined to be a colonel, would be assigned by TRADOC and would come from their manpower assets, while working under the operational control of the Test Director, who was also the Commander, 9th ID. The same situation existed relative to the Chief of the DARCOM Materiel Development Support Team. The potential for conflict and divided loyalties was obvious, but was not thought unworkable by General Meyer, who considered it imperative that the two key Test Bed officers be responsible to the Test Director. He also felt the Test Director had to have direct access to the Chief of Staff of the Army.

The message went on to outline the major taskings assigned each major command.

HQDA:

- Provide initial guidance and assigns responsibilities.
- Through the Army Test Schedule and Review Committee process, plays an active role in determining requirements.
- Allocates resources in the form of money, personnel spaces, people and equipment.
- Forms a High Technology Test Bed Coordination Office within the Office of the Deputy Chief of Staff for Operations to:
  - Monitor execution of test.
  - Provided a channel for Chief of Staff guidance.
  - Is the formal Headquarters, Department of the Army point of contact.

FORSCOM:

- Commands the 9th Infantry Division.
- Provides the Test Director.
- Provides administrative and logistic support as required.
- Requests and allocates funds.

Commander, 9th Infantry Division:

- Is the Test Director.
- Provides the facilities and units needed to support testing.
- Through the test group:
  - Develops detailed test plans.
  - Conducts tests.
  - Writes test reports and submits them to the TRADOC Commander.
  - Accounts for special test funds and resources.
  - Requests and allocates funds.

TRADOC:

- Provides the Deputy Test Director, who will be the test group commander.
- Establishes a small permanent test group capable of being augmented as necessary.
- Formulates and coordinates the MOU.
- Develops outline test plans, organizational and operational concept alternatives, and doctrine. Secures Army Test Schedule and Review Committee approval.
- Conducts supporting quantitative analyses.
- Analyzes and evaluates test results.
- Conducts independent evaluations.
- Requests and allocates funds.
- Reports results and recommendations to DA.
- Develops the operational security plan.

DARCOM:

- Provides Deputy Test Director for Support.
- Provides materiel development support team.
- Provides advice on materiel related items.
- Provides technical assistance for maintenance of nonstandard equipment.
- Requests and allocates funds.[11]

As a result of this guidance, changes were rapidly made to the various draft MOUs. A meeting was held at DA on 30 June for final coordination, and the memorandum was published. The Chiefs of Staff of TRADOC and FORSCOM had signed the document by 25 August. The Chief of Staff of DARCOM signed the document on 8 October 1980, making that the date it took effect.

The MOU was to be reviewed and revised annually, as necessary, and could be altered by mutual consent as required. Annex A defined operational control, as it related to the authority exercised by the Test Director over the Deputy Test Director and the test group. Annex B showed the organization of the Test Bed, reflecting numbers in each section. This organization called for the TRADOC Deputy Test Director to control thirty-one people divided into four sections: The Office of the Deputy Test Director, the Test Design and Analysis Division, the Operations and Testing Division, and the Administrative and Logistics Division. The Office of the Deputy Test Director for Materiel Support, with six people, was shown as being co-equal with the Deputy Test Director in answering to the Test Director/Commander, 9th ID. This co-equal position was also reflected in the Officer Efficiency Report rating chain, in spite of the fact that the TRADOC Deputy was to "direct activities of the HTTB Test Group," and "represent the Test Director in development of HTTB test policies and procedures." This ill-defined relationship between the two deputies was to cause some minor heartaches later on.

Tabs one and two to Appendix B very simply outlined the functions of the various sections of HTTB, and reflected the rank, title, and skills of each position in the organization, along with which MACOM was to supply that individual. Also reflected was the priority of fill

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[11](1) Meyer Interview, 13 Jun 84. (2) Msg, HQ DA to dist, 181555z Jul 80, sub: 9ID High Technology Test Bed.

required for each position. The thirty-eight spaces were divided thus: 25 TRADOC, 7 FORSCOM, 6 DARCOM: 18 officers, 5 enlisted and 15 civilians.

A copy of the MOU was sent to DA from TRADOC on 27 August. The cover letter that accompanied it requested DA to act promptly on authorizing the manpower spaces and $201,000 for FORSCOM to use in upgrading buildings and providing furnishings at Fort Lewis to house the test group. Additional Fiscal Year 1981 costs were estimated at $192,000, and outyear costs of the fully-staffed Test Bed were estimated at $386,000 annually. Test and material costs were still being developed.[12]

Forming the Test Group

On 14 July 1980 Major David T. Jones, the 9th Division G3 Operations Officer who had been working HTTB actions, was designated the division G6. This gave him the status of a primary staff officer within the headquarters. The action was taken by Colonel Joseph H. Felter, the new Chief of Staff of the 9th, as a temporary measure until such time as a formal organization was established.

Colonel Felter was General Stone's primary HTTB action officer at this time. He worked with MAJ Jones on such actions as how the division was going to administratively support the Test Bed, where it was to be physically located, how to get personnel authorized, how training facilities could be used to support testing, etc. As a few additional people, 9th Division assets, were supplied to MAJ Jones, he became the nucleus of the test group.[13]

Effective 18 August 1980 the embryo test group, the G6, moved from the 9th Division Headquarters in the permanent cantonment area of Fort Lewis across Interstate 5 to North Fort Lewis. This area consisted of World War II era wooden buildings, which had to be renovated to make them suitable. These buildings were removed by some three miles from headquarters.[14]

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[12](1) MOU, 8 Oct 80. (2) Ltr, HQ TRADOC to HQ DA, 25 Aug 80, sub: High Technology Test Bed (9ID).

[13](1) Arnold Interview, 16 Nov 82. (2) Felter Interview, 4 Dec 82.

[14]9th Inf Div and Ft Lewis Daily Bulletin, 26 Aug 80.

DARCOM responded quickly. On 18 September they published an order establishing the "US Army DARCOM High Technology Test Bed Materiel Support Activity." It established the Materiel Support Activity (MSA) strength at three officers and three civilians. This was even before DARCOM had signed the MOU.

The MSA mission, as stated in its Table of Distribution and Allowances (TDA): "Serves as the official representative of the Commanding General, US Army Materiel and Development Command, at the High Technology Test Bed, Fort Lewis, for all HTTB materiel support matters between DARCOM and the Director of the HTTB at Fort Lewis."

Colonel Edmund H. Thompson reported in as the DARCOM Deputy Test Director on 1 October.[15]

The search for a TRADOC Deputy Test Director had been ongoing since July. A number of names had been proposed. Colonel Harold C. Van Meter was the man selected.

Colonel Van Meter, while Commander of the 1st Training Brigade at the Infantry School during the summer of 1980, had been visited by Lieutenant General William R. Richardson, while Richardson was touring the school. General Richardson was the Deputy Commander of TRADOC, and Commander, Combined Arms Center (CAC) at Fort Leavenworth, Kansas. As CAC Commander, he would become the senior TRADOC action officer working HTTB actions, and was the man who selected Colonel Van Meter. Van Meter, in hindsight, felt he was being observed during Richardson's visit, because he was informed that he was being considered for the TRADOC Deputy Test Director's position shortly thereafter. Van Meter, because he had only had seventeen months command time in his brigade, attempted to withdraw his name from contention, with the support of the Infantry School Commander, but to no avail. He was appointed in orders published on 22 August, and reported to Fort Lewis on 9 October.

A handwritten note from HTTB files lists seven names as being in HTTB on 1 October. Several were added by the time Colonel Van Meter arrived, so that the HTTB consisted of approximately fifteen people on 15 October 1980. Those like Colonel Van Meter, who were TRADOC manpower assets, were assigned to CAC with duty station at Fort Lewis.

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[15](1) HQ DARCOM Perm Orders 7102, 18 Sep 80, Sub: US Army DARCOM HTTB MSA. (2) MSA Significant Activities Rpt, 14 Oct 80. (3) TDA XXW4GEAA, HQ DARCOM, sub: US Army DARCOM High Technology Test Bed Materiel Support Activity. Effective date, 1 Oct 80.

One of Colonel Van Meter's first actions was to review the Test Bed organization as stated in the MOU, which staffed the organization at thirty-eight. He quickly revised this upward to fifty, and set out to try to get the increase approved, and to get more people assigned.[16]

On 22 October Colonel Van Meter and Major Jones spent three hours discussing personnel matters, including how to develop a TDA for the TRADOC portion of HTTB, with Military Personnel Center officers in Washington, D. C. On 28 October the Test Director, General Stone, was briefed on the status of the test group: it consisted of nine officers assigned, six enlisted members of the 9th, who were assigned special duty, and one temporary overhire civilian. Nine additional persons were programmed in. General Stone directed that a message be sent to the TRADOC Commander, General Starry, which would include a statement of the HTTB personnel status. He also requested to be presented with a "plan of attack" on how to alleviate the shortage. The organization presented at the resultant meeting reflected an executive officer under the TRADOC Deputy, and five sections, rather than the three shown in the MOU: Administration, Plans, Testing, Aviation Systems Manager, and a Command, Control, Communications and Intelligence Systems Manager.

On 5 November, FORSCOM was notified in a periodic update message that ten officers were assigned, and that the need for expanded staffing over the MOU allowances had become apparent. A new proposed TDA was being staffed.

On 7 November General Stone sent a message to the Commanding General of the Army Military Personnel Center, in which he requested ten officers, by name, for the HTTB. The response, on 24 November, stated that all the presently recognized officer slots had already had officers placed on orders against them. If additional slots were authorized, then the by-name officers would be considered. This was very unsatisfactory to General Stone.

At another update briefing presented on 18 November, General Stone was presented a staffing picture that reflected fourteen persons on hand. Four special duty soldiers and one temporary hire civilian were still at HTTB, but they were not part of the fourteen. The proposed TDA, as it was being worked at that time, reflected an increase of four

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[16](1) Interview, Dick Grube, Director, National Infantry Museum with COL (Ret) Harold C. Van Meter, 23 Aug 84. (Hereinafter: Van Meter Interview, 23 Aug 84). (2) SO 235-005, HQ, USA Inf Sch, 22 Aug 80, Para 3, amended 2 Sep 80, as pertains to COL H. C. Van Meter. (3) Note, HTTB, 1 Oct 80, no subject. (4) Interview, author with LTC Bruce H. Braun, 30 Sep 82. (Hereinafter: Braun Interview, 20 Sep 82).

FORSCOM and eight TRADOC officers over the MOU authorization for a total of fifty.[17]

There were twenty-one civilian spaces recognized as requirements by 21 November, but none of the full-time permanent spaces for HTTB had been granted Fort Lewis for hiring. General Stone sent a message to FORSCOM and to TRADOC with an information copy to DARCOM, pointing out that fact. Since the goal was to be fully operational by 1981, and the Civilian Personnel Office estimated a recruiting and hiring lag of forty-five days, he requested that sixteen temporary positions be authorized immediately, to allow some operational capability by the first of the year. FORSCOM granted the sixteen temporary positions on 15 December. In the same message, FORSCOM reassured the 9th that it was making every effort to get the permanent spaces allocated from DA.

TRADOC responded to General Stone's message on 19 December. It stated that the twenty-five positions (8 officer, 5 enlisted, 12 civilian) it had been tasked to provide by the MOU had been confirmed by DA. The allocations would be provided through CAC, and the Fort Lewis Civilian Personnel Office could initate recruiting. In the meantime, HTTB had submitted its request for an expanded TDA, and had begun coordination to try to get the additional people it reflected.

On 4 December, four of the 9th ID HTTB officers, including MAJ Jones, were transferred from the 9th Division to Headquarters, US Army Garrison, Fort Lewis, with duty at HTTB. Presumably this was done so that replacements could be requisitioned against the vacancies created in the 9th. It also signaled the intent for those four officers to be the first contingent of the total of seven that FORSCOM was obliged to provide under the MOU.[18]

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[17](1) After Action Rpt, TRADOC Dep Test Dir to Cdr 9th Inf Div, 24 Oct 80. (2) HTTB Update Briefing, 28 Oct 80. (3) Memo for Record, 29 Oct 80, sub: HTTB Update Briefing. (3) Msg, Cdr 9th Inf Div to Cdr FORSCOM, 051500z Nov 80, sub: Test Bed Periodic Update Nr 3. (4) HTTB Update Briefing, 18 Nov 80. (5) Msg, Cdr 9th Inf Div to CG USA MILPERCEN, 072232z Nov 80, sub: Personnel Fill for HTTB. (6) Msg, Dir OPMD to Cdr 9th Inf Div, 241840z Nov 82, sub: Personnel Fill for HTTB.

[18](1) Msg, Cdr 9th Inf Div to Cdr FORSCOM and Cdr TRADOC, 212100z Nov 80, sub: High Tech Test Bed (HTTB). (2) Msg, Cdr FORSCOM to Cdr 9th Inf Div, 151030z Dec 80, sub: High Tech Test Bed (HTTB). (3) Msg, Cdr TRADOC to Cdr 9th Inf Div, 111935z Dec 80, sub: High Tech Test Bed (HTTB). (4) HTTB Significant Activities Report, 21 Nov 80 - 4 Dec 80. (5) SO 240-633, HQ 9th Inf Div & Ft Lewis, 4 Dec 80.

During this time period, the G6 designation disappeared from Fort Lewis documents dealing with HTTB.

As of the close of 1980, the test group was filling with personnel. Work was underway on four buildings on North Fort Lewis, which were being renovated at a cost of $115,443.67 for HTTB use. The Test Bed had begun.[19]

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[19]Memo, HTTB for COL Van Meter, 19 Jan 81, sub: FY80 Start-Up Costs for HTTB.

CHAPTER 2

EXPANDING THE TEST BED, 1981

> The Test Bed itself went through a series of reorganizations which were skeletonized or designed by Concepts Group. Then, with a series of round-table discussions, many of them quite heated, the organization evolved into something similar to what now exists. We evolved from what was seen by many of the members who had a testing background, as a testing headquarters to a part think tank, part testing, part developmental organization.
>
> LTC David S. Blodgett
> Chief, Concepts Division[1]

As noted earlier, one of Colonel Van Meter's first actions, upon his arrival at Fort Lewis, was to begin work on a revised and expanded TDA for the Test Bed. This recommendation, which raised the thirty-eight spaces authorized by the MOU to fifty, went forward for MACOM coordination and approval on 18 December 1980. In the meantime, the struggle continued to fill the thirty-eight space TDA. As of 6 January 1981, the Test Bed had fifteen people assigned. As CAC staffed the fifty-space proposed TDA, additional needs were identified. When the proposal was hand-carried to TRADOC by General Richardson on 5 February, it asked for a total of fifty-five spaces. TRADOC handled this action quickly, and it was sent to DA promptly.

Security had become an issue of interest in the Test Bed. One of the five additional slots on the proposed TDA was for a security officer, and the Test Bed published an internal security SOP in February.[2]

While DA was working on the new TDA, FORSCOM made it plain that while they concurred with the proposal, DA would have to supply the

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[1]Interview, author with LTC David S. Blodgett, 10 Apr 84. (Hereinafter, Blodgett Interview, 10 Apr 84.)

[2](1) Msg, Cdr 9th Inf Div to Cdr FORSCOM, 061730z Jan 81, sub: Test Bed Periodic Update Nr. 5. (2) Memo, HTTB Chief of Admin to COL Van Meter, 22 Jan 81, sub: High Technology Test Bed TDA. (3) Memo, Chief HTTB to Record, 11 Feb 81, sub: Conversation Between COL Montgomery and COL Van Meter on 11 Feb 81. (4) SOP, HTTB 13 Feb 81, sub: Military Security.

additional personnel slots, for they did not have any to spare. Similarly, during this time DARCOM made known a need to increase its Materiel Support Activity (MSA) staffing from six to nine, but again they could not support the increase internally.

The fifty-five space TDA was approved by DA in March. Also, on 6 March at a general officer working session at DA, several additional positions were approved. These were: five lieutenant colonels for a Concepts Group, three majors to be added to the Fort Lewis Logistics Center to support Test Bed projects, three civilians to be added to the MSA, and one senior civilian as scientific adviser. On-hand staff was still less than half of the fifty-five authorized. In anticipation of approval of the expanded TDA, however, DA Officer Personnel Management Directorate had begun work on filling the new slots in late February. Most officers to fill the fifty-five-space TDA were identified by 1 April and work had begun on identifying the five lieutenant colonels for Concepts Group and the three majors for the Logistics Center. The target report date for the later two groups was 15 July and 3 June respectively.[3]

With the arrival of new personnel, additional space was needed. The World War II temporary buildings on North Fort Lewis that housed the Test Bed had to be renovated before they were suitable. Renovation would be complete on three buildings by June, and a fourth would be occupied on a temporary basis. The Test Bed requested that they be provided with an additional sixty-four office spaces. Fort Lewis provided one more building, admittedly not enough, and worked with the Test Bed on other options. Funds for renovation did not become available until 26 June, however.[4]

Another source of qualified personnel had been developed early in 1981, and came to fruitation during the spring and summer. On 14 January the BDM Corporation submitted an unsolicited proposal to "infuse the HTTB and CACDA TNE [CAC Development Activity Test and

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[3](1) Msg, Cdr FORSCOM to Cdr TRADOC, 172006z Feb 81, sub: High Technology Test Bed Group Staffing. (2) Msg, Cdr DARCOM to Cdr TRADOC, 052000z Mar 81, sub: High Technology Test Bed Test Group Staffing. (3) Msg, Cdr 9th Inf Div to Cdr FORSCOM, 121415z Mar 81, sub: Test Bed Period Update Nr. 6. (4) Msg, Dir OPMD to Cdr 9th ID, 242004z Feb 81, sub: Staffing the 9th ID High Technology Test Bed (HTTB). (5) Msg, Cdr MILPERCEN to Cdr 9th Inf Div, 021430z Apr 81, sub: Additional Personnel Requirements for HTTB.

[4](1) DF, HTTB to DIO, 13 Apr 81, sub: Request for Additional Administrative Space. (2) DF, HTTB to CofS 9th Inf Div, 9 Jul 81, sub: Bi-Weekly Report of Significant Actions - 19 June through 9 July 1981.

Evaluation] Directorate with on-site support services." This corporation was already doing test support work for the TRADOC Combined Arms Test Activity (TCATA) at Fort Hood, Texas. BDM proposed to provide:

> a. Test planning support. Assist in the development of Outline Test Plans, scenarios and statistical designs. Provide major input to Data Collection Plans, data event identification, test scheduling, and resource requirements identification.
>
> b. Test execution support. Work on-site during test execution to ensure timely and quality data. Assist in the selection and training of controllers and data collectors.
>
> c. Test reporting. Provide a quick-look analysis and summary of test findings. Participate during inprogress reviews with test officer. Assist test officer in publishing final report.

The proposal went on to recommend six of their contract positions for Fort Lewis: a director, senior scientist, two operations analysts and a field scientist. BDM proposed incumbents for the positions by name.

In late February Colonel Van Meter made an extended TDY trip during which he visited the BDM Corporation in Los Angeles. As a result of his discussions there it was agreed that twelve people would be needed to assist HTTB. Van Meter proceeded on to Fort Hood, where he worked on adding the BDM support personnel to the existing TCATA contract. While there he managed to get the contract altered, staffed and approved before he left on 20 February. BDM had three people on the ground at Fort Lewis eleven days later, on 4 March. An additional three were expected by 31 March.[5]

CAC requested that TRADOC reprogram funds in the amount of $450,000 to pay for the addition to the TCATA BDM contact, but was refused.

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[5](1) Info Paper, HTTB for Cdr 9th Inf Div, 27 Jan 81, sub: Unsolicited Proposal from BDM for HTTB. (2) Memo, Chief HTTB to CG 9th Inf Div, 23 Feb 81, sub: Trip Report. (3) DF, HTTB to CofS 9th Inf Div, 5 Mar 81, sub: Bi-Weekly Report of Significant Actions - 20 Feb 81 through 5 Mar 81. (4) Msg, Cdr 9th Inf Div to Cdr FORSCOM, 121415z Mar 81, sub: Test Bed Periodic Update Nr. 6.

However, the TCATA Commander visited Fort Lewis in late March, and as a result of his discussions, not only provided funds for the contract, but expanded it to the twelve that were needed.

On the same February TDY trip, Colonel Van Meter visited another contractor, Research and Development Associates (RDA) in Los Angeles. RDA was doing contractual work for the Army on a number of studies and tests, and Van Meter developed a good idea of their capabilities. RDA was never to provide on-the-ground support on the scale of BDM, but was to do considerable contractual "piece" work for HTTB.[6]

Spring and summer of 1981 also saw a number of more or less routine administrative matters addressed. An MOU was developed between the Fort Leavenworth and Fort Lewis Adjutants General (AGs), clarifying responsibilities of each party relative to TRADOC personnel assigned to CAC with duty station at Fort Lewis. An HTTB Public Affairs Plan was developed by both FORSCOM and Fort Lewis to take advantage of the positive publicity that could be generated by Test Bed and 9th Division activities. Some of the various divisions within the Test Bed begin to draft Standing Operating Procedures and statements of organization and functions.[7]

Also during this period, General Stone was searching for ways to manage this organization which seemed to have developed a life of its own. He developed an HTTB Management Book which was updated twice weekly by Captain Tom Harvey, the Deputy Chief of Staff of the 9th. It contained statements of responsibility for all the 9th's staff sections relative to HTTB, schedules, programs and itineraries of all kinds, and a mass of other data. He directed Colonel Van Meter and the ADC(O), General Jones, not to schedule TDY so that they would both be gone at the same time. Ultimately, he reached a point where he forbade his key people to go TDY without his personal approval. He also established,

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[6](1) Msg, Cdr TRADOC to Cdr CAC, 200845z Mar 81, sub: Contract Support for HTTB. (2) Ltr, Cdr TCATA to Cdr 9th Inf Div, 18 May 81, no sub. (3) Memo, Chief HTTB to CG 9th Inf Div, 23 Feb 81, sub: Trip Report.

[7](1) Memorandum of Understanding between the Adjutant General Ft Lewis and the Adjutant General Ft Leavenworth, signed LTC B. Hylan AG Ft Leavenworth, 29 May 81 and LTC D. P. Schneider, AG Ft Lewis, 8 Jun 81. (2) Ltr, FORSCOM PA to dist, 2 Apr 81, sub: High Technology Test Bed Public Affairs Plan. (3) Ltr, 9th Inf Div Dep PAO to dist, 1 Jun 81, sub: High Technology Test Bed Public Affairs Plan. (4) Draft SOP, n.d., sub: Administration of Resource Management Division. (5) Ltr, Chief Plans Div to All Personnel, 6 Jul 81, sub: Plans Division Organization and Functions.

effective 20 July, a daily 0730 to 0745 coordination staff meeting between himself, General Jones, and Colonels Van Meter, Courtney E. Prisk of Concepts Group, and Edmund A. Thompson of the Material Support Agency.[8]

The period August through October 1981 was one of enormous turmoil and significance to the Test Bed. It began with the 30 July IPR to General Meyer in which he reoriented HTTB and the 9th by stating he wanted more emphasis on conceptual rather than equipment testing, and he wanted the 9th to become a High Technology Light Division by 1985. This was quickly followed by:

- 3 August. General Richardson moves from Commander, CAC to DA DCSOPS. Colonel Van Meter is relieved as Chief, HTTB.
- 9 August. Major General Robert M. Elton, command designee of the 9th Infantry Division selects Colonel Paul G. Cerjan to be Chief, HTTB, and informs him that he will be co-equal to the Division Chief of Staff.
- 10 August. Colonel Courtney E. Prisk, Chief of Concepts Group, becomes interim Chief of HTTB and begins reorganization efforts designed to integrate Concepts Group into the Test Bed.
- 11 August. General Elton takes command of the 9th. General Stone is promoted to lieutenant general, and moves to replace General Richardson as Commander, CAC.
- 12 August through 21 September. TRADOC initiates, staffs and coordinates revision of the October 1980 Memorandum of Understanding.
- Late August. Work on the reorganization of HTTB is completed, and approved by General Elton. An expanded TDA, reflecting eighty spaces, is forwarded to TRADOC. Work begins on supporting manpower documents.

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[8](1) HTTB Management Book. Internal evidence indicated Jul 81 date. (2) Note, Cdr 9th Inf Div to Chief HTTB and ADC(O), 16 Jun 81, no sub. (3) Note, Cdr 9th Inf Div to dist, 12 Jul 81, no sub. (4) Note, Cdr 9th Inf Div to dist, 12 Jul 81, no sub.

- 1 October. I Corps arrives as the senior headquarters at Fort Lewis. It is agreed that the 9th Division Commander will continue as Test Director and I Corps will assist in any way possible (see Chapter 12, Command Relations).

- 21 October. Colonel Cerjan arrives and becomes Chief, HTTB. He and General Elton had already agreed that their priorities should be to develop an operational concept by 1 January 1982 and develop an HTLD design immediately thereafter.[9]

Off-the-record comments made to the author by several of the officers interviewed about the Test Bed indicated that many felt that the great expenditure of effort by HTTB to this point had been largely wasted. For lack of direction and understanding of the mission, in their view, little had been accomplished in the first year of the Test Bed's existence. Some of their misunderstanding is outlined in Chapter 5, The Search for a Mission.

Colonel Cerjan lost no time in trying to settle some of the confusion. In his first week on the job, he held an Organizational Effectiveness meeting of his key subordinates in order to learn to know them, and to hear their concerns in a risk-free environment. Their confusion and lack of direction was evident in some of the topics they raised. Some asked questions as simple as "Why are we testing?" "What is my mission?" "I don't know what the boss really wants done." "Who is driving the train?" Colonel Cerjan tried to address each topic.

Evolution of the HTTB Table of Distribution and Allowances

In the meantime, Colonel Prisk had been trying to finalize the Test Bed TDA. The eighty-slot submission that had gone to TRADOC in August came back in September with only forty-two spaces recognized. This drew a quick response from General Elton. He resubmitted still another proposed TDA, totalling 133 spaces, on 7 October. This resubmission was

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[9](1) Memo, Mr. Jolley to Record, n.d., sub: Periodic HTTB Update by MG Stone to CSA on 30 July 1981. (2) Interview, author with LTC Wynn G. Richards, 22 Mar 84. (Hereinafter, Richards Interview, 22 Mar 84.) (3) Interview, author with COL Paul G. Cerjan, 17 Feb 83. (Hereinafter, Cerjan Interview, 17 Feb 83.) (4) Msg, Cdr TRADOC to dist, 191400z Aug 81, sub: TRADOC Review of 9th ID HTTB MOU. (5) DF, HTTB to CofS 9th Inf Div, 3 Sep 81, sub: Bi-Weekly Report of Significant Actions - 20 August through 3 September 1981. (6) DF, Chief Admin Support Div to All HTTB Div, 27 Aug 81, sub: Schedule X/TDA Submission.

transmitted by a cover letter in which Elton declared his willingness to argue the need for the additional spaces personally all the way to the Deputy Chief of Staff for Personnel.

CAC reworked the proposal, eliminating twenty-two spaces. It should be noted that the proposal included spaces for the DARCOM MSA and an I Corps Coordination Division, not just the HTTB Test Group alone. When CAC forwarded the package to TRADOC on 10 November, it added on six officer positions for its HTTB coordination staff for a total of sixty-five new requirements. CAC recommended approval, and asked the positions be supplied by directed overstrength as the quickest way to get people to Fort Lewis. TRADOC supported the entire package, sending it on to DA, meanwhile authorizing HTTB to begin hiring, as temporary overhire, the requested civilians.[10]

As 1981 ended, the Test Bed had twenty-nine officers, five enlisted, and fifteen civilians for a total of forty-nine assigned. This did not include the MSA or the I Corps cell. In addition, the Test Bed was carrying ten enlisted members on special duty from the 9th Infantry Division. Staffing had more than doubled during the year.[11]

In addition to the efforts to expand the TDA, a number of other actions had been, and were, ongoing. After a ten-month effort, the four officer positions in the HTTB Aviation Systems Branch had been designated as Operational Flying Positions. The revision of the MOU was still being worked. Allied officers had begun to arrive. The mechanics of processing the flow of ideas from various sources had been established, and Fort Lewis personnel were receiving $50 awards for the best idea of each month.

With the establishment of a TDA, HTTB personnel could now be assigned to HTTB directly, rather than being assigned to CAC with duty at Fort Lewis.

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[10](1) Ltr, 9th Inf Div OE to Chief HTTB, 30 Oct 81, no sub, w/Attachments. (2) Memo, HTTB CofS to CG 9th Inf Div, 23 Sep 81, sub: HTTB Organization. (3) Ltr, Cdr 9th Inf Div to Cdr CAC, 7 Oct 81, sub: High Technology Test (HTTB) Organization. (4) Ltr, Cdr CAC to Cdr TRADOC, 10 Nov 81, sub: High Technology Test Bed (HTTB) - Test Group Organization and I Corps HTTB Coordination Division, w/8 Incl. (5) Ltr, CofS TRADOC to VCSA, 4 Dec 81, sub: High Technology Test Bed (HTTB) - Test Group Organization and I Corps HTTB Coordination Division, w/1 Incl. (6) Msg, Cdr TRADOC to Cdr CAC, 282107z Dec 81, sub: Request for Overhire Authority.

[11](1) Memo, HTTB to Record, 17 Dec 81, sub: Personnel Status Report of CAC Assets to CACDA. (2) DF, 9th Inf Div G1 to dist, 29 Dec 81, sub: Special Duty Authorizations, w/1 Incl.

Internal administration of the Test Bed was beginning to appear more routine. HTTB Policy Letter Number 1 established "...policy letters to promulagate the standard method of handling certain recurring activities and actions." Colonel Cerjan was attempting to reduce turmoil by restricting the amount of TDY time expended by his staff. The Test Bed was beginning to sound more and more like any other Army staff section.[12]

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[12](1) Orders 227-82, HQ I Corps and Ft Lewis, 19 Nov 81. (2) DF, HTTB to CofS 9th Inf Div, 19 Nov 81, sub: Bi-Weekly Significant Actions Report, 6 through 19 November 81. (3) Orders 227-2, HQ CAC and Ft Leavenworth, 11 Dec 81. (4) HTTB Policy Letter 81-1, 20 Nov 81, sub: Establishment of HTTB Policy Letters. (5) Msg, Cdr 9th Inf Div to dist, 210830z Dec 81, sub: HTTB Travel Windows, First Quarter, CY82.

CHAPTER 3

THE TEST BED MATURES, 1982

The Test Bed is here to stay.

MG Robert M. Elton
Commander
9th Infantry Division[1]

As 1982 opened, the revisions to the Memorandum of Understanding were being finalized. DA approved the TRADOC request for sixty-five additional personnel spaces for HTTB and CAC on 20 January, so the new MOU documented that increase. The MOU, effective with the signature of the last of the MACOM Chiefs of Staff on 27 February, reflected 116 spaces in the Test Bed, and seventeen in the Materiel Support Activity for a total of 133. The MOU contained appendices dealing with the definition of operational control, HTTB organization, HTTB command and control, funding, allied involvement and use of allied equipment.

At least one officer in the Test Bed disagreed with the new MOU. In a memo to Colonel Cerjan, LTC Wynn G. Richards of the Force Development Division stated he felt "The tangled layering of agencies between 9th ID/HTTB and HQDA - I Corps, CAC, TRADOC, FORSCOM and DARCOM - is bureaucratic and unworkable." Richards recommended the MOU be rescinded immediately, and defined the way the MACOMs and DA should interface, in his view, with the Test Bed. Later, in August, LTC Richards took his cue from a BDM report and recommended that a charter be developed for HTTB, and it be published in a 10-series Army regulation. Richards was with the Test Bed long enough to see most of his recommendations come to pass when HTTB became the Army Development and Employment Agency (ADEA), but no action was taken at the time he made them.[2]

Also, the MOU between the Adjutants General of Fort Lewis and Fort Leavenworth was updated later in the year, as a result of annual review.

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[1]Interview, author with MG Robert M. Elton, 29 Nov 82. (Hereinafter, Elton Interview, 29 Nov 82.)

[2](1) Memorandum of Understanding Between FORSCOM, DARCOM, and TRADOC, sub: The 9th Inf Div High Technology Test Bed, signed by MG William E. Schneider CofS DARCOM 12 Feb 82, MG Charles M. Graham CofS FORSCOM 11 Feb 82, MG John B. Blount CofS TRADOC 27 Feb 82. (Hereinafter MOU, 27 Feb 82.) (2) Memo, Dep C FDD to Chief HTTB, 8 Apr 82, sub: MACOM MOU for HTTB Operations. (3) Memo, Chief PMD to Chief HTTB, 4 Aug 82, sub: Charter for HTTB.

Administrative normalization continued. HTTB applied for a pinpoint distribution account for publications. Policy letters continued to be published. A formalized management plan was staffed for HTTB Testing and Evaluation. Idea Management continued to be a viable project, and had to be addressed. A number of interfaces between HTTB and different elements of the 9th were developed. The Test Bed was visited by the General Accounting Office on an informal basis. The interface between Fort Lewis, I Corps and HTTB relative to operational security and legal support was worked out. And finally, in December, Colonel Cerjan circulated a memorandum to the HTTB staff in which he stated he had become increasingly aware of the internal bureaucracy that had grown within the Test Bed. He gave guidance on how to combat that bureaucracy and charged his subordinates to abide by them.[3]

The use of civilian contractors in support of the Test Bed grew during the year, but not without some discussion. In January 1982 it became known to HTTB that the decision had been made to go to competitive bids for contractual scientific support to the Test Bed, beginning in fiscal 1983. This would replace satelliting HTTB on TCATA's BDM contract. HTTB objected. At that point, they were not in a position to define what support would be needed in FY83, and therefore were unable to state their requirements in a contract or request for bids. CAC sympathized, but pointed out that all TRADOC contracting was being consolidated under the TRADOC Contracting Activity at Fort Eustis, Virginia. Using the Critical Path Method networks just being developed for the Test Bed by BDM, the HTTB prepared an extensive statement of work, and submitted it with a request for contractual support in April. The contract would be for FY83, beginning 1 October 1982.

As the year progressed, the anticipated date for the award of the contract slipped to 1 January 1983. This meant that not only would the current BDM contract have to be extended ninety days, but it would have to be increased. The needed support for these months, as described in

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[3](1) DF, HTTB to CofS 9th ID, 16 Aug 82, sub: Annual Review of the Ft Lewis/Ft Leavenworth Memorandum of Understanding for the USA 9th Infantry Division High Technology Test Bed. (2) Ltr, HTTB XO to Cdr USAAGDC, 28 Dec 82, sub: Justification for Establishment of Pinpoint Distribution Account at USA 9th ID HTTB. (3) Memo, Chief HTTB to CG 9th ID, 12 Feb 82, sub: HTTB Management Plan for Testing and Evaluation. (4) Memo, HTTB to Record, 12 Aug 82, sub: General Accounting Office Visit. (5) Memo, Chief HTTB to Div Chiefs, 9 Dec 82, sub: Test Bed Bureaucracy.

the statement of work, called for a significant increase. CAC provided TCATA with $135,000 for the purpose, and the support was provided.[4]

In the meantime, contracts with RDA continued to be let on a case-by-case basis.

In September, the Test Bed began action to establish a permanent civilian position within its TDA for a contract specialist. The immediate solution was to hire one in an overhire status.[5]

The TDA, however, was another story altogether. As mentioned earlier, DA approved the 133-spaced TDA on 20 January. They also approved six officers and two civilians, through FORSCOM, for I Corps to establish a coordination office. Both FORSCOM and CAC provided funds and hiring authority for the new civilian positions before the end of January. I Corps announced the establishment of its HTTB Coordination Office in June.[6]

Within HTTB, reorganization to the new TDA took place rapidly. Some of the officer spaces were filled with local 9th Division assets, but most had to wait the reassignment process, which DCSPER and the Military Personnel Center expedited. By 8 March the Test Bed had eighty-eight

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[4](1) Msg, Cdr 9th Inf Div to Cdr CAC, 031515z Mar 82, sub: Contractual Scientific Support for HTTB. (2) Msg, Cdr CAC to Cdr 9th Inf Div, 151640z Mar 82, sub: Contractual Scientific Support for HTTB. (3) Ltr, Chief HTTB to Cdr USA Transportation Tng Spt Ctr, 20 Apr 82, sub: Request for Procurement of On-Site Test and Evaluation (T&E) Support to the High Technology Test Bed (HTTB). (4) Msg, Cdr CAC to Cdr TRADOC Combined Arms Test Actv, 161300z Aug 83, sub: Request for Increased Level of Effort - HTTB Contract DA ADEA 18-80C-0053 BDM.

[5](1) Msg, Cdr CAC to Cdr TRADOC, 312152z Mar 82, sub: Contractual Support for HTTB. (2) Memo, Cdr 9th Inf Div to CG I Corps, 16 Sep 82, sub: Contract Specialist, HTTB Staff. (3) Msg, Cdr 9th Inf Div to Cdr CAC, 151830z Oct 82, sub: Request for Approval Overhire.

[6](1) Msg, HQDA to Cdr TRADOC, 201920z Jan 82, sub: High Technology Test Bed (HTTB) - Test Group Organization and I Corps HTTB Coordination Division. (2) Msg, Cdr FORSCOM to Cdr I Corps, 231915z Jan 82, sub: High Technology Test Bed (HTTB) - Test Group Organization and I Corps HTTB Coordination Division. (3) Msg, Cdr CAC to Cdr 9th Inf Div, 281600z Jan 82, sub: Authority to Hire FY82/83 Out of Cycle TRADOC Civilian Positions for HTTB. (4) Msg, Cdr I Corps to dist, 301930z Jun 82, sub: Establishment of I Corps HTTB Coordination Office.

slots filled, twenty-three of which were special duty. They were organized into six divisions: Operations and Support, Test, Force Design, Concepts/Deployment, Idea Management and Financial Management and Transition.[7]

The internal HTTB organization was still being changed frequently. On 1 July Colonel Cerjan directed a major realignment of functions to take place at various times during the month. Two examples: Aviations Systems Branch inactivated, 6 July, and Idea Management and Industrial Interface Division downgraded to branch status and placed under the Concepts and Anlysis Division, 19 July. Even the branch and division names had changed since March. The 1 July letter directed the formation of a Project Management and Transition Division on 6 July. When actually formed on 19 July, it was titled the Program Management Division, and it had no HTLD transition responsibilities. This was typical of the turmoil that had been, and continued to be, evidenced within the Test Bed as needs changed.

On 13 July, TRADOC published orders organizing the Test Bed under a new TDA. In actuality, the change was only in the TDA number, not in any of the organization or personnel authorizations.[8]

A number of peripheral personnel actions were also taking place. The Test Bed requested the assignment of a Medical Service Corps officer, a GS-11 Computer Specialist, a GS-11 Security Manager, and a GS-9 Contract Specialist, as mentioned above.[9]

In terms of outside augmentation, a number of new offices were being formed. Liaison officers had arrived from the Infantry School, the

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[7](1) Msg, DCSPER to Cdr CAC, 031523z Mar 82, sub: High Technology Test Bed (HTTB) - Test Group Organization and I Corps HTTB Coordination Division. (2) Draft Msg, Cdr 9th Inf Div to DCSPER, 12 Mar 82, sub: High Technology Test Bed (HTTB). (3) Briefing Charts, 8 Mar 82, sub: High Technology Test Bed Personnel Status.

[8](1) Ltr, Chief HTTB to dist, 1 Jul 82, sub: Reorganization. (2) DF, HTTB to CofS 9th ID, sub: Bi-Weekly Significant Action Report (16-31 Jul 82). (3) Perm Orders 65-14, HQ TRADOC, 13 Jul 83, sub: US Army High Technology Test Bed Test Group (W4J8AA) Ft Lewis, WA 98433.

[9](1) DF, HTTB to CofS 9th ID, 2 Feb 82, sub: Request for Assignment of MSC Officer to HTTB. (2) Ltr, Cdr 9th Inf Div to Cdr TRADOC, 15 Mar 82, sub: High Technology Test Bed (HTTB) - Test Group Organization and I Corps HTTB Coordination Division. (3) DF, HTTB to CofS 9th ID, 21 Dec 82, sub: Operational Security Office Assignment.

Soldier Support Center and the Artillery School. The Army Materiel System Analysis Agency had sent a GM-15 Supervisory Physical Scientist; the Human Engineering Laboratory had a Human Factors Engineer at Fort Lewis; and CAC had requested a three-man field office be placed at HTTB from the Army Research Institute.[10]

On 2 September work began within HTTB on still another revision of the TDA. The completed package, requesting an additional colonel and twenty civilian spaces was submitted to CAC on 12 November 1982. CAC forwarded the package, recommending disapproval, to TRADOC in mid-December.[11]

In the meantime, another action had begun that would have a profound impact on the Test Bed.

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[10](1) Msg, Cdr 9th Inf Div to Comdt Inf Sch, 171457z May 83, sub: USA Infantry School Liaison Officer to HTTB. (2) Msg, Cdr SSC to Cdr 9th Inf Div, 141700z Sep 82, sub: LOI on Soldier Support Center Liaison Officer to HTTB. (3) Ltr, USAFAS to Chief HTTB, n.d., sub: Letter of Transmittal - Letter of Agreement (LOA) Between USAFAS and HTTB. (4) Msg, Dir of AMSAA to Cdr 9th Inf Div, 211930z Dec 82, sub: AMSAA Analyst at High Technology Test Bed. (5) Ltr, Dir HEL to Cdr 9th Inf Div, 15 Jun 82, sub: HEL Representative to 9th ID/HTTB. (6) Msg, Cdr CAC to DA, 261438z Mar 82, sub: Request for ARI Support to the HTTB.

[11](1) DF, HTTB XO to Div Chiefs, 2 Sep 82, sub: HTTB TDA Reorganization. (2) Ltr, Cdr 9th Inf Div to Cdr CAC, 12 Nov 82, sub: High Technology Test Bed (HTTB) Organization. (3) Ltr, Cdr CAC to Cdr TRADOC, 14 Dec 82, sub: High Technology Test Bed (HTTB) Organization.

CHAPTER 4

HTTB BECOMES ADEA, 1983

> I had talked to Richardson, as DCSOPS, knowing I was going to send him down to TRADOC. I had talked to Wickham, who was the Vice Chief, so that I was sure he generally supported it [the ADEA proposal], and then, of course, to the DARCOM Commander, the FORSCOM Commander. I said we wanted to get something in place so that it was formalized. They all agreed that it needed to be formalized in some way...
>
> General E. C. Meyer
> Chief of Staff
> US Army[1]

General Meyer was due to step down from his position as Chief of Staff of the Army in the summer of 1983. He wanted HTTB institutionalized before he departed. Work had begun on that action in early fall of 1982.

There were two elements of the proposal that stood out: The new organization, called the Army Development and Employment Agency (ADEA), would control its own funds, and it would work on developments for the entire Army, not just for the 9th Division.

General Meyer started formal action on ADEA by requesting support from the Office of the Secretary of Defense, specifically the Undersecretary for Research and Engineering, Doctor Richard D. DeLauer, and the Undersecretary for Defense Policy, Mr. Fred C. Ikle. The memorandum to Doctor DeLauer outlined the expanded mission envisioned for ADEA:

- Examine the interrelationships among high technology equipment capabilities, actual performance, employment concepts, strategic deployability, force design, supportability, soldier interface, and training. This includes qualitative as well as quantitative considerations.

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[1]Meyer Interview, 13 Jun 84.

- Suggest to TRADOC tactics and techniques for the employment of high technology equipment using the AirLand Battle concepts.

- Evaluate the entire spectrum of solutions to specific military problems and operational concepts to include training, organizations, high technology, adaptive engineering, off-the-shelf procurement, equipment product improvement and employment solutions.

- Identify, through simulations, field experiments and user evaluation, key technologies having the greatest impact on improving tactical combat power.

- Develop and evaluate innovative employment concepts, force design, and material requirements for AirLand Battle and AirLand Battle 2000. This effort should be in the context of the total Army (AC and RC) light divisions. Force designs will be evaluated and proposed to provide a total force capable of meeting the broad range of scenarios applicable to light divisions.

- Integrate mobilization considerations into equipment initiatives and force designs.

Doctor DeLauer's handwritten response was "You have both my personal as well as total R&E support in this effort."[2]

The organization chart that accompanied the memorandums showed the 9th Division Commander as the Activity Head, answering to the Vice Chief of Staff, with DSCOPS as the DA staff proponent.

DA telefaxed a copy of a draft memorandum for the Chief of Staff to the MACOMs in late November outlining a master plan for ADEA. As might be expected, reaction was prompt. On 13 December 1982 an HTTB representative met with the DA staff, which was reworking the plan based on the MACOM responses. The Test Bed was to develop a "strawman" ADEA organization and charter.

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[2](1) Telephone Record, DA to HTTB, 18 Oct 82, no sub. (2) Memo, CSA to USD for Policy, 19 Nov 82, sub: Establishment of a Development and Employment Activity at Fort Lewis, WA. (3) Memo, CSA to USD for Research and Engineering, 19 Nov 82, sub: Establishment of a Development and Employment Activity at Fort Lewis, WA.

The MACOM's comments on ADEA were briefed to General Meyer during an in-progress review (IPR) on 7 January 1983. They were summarized as being generally favorable, but all three, DARCOM, FORSCOM and TRADOC, were concerned about the proposed command arrangements. TRADOC and FORSCOM both favored putting ADEA under the I Corps Commander vice the 9th Division Commander. Meyer vetoed that proposal on the spot, for he felt the I Corps Commander was too busy getting the Corps established. As for the other command lines, he would make his decision "this weekend." The result was a decision to leave command relations as they were for the time being, but he directed General Richardson, his Deputy Chief of Staff for Operations (DSCOPS), to begin work on a directive on the establishment of ADEA.[3]

DA hosted an ADEA Action Officer workshop on 2-3 February. A list of unresolved issues was developed and parceled out to the participants. They were to work the issues and reassemble on 17-18 February, following which DA would finalize the package and brief it to General Elton before taking it to General Meyer. HTTB was to draft a proposed TDA and rework its draft ADEA charter.

As a result of all of this activity, several actions that had normally been ongoing at this time each year were put on hold. The revised Test Bed TDA that had been forwarded to TRADOC in December 1982 was disapproved, essentially without action, and the annual review of the MACOM MOU was held in suspense. The Chief of Staff's mid-January decision to formally establish ADEA made both actions moot.

A New Chain of Command

The question of command lines continued to be a major concern. The nub of the question was, should ADEA be a field operating agency of DA, or should it be under TRADOC in some manner? Both FORSCOM and TRADOC felt ADEA should be an agency of TRADOC. DARCOM took no position, since it was expected from the outset that its MSA would be independent of ADEA, and its command relations with DARCOM would remain as they were. DARCOM was debating, however, whether or not to name the MSA head a "Project Manager, Light Forces Material." HTTB supported both the project manager proposal and the DA field operating agency proposal.

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[3](1) Msg, Cdr FORSCOM to DA, 091305z Dec 82, sub: High Technology Test Bed (HTTB) and High Technology Light Division (HTLD) Draft Master Plan. (2) DF, HTTB to CofS 9th Inf Div, 20 Dec 82, sub: Bi-Weekly Significant Action Report (1-15 Dec). (3) Memo, Chief HTTB to Record, 31 Jan 83, sub: CSA Visit to 9th ID/HTTB 6-7 Jan 83. (4) Memo, CofS HTTB to Record, 18 Jan 83, sub: Chief of Staff of the Army Decision on ADEA.

On 15 February, General Elton approved a draft TDA and a draft Army regulation on ADEA that had been prepared by the Test Bed. The proposed TDA reflected six subdivisions: an Office of the Chief, and one for the Scientific Adviser; an Operations and Support Division; a Force Development Division; an Evaluation Division; and a Plans, Programs and Financial Management Division, for a total of eighty-two military and fifty-three civilians, or 135 people. The MSA had fallen away, to be picked up by a separate DARCOM TDA.[4]

The HTTB representative at the 17-18 February DA/ADEA Workshop came away with the sensing that ADEA would probably be placed under TRADOC, with some sort of functional operational control relationship with DA. The Test Bed, as a result of the workshop, was tasked with formalizing and submitting the proposed TDA, and with drafting a test and evaluation annex and a financial management annex for the ADEA charter. DARCOM was to develop an annex on the quick reaction program. In the meantime, work began internally on plans to reorganize provisionally into ADEA. This was expected to take place not later than April.

The DA staff telefaxed a draft action memorandum to HTTB and the MACOMs on 22 February, in which they recommended that ADEA be organized as a field operating activity of TRADOC, with modified authority for ADEA-initiated programs retained by the ADEA Commander and authority for Army programs retained by the TRADOC Commander. Two other options were put forward, however: have ADEA operate as a field operating agency (FOA) of DA, and have it come totally under TRADOC. Again, TRADOC and FORSCOM responded that they felt that ADEA should become a field operating agency of TRADOC, while HTTB advocated direct association with DA.[5]

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[4](1) DF, HTTB to dist, 18 Feb 83, sub: Bi-Weekly SIGACTS Report (1-15 Feb 83). (2) Ltr, TRADOC to Cdr 9th Inf Div, 4 Feb 83, sub: High Technology Test Bed (HTTB) Organization. (3) Msg, Cdr DARCOM to HQDA, 191600z Jan 83, sub: Annual Review of 9th ID HTTB MACOM MOU. (4) DF, HTTB to CofS 9th Inf Div, 12 Feb 83, sub: ADEA TDA and Charter, w/Encl.

[5](1) DF, Dep Chief HTTB to dist, 21 Feb 83, sub: HTTB Taskings Resulting from ADEA Workshop, 17-18 Feb 83, w/Encl. (2) Draft Memo, DA DCSOPS to CSA, n.d., sub: Formation of the Army Development and Employment Activity (ADEA) - ACTION MEMORANDUM. (3) Msg, Cdr TRADOC to HQDA, 251700z Feb 83, sub: HQ TRADOC Position for Input to CSA Decision Memo on ADEA. (4) Msg, Cdr FORSCOM to DA, 251910z Feb 83, sub: Formalizing the Army Development and Employment Activity (ADEA) Concept. (5) Ltr, Chief HTTB to HQDA, 25 Feb 83, sub: Draft ADEA Action Memorandum for CSA.

The question continued as a primary concern as the memorandum was worked and reworked through a second draft on 15 March and a third on 22 March. In the 22 March draft, DA's position changed. It recommended forming ADEA under DA. This drew quick fire from the FORSCOM Commander who stated "We don't need ADEA, but if we must have it, ADEA should be organized under the TRADOC Combat Developments umbrella." TRADOC and DARCOM also disagreed.

The final version, as forwarded to General Meyer on 7 April, recommended that ADEA be a TRADOC agency with authority modified to allow DA oversight. Meyer's handwritten comment on the bottom of the page: "Decision - ADEA to be an FOA of DA. ECM [Edward C. Meyer] 20 Apr 83." The DA staff could probably have saved weeks of work had they surfaced the question to Meyer earlier, for his comments to the author were:

> ...it is absolutely essential. The only way that you are going to make the kind of revolutionary/evolutionary changes that are necessary is to have it come directly back to the Chief. The only reason it is under DSCOPS is that the Chief needs somebody to do the day-to-day work down there. It goes back again to my experience with the 11th Air Assault Division. I saw it work there.
>
> It's controversial only when people don't have the interest of the Army first, and have the interest of their turf first. There are just times when you have to do things in an atypical way in order to get progress more quickly than you could afford through the routine way.[6]

With that question settled, the various documents concerning ADEA could be finalized.

In the meantime, other actions were still moving. A letter of instruction to the various subordinate elements of HTTB was published on 21 March, detailing steps to be taken to reorganize provisionally. When the entire physical complex was complete, ADEA and its peripheral

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[6](1) Draft Memo, DA DCSOPS to CSA, 22 Mar 83, sub: Formation of the Army Development and Employment Activity (ADEA) - ACTION MEMORANDUM. (2) Msg, Cdr FORSCOM to DA, 251310z Mar 83, sub: Organization of the Army Development and Employment Activity (ADEA). (3) Memo, DA DCSOPS to CSA, 7 Apr 83, sub: Formation of the Army Development and Employment Activity (ADEA) - ACTION MEMORANDUM. (4) Meyer Interview, 13 Jun 84.

organizations such as BDM Corporation and the MSA would occupy fifteen buildings on North Fort Lewis. Target date for the reorganization was 4 April 1983.

On 23 March the Test Bed submitted its final version of the new ADEA TDA through CAC to TRADOC. It maintained the same six divisions as outlined earlier, but the figures were now eighty military and sixty-five civilians, for a total of 145. CAC forwarded the TDA to TRADOC, with an endorsement recommending disapproval. HTTB responded with a message rebutting CAC's objections. The TDA went on to DA on 19 May, but there, like the one submitted in December 1982, it was overcome by events. The decision was made to have a DA manpower survey team survey the Test Bed in August. In June, work began on documentation for the survey.[7]

On 21 July the Test Bed submitted its document package to DA, reflecting a proposed TDA of 166 spaces. The manpower survey took place 8-17 August, and verified 108 spaces. The Test Bed reclaimed fourteen spaces, and requested expedited processing so that the results could be considered by the 12 September DA Out-of-Cycle Manpower Board and the TDA could be published by the 1 October target date.

DA did expedite the handling, and made the goal. The finalized TDA, reflecting 58 officers, 1 warrant officer, 9 enlisted and 45 civilians, for a total of 113, was in place by 29 September.[8]

Finding the People

Having spaces was one thing. Filling them was another. Through all the TDA changes since 1980, the Test Bed had never been able to fill all the slots authorized. Each time they came close, the TDA would change.

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[7](1) Ltr, Chief HTTB to dist, 21 Mar 83, sub: HTTB/ADEA Reorganization LOI. (2) Ltr, Chief HTTB through Cdr CAC to Cdr TRADOC, 23 Mar 83, sub: Revised TDA: Redesignation of HTTB to the Army Development and Employment Activity/Agency, w/Incl and Ind. (3) Msg, Cdr I Corps to Cdr TRADOC, 182100z Apr 83, sub: Redesignation of the High Technology Test Bed (HTTB) as the Army Development and Employment Agency/Activity (ADEA). (4) DF, CofS ADEA to CG ADEA, 7 Jun 83, sub: Bi-Weekly SIGACTS Report (1-31 May 83). (5) DF, CofS ADEA to CG ADEA, n.d., sub: Bi-Weekly Significant Actions Report, 16-30 Jun.

[8](1) Draft Msg, CG ADEA to HQDA, 261300z Aug 83, sub: ADEA Personnel Fill. (2) Memo, DA DCSPER to dist, 13 Sep 83, sub: Out-of-Cycle Request for Additional Manpower for US Army Development and Employment Agency (ADEA). (3) Ltr, Dep Cdr ADEA to HQDA, 4 Oct 83, sub: ADEA TDA (SFW4MRAA) Update.

As it became obvious that ADEA was to become a reality, efforts began to fill the positions that Test Bed expected to be authorized. Of particular interest were the officers to head two major divisions of ADEA, Force Development and Test and Evaluation. General Elton personally requested that the Military Personnel Center (MILPERCEN) assign qualified officers to ADEA for these spaces. As time went on, the decision was made to request that the two positions be upgraded from lieutenant colonel to colonel. As the TDA was developed, this upgrade came to pass.

In the early days of the Test Bed, there had been some question of the quality of officers it received. These questions continued, as there was always concern that the Test Bed might not be getting the high quality of talent that it felt it needed. Shortly after General Robert W. RisCassi took command of ADEA and the 9th Division on 27 May 1983, he wrote MILPERCEN and asked that they do a quality analysis of the officers then assigned to the Test Bed. The response was that the quality of ADEA officers was comparable to those in similar agencies such as the Army Concept Analysis Agency.[9]

As for civilian employees, a number of actions were affected by the establishment of ADEA, and by the adoption of the TDA. Approval of the TDA did not grant the Fort Lewis Civilian Personnel Office (CPO) authority to recruit for the senior-level spaces, GS/GM-13 and above. In coordination with ADEA, the CPO requested approval of the additional spaces reflected on the new TDA, while there was ongoing effort to hire the lower-level personnel.

Another administrative matter threatened to slow recruitment. As a field operating agency of DA, it was obvious that ADEA's manpower spaces, both military and civilian, would no longer be provided by TRADOC and FORSCOM, but directly by DA. This presented little problem for the military, but some added administrative requirements for the civilians. The Civilian Personnel Officer reminded ADEA that he had to have, in addition to funding and an approved TDA, another document which delegated to him the authority to be an "Appointing Officer."

ADEA queried DA as to who would have the authority of Appointing Officer, DA or Fort Lewis. They also questioned several other things that would take notice of delegation authority from DA, such as the

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[9](1) Draft Msg, CG 9th Inf Div to CG MILPERCEN, n.d. (sent 11 Mar 83), sub: Key Officers for ADEA, w/Atch. (2) Msg, Cdr ADEA to HQDA, 231300z Jun 83, sub: Army Development and Employment Agency (ADEA) TDA Grade Authorizations. (3) Ltr, Cdr ADEA to Dir OPMD MILPERCEN, 24 Jun 83, no sub. (4) Ltr, Dir OPMD MILPERCEN to Cdr ADEA, n.d., w/Incl.

authority to approve monetary awards for such things as suggestions, meritorious and outstanding civilian service awards, etc. The senior grade position question was also readdressed.

DA responded that authority as Appointing Officer was delegated to the ADEA Commander and that it could be further delegated to the Fort Lewis Civilian Personnel Officer. This was done by General RisCassi. DA granted authorization for three high-grade civilians, and promised to address requests for more. The other requests were handled in different ways.

In a final action, General RisCassi designated the Colonel, Deputy Commander, ADEA, as his Position Management Officer for the Agency.

In the meantime, ADEA and the Fort Lewis Facilities Engineers were working on housing the expanded activity and all its various peripheral organizations.[10]

In addition to ADEA itself, as of 2 August 1983, the following personnel were either on hand or expected in: The MSA, 34; TRADOC Liaison Element, 21; Air Force, 6; Marine Corps, 1; BDM, 19; Professional Grade Liaison Officers (Human Engineering Lab and Army Material System Analysis Agency), 2; and Allied Officers, 4; for a total of 97. As the fiscal year ended, ADEA was working on expanding the BDM contract still further.

The TRADOC Liaison Element was set up as a separate entity from ADEA during the summer. It consisted of Colonel Kenneth Montgomery as Chief, seventeen School/Center liaison officers, and three civilian clerks. It was subdivided into three sections, under the liaison officers from the three Centers, i.e., CAC, the Soldier Support Center and the Logistics Center.[11]

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[10](1) DF, CPO to ADEA, 23 Sep 83, sub: Senior Level Spaces. (2) DF, CPO to ADEA, 27 Jun 83, sub: Recruiting Time on ADEA Jobs. (3) Msg, Cdr I Corps to HQDA, 231900z Sep 83, sub: Establishment of ADEA. (4) Draft Msg, HQDA to Cdr I Corps, n.d. (Telefaxed to ADEA 20 Oct 83), sub: Establishment of ADEA. (5) Ltr, Cdr ADEA to Ft Lewis CPO, 20 Oct 83, sub: Civilian Personnel Management Program - Delegation to Act. (6) Ltr, Cdr ADEA to Dep Cdr ADEA, 20 Oct 83, sub: Designation of Position Management Officer. (7) DF, ADEA to Dir Facility Engr, 19 Jul 83, sub: Request Administrative Space to Support ADEA.

[11](1) Chart, 2 Aug 83, sub: ADEA Required Figures. (2) Msg, Cdr TRADOC to dist, 262124z Jul 83, sub: TRADOC Liaison (LNO) Element to US Army Development and Employment Agency (ADEA).

Throughout the year, HTTB/ADEA had been working its usual myriad of normal and abnormal actions. These varied from such routines as changing chiefs, as when Colonel Lawrence Dacunto replaced Colonel Cerjan on 25 February, to getting the Surgeon General to agree with "dual hatting" the 9th Division Surgeon as concurrently being the ADEA Surgeon.[12]

ADEA and the New Light Division

In the summer, while the ADEA charter was being worked, the question arose as to how deep the agency should become involved with light forces, and the light infantry division in particular. When General Meyer retired from the position of Chief of Staff of the Army, and was replaced by General John A. Wickham, Jr., General Wickham lost no time in instituting a CAC study of a very light 10,000-man division. How was ADEA to interface? There was even, for a brief moment, discussion of forming a High Technology Test Bed for special operations forces. This proposal triggered a deeper look at the topic.

In July, the DA Chief of the High Technology and Testing Division, DCSOPS, sent an information memorandum to the DCSOPS in which he recommended that ADEA deal with the light infantry divisions and the HTLD only, and not with other light forces. The other light forces were defined as including airborne, air assault, special forces, civil affairs, rangers, and psychological operations units. This apparently had the desired effect, since there is no record of further discussion of ADEA becoming involved with forces other than HTLD and the light infantry division.

This still left a question of how ADEA would interact with the 10,000-man light infantry division, which was beginning to take shape during the late summer. This new division design had the personal sponsorship of General Wickham. In late July the ADEA/9th Division Commander, General RisCassi, was asked by the CAC Commander to comment on the draft operational concept for the light division. RisCassi responded by message on 17 August with several recommendations.

ADEA had been commenting since June on how it should interact with the light division. As time went on, three possible courses of action were surfaced by General RisCassi:

- Terminate work on the HTLD and have the 9th transition to the light infantry division design, with ADEA's assistance. Seen as the

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[12](1) DF, HTTB to I Corps AG, 14 Feb 83, sub: Request for Entry in the FL Daily Bulletin. (2) Memo, Cdr ADEA to ADEA CofS, n.d., no sub.

easiest course to take, but one with serious implications because of the years of effort already expended on the HTLD.

- Have the 9th continue the HTLD effort, plus evaluate the light division design, perhaps by transitioning a brigade "slice" to the 10,000-man design. Seen as very difficult, requiring an increase of resources at Fort Lewis and a decrease of readiness requirements and distractors such as ROTC summer camp support.

- The light division would not be evaluated at Fort Lewis, but ADEA would be responsible for the evaluation while it continued work on the HTLD. Seen as difficult because of communication and control problems when dealing with an off-post division, requiring additional resources for ADEA.

These proposals were still being discussed as Fiscal 1983 came to an end.[13]

Also as the fiscal year closed, many of the various other actions concerning HTTB's transition to ADEA were culminated. As mentioned earlier, General Meyer's decision to have ADEA become a field operating agency of DA, with DA DCSOPS as its proponent, cleared the way for work to continue on an ADEA charter, an Army regulation, internal organization and functions, etc.

Transition to ADEA

HTTB had done a great deal of work internally in preparation for the change to ADEA. To quote Colonel Richards, "We had already laid all the ground work to do that. We had letterheads printed up, new telephone

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[13](1) Draft Memo, DA Army Initiative Group to DA DSCOPS, 22 Jun 83, sub: High Technology Test Bed for Special Operations. (2) Memo, Chief HTTB to DSCOPS, n.d., sub: Expanded Operational Test Bed for Light Forces--Information Memorandum. (3) Msg, Cdr ADEA to Cdr CAC, 171600z Aug 83, sub: 10,000-Man Light Infantry Division Concept Statement, w/Atch. (4) DF, CofS ADEA to CG ADEA, 24 Jun 83, sub: ADEA Comments on Draft Action Memorandum for CSA ("Future of Light Infantry Divisions"), w/Incl. (5) Msg, Cdr 9th Inf Div/ADEA to Cdr FORSCOM, 131600z Sep 83, sub: Force Structure and Design Initiative for an Army of Excellence.

rosters made, the whole nine yards." Colonel Dacunto, the recently-appointed Chief of HTTB (for a time the title was Chief of Staff, ADEA, after the provisional reorganization), had a packet all ready to distribute far and wide announcing the changes. The provisional reorganization at Fort Lewis took place on 25 April 1983. According to a DA message to the field on 27 April, the formal decision to form ADEA had been made on 20 April.

Work on a concept plan had been ongoing between ADEA and DA for some weeks. This concept plan had a number of elements: The TDA, discussed above; an ADEA charter; a functions listing for each ADEA element; workload estimates; and an Army regulation. The strawman packages, to go to DA, would allow DA to prepare a finalized package for staffing and a Chief of Staff decision. Most of these elements were well underway by the time of the provisional reorganization on 25 April.[14]

Much of the month of May was spent in developing these draft documents, in close coordination with DA. The TDA was submitted to DA on 19 May; ADEA published its mission and functions manual on 24 May; the draft Army Regulation (AR) and a more detailed charter were released by DA to ADEA, the DA staff, and the MACOMs for formal staffing on 27 May, with a 13 June suspense. As might be imagined, the commentary was considerable.

Some of the DA staff agencies were tardy in responding. This delayed the anticipated publication date of the charter until the end of July. The AR would be finalized later. In the meantime, ADEA and DA went back to work on the charter, incorporating the MACOM input while still trying to agree among themselves. ADEA's final response went to DA on 22 July. Finally, the charter went to the Chief of Staff for approval on 15 August. General Wickham signed it and it was published on 15 September 1983. ADEA's mission statement was:

> In an accelerated manner, ADEA will identify, evaluate, and recommend to Department of Army operational concepts, doctrine, organizations, material requirements, technology, and training developments which will improve the combat power, deployment capability, mobilization, and sustainability of light infantry divisions in the

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[14](1) Richards Interview, 22 Mar 84. (2) Note, CofS ADEA to CG ADEA, 22 Apr 83, no sub, w/Atch. (3) Msg, HQDA to dist, 271135z Apr 83, sub: Formation of the Army Development and Employment Agency (ADEA). (4) DF, CofS ADEA to CG ADEA, 4 May 83, sub: Bi-Weekly SIGACTS Report (16-30 Apr 83).

> total Army. This includes developing the 9th ID as an evolving prototype of a new type light division and providing ideas and products for use in upgrading the total Army's light infantry divisions.[15]

On 10 October, Colonel Dacunto reissued his announcement to the field of ADEA's existence, to include a copy of the ADEA charter, a revised organization chart reflecting the changes dictated by the August DA manpower survey, and a new telephone roster. On the same day, ADEA's new organization and functions manual took effect.

Almost as an afterthought, on 7 November, DA published General Orders Number 47. They stated:

> US ARMY DEVELOPMENT AND EMPLOYMENT AGENCY (W4MRAA). Effective 1 October 1983, the US Army Development and Employment Agency, a field operating agency of the Office of the Deputy Chief of Staff for Operations and Plans, is established.[16]

HTTB had become ADEA.

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[15](1) DF, CofS ADEA to CG ADEA, 7 Jun 83, sub: Bi-Weekly SIGACTS Report (1-31 May 83). (2) DF, CofS ADEA to CG ADEA, n.d., sub: Bi-Weekly Significant Activities Report, 16-30 Jun. (3) Memo, COL Dacunto to CG ADEA, 22 Jul 83, sub: "Final" Draft of ADEA Charter. (4) DF, CofS ADEA to CG ADEA, n.d., sub: Bi-Weekly Significant Activities Report (1-15 Aug 83). (5) Charter of the Army Development and Employment Agency, HQDA, 15 Sep 83.

[16](1) Ltr, Dep Cdr ADEA to dist, 10 Oct 83, sub: Organization of the Army Development and Employment Agency (ADEA), w/Incl. (2) Organization and Functions Manual for the Army Development and Employment Agency (ADEA), effective 10 Oct 83. (3) GO47, HQDA, 7 Nov 83.

CHAPTER 5

THE SEARCH FOR A MISSION

> ...at the start what I was hoping would happen was, as in the 11th Air Assault, the ideas bubbled up from down below. My own view at that time was that the more it was their idea, their baby, that the more enthusiasm and interest would evolve. If it became a case in which everything were directed downward, you would end up stifling their initiative, essentially, and I really felt strongly about that.
>
> General E. C. Meyer
> Chief of Staff
> U.S. Army[1]

General Stone had repeatedly asked for a definitive mission statement for the High Technology Test Bed, starting in early May of 1980. Different interpretations of what the Chief of Staff really wanted the Test Bed to do were to cause friction until the spring of 1981. The question was still being asked by ex-test group members the author interviewed in 1984.

The issue was far more complex than it would initially appear. It encompassed the question of "who's in charge here," which in turn involved matters of "turf" or command authority and prerogatives.

While the Memorandum of Understanding was being worked by DA, FORSCOM, DARCOM and TRADOC in the summer of 1980, the 9th ID drew up one of its own. Among the assumptions which it made in doing so were:

- There were two distinct missions; enhance 9th ID near-term combat capabilities, and evaluate emerging operational and organizational concepts.
- Must maintain 9th ID readiness.
- Organizational rather than equipment testing, which would include DA, FORSCOM and 9th ID ideas and initiatives.

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[1]Meyer Interview, 13 Jun 84.

This draft was sent to FORSCOM on 27 June 1980. It is significant in that it places primary emphasis on improved near-term 9th ID capabilities and readiness and that it excludes "ideas and initiatives" from TRADOC. This reveals a mind-set that was to continue in the 9th.

General Stone had correctly interpreted General Meyer's intent. On 3 September he caused the formation of several committees "...for developing candidate organizational arrangements and operational concepts..." because: "The Chief of Staff of the US Army expects that many of the operational and organizational concepts to be evaluated as part of the High Technology Test Bed Program will emanate directly from the 9th Infantry Division."[2]

Infantry Division 86 or a New Light Division?

On the other hand, General Meyer approved Infantry Division 86 (ID86) for planning and testing on 18 September. TRADOC, and more specifically CAC, had been working on that project vigorously for over a year. Lieutenant General William R. Richardson, the CAC Commander, had his own interpretation of General Meyer's intent. In a message to the TRADOC commander on 8 October, he spelled out that interpretation. The message begins with the statement: "We need to push the planning effort for the 9ID HTTB to ensure that the overall plan fully incorporates near-term enhancements, the field testing of ID86 concepts and organizational designs, and eventual conversion of the 9th ID to ID86 organizations."

General Richardson went on to say that he felt there were two major initiatives that should take place in the HTTB, which were largely complementary to one another:

> The first of these is to field test, where necessary, the concepts and organizational designs of Infantry Division 86 approved by CSA for planning and testing...
>
> The second major initiative is the infusion of advanced present day material systems into the 9th ID with the objective of enhancing the capability of the division to defeat heavy forces...

Since CAC was the action arm of TRADOC in HTTB matters, the difference in attitudes between them and the 9th was significant.

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[2](1) Memo, 9th Inf Div to FORSCOM DCSOPS, 27 Jun 80, sub: HTTB MOU. (2) Ltr, MG H. F. Stone to dist, 3 Sep 80, sub: High Technology Test Bed.

General Richardson, who had selected Colonel Van Meter to be the TRADOC Deputy Test Director for the Test Bed, had oriented him as to CAC's desires. Colonel Van Meter's mission was clear to him: "[Infantry] Division 86 was clearly the structure from which we were to launch the test. That structure was down on paper. It gave to us equipment, it gave to us individuals, numbers of people assigned to organizations, etc. That was the clear mission as I understood it, and let me say up front that this was not the mission as was perceived in the eyes of the 9th Infantry Division."

Yet Colonel Van Meter's efficiency reports were written by General Stone, and went forward to General Richardson for his comments. Van Meter started life in HTTB faced with the fundamental problem of having two bosses with differing objectives in mind.

The differing perspectives not only affected people on the ground at Fort Lewis, but the action officers at CAC as well. One, Colonel Kenneth H. Montgomery, the Director of the TRADOC Independent Evaluation Directorate under CAC, put it this way:

> We always had a problem at the Chief of Staff IPRs, in that two people hearing the same thing interpreted it differently.
>
> There was a problem in the first six months determining who was in charge, because General Stone thought he was in charge, and yet TRADOC thought they were in charge. TRADOC was trying to give direction and it wasn't being accepted. Finally it became clear, not immediately, but after a period of four or five months of struggling against each other, that General Meyer intended for the 9th Infantry Division to be in charge. He wanted the Division to be designed from the troop/FORSCOM perspective. Also it was a little bit confusing because there seemed to be a direct link between General Meyer and CG, 9th ID. FORSCOM wasn't always in the loop, and TRADOC was not always in the loop. This caused some heartburn and problems initially, but eventually we all got the message as to how it was being run. It wasn't always clear to the underlings, people working the problem.[3]

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[3](1) Msg, Cdr CAC to Cdr TRADOC, 081700z Oct 80, sub: 9ID HTTB Plan. (2) Van Meter Interview, 23 Aug 84. (3) Interview, author with Colonel Kenneth H. Montgomery, 5 Jul 84. (Hereinafter, Montgomery Interview, 5 Jul 84.)

During the MACOM Program Review held at TRADOC on 15 October, TRADOC briefed the purposes of HTTB as: "To provide, through field tests and supporting analyses, and evaluation of candidate operational, organizational and technological opportunities for enhancing the command and control, fire power, tactical mobility, survivability, flexibility and sustainability of the infantry division with a major emphasis on improving its strategic deployability."

At the same meeting, General Stone had in his hands a read-ahead packet prepared for him by HTTB. At the back of that packet was a position paper that Colonel Felter had removed from the other packets that were passed about. That position paper stated, in sum, that if the opportunity arose General Stone should emphasize that while ID86 was a good theoretical guide, it was clear that DA intended for the 9th to examine ideas from other sources as well. Whether Stone got the chance to service the topic is unknown. If so, it apparently did not materially change any attitudes, for Colonel Van Meter came away from a visit to CAC on 31 October "...still convinced TRADOC believes 9th ID is to test ID86..."[4]

On 6 November 1980, TRADOC formalized the appointment of CAC as its proponent in HTTB matters by message. While there had been no doubt of it all along, this ensured that the issue of the divergent views of Generals Stone and Richardson would have to be dealt with.[5]

General Stone invited General Richardson to visit Fort Lewis on 16 January 1981. In a message accepting that invitation, Richardson expressed concern that there were differences of opinion concerning the primary purposes of HTTB. He stated that based on his conversations with General Meyer, General Starry, Lieutenant General Otis and others, the purposes in priority were:

- To check out the ID86 organization and structure prior to Army-wide implementation.
- To collect, experiment with, and infuse high technology systems or subsystems that would enhance the light division's combat effectiveness and deployability.

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[4](1) Briefing slides presented in TRADOC's Introductory Briefing, MACOM FY81-82 Test Program Coordination Meeting, 15 Oct 80. (2) Preparation Packet for MG Stone, MACOM FY81-82 Test Program Coordination Meeting, 15 Oct 80. (3) Memo, HTTB, 31 Oct 80, sub: After Action Trip Report.

[5]Msg, Cdr TRADOC to dist, 062130z Nov 80, sub: 9th Infantry Division High Technology Test Bed.

- To allow the division commander and test director local initiatives for improving the light division's combat capability.
- To provide a conduit for harnessing allied and industry ideas for enhancing the light division's capability.

General Richardson saw those purposes as largely complementary. He asked that Stone address any dissatisfaction he had with them during the 16 January meeting.

After the meeting, General Stone issued a statement with Richardson's concurrence, to the various headquarters concerned with HTTB. The message stated that ID86 would provide the baseline for all HTTB evaluations, but that Richardson understood that the Test Director should be able to deviate from ID86 when warranted as testing progressed. Any conflicts would be resolved by the MACOMs or by Headquarters DA.

That did not settle the matter, however. In another message to the major participants on 5 February, Richardson addressed the following request to Headquarters DA: "Clearly define the 9th Infantry Division's High Technology Test Bed mission." The message announced a general officer workshop to be held in the Pentagon later in February, date to be announced. The meeting was actually held on 6 March 1981.

General Stone spent some time in the Pentagon on 20 February coordinating a number of topics with various officers. In a dictated summary of the day's events, two points affecting the mission came out: The belief was that getting the division light was becoming more critical than testing ID86, and that the HTTB mission still lacked clarity. At the general officers workshop on 6 March, the mission was reviewed and several suggestions advanced by General Stone. It was agreed that the topic would be presented to General Meyer for clarification.[6]

On 9 March General Meyer sent a message to the MACOMS and the 9th addressing HTTB problems as he perceived them:

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[6](1) Msg, Cdr CAC to Cdr 9th Inf Div, 101755z Jan 81, sub: Visit to High Technology Test Bed. (2) Msg, Cdr 9th Inf Div to dist, 230020z Jan 81, sub: Light Div 86 Baseline for HTTB. (3) Msg, Dep Cdr TRADOC to dist, 051820z Feb 81, sub: High Technology Test Bed General Officer Workshop. (4) Transcript, MG Stone's dictation on visit to the Pentagon, undated. (Date 20 Feb 81 found internally.) (5) Transcript, MG Stone's dictation on General Officers Workshop, 6 Mar 81. (6) Preparation Packet for MG Stone, HTTB General Officers Workshop, 6 Mar 81.

Mission...to develop a new light division designed for rapid deployment, sustainability, and exploitation of technical opportunities in order to produce a lean, hard-hitting force. Through incremental enhancements resulting from innovations and technology, develop a division possessing the combat capability of a heavy division, while retaining the airlift requirements and sustainability inherent to light divisions.

Through:

° Infusion of high technology.

° Experimentation and tests.

° Integration of new equipment.

° Force design change.

° Doctrinal and tactical innovation.

° Contribution of industry and allies.

Using:

° Standard infantry division as a base.

° Infantry Division 86 as a guide.

a. ...we are beginning the process of beginning on the operative light force structure for our active and reserve components for at least the next 10 to 20 years (and, perhaps, the divisions we could create if we mobilized).

b. The prime responsibility for execution of the High Tech Test Bed efforts rests with the Test Director--MG Stone. I am convinced that the fundamentally important and critical contributions to this project will be made by the leaders and soldiers at Fort Lewis.

c. The pinpointing of responsibility is not intended to obviate the traditional roles performed by the combat developer--TRADOC, the material developer--DARCOM or the readiness agent--FORSCOM, but to place squarely the prime responsibility for success and execution.

d. The ID86 design should be used as a guide. I see ID86 as a well-thought out point of departure but not as a constraint.

General Meyer went on to emphasize the high priority he wished the Test Bed to have, and the emphasis he wanted the MACOMS to give. He also asked General Stone to periodically update him on the effort, beginning with an in-progress review (IPR) to be arranged as soon as practical.

The Mission Clarified

As a result of the meeting and of General Meyer's message, a flurry of actions took place: General Stone got out a message with a revised mission statement and list of implied tasks; reponses concurred, or offered revisions. Finally, on 16 April 1981, the first official in-progress review was held for General Meyer. The Test Director's mission was presented as:

> Expeditiously transition the 9ID into a technologically advanced, combat ready light infantry force prototype capable of rapid strategic deployment characterized by:
>
> ° Tactical mobility.
>
> ° Firepower.
>
> ° Survivability.
>
> ° Sustainability.
>
> Adequate to execute world-wide contingency missions while retaining significant utility on the European battlefield.

Included in the 9th's planning assumptions was a statement that ID86 would be a guide but it should not restrict the Test Director's initiative and military judgment.

General Meyer concurred in the mission statement. He went even further, by stating that the Test Director had to be the "primary player," with the freedom to innovate, and that he was "...not obliged to do anything with regard to ID86 as a start point if it does not make sense."[7]

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[7](1) Msg, HQDA to dist, 092257z Mar 81, sub: 9th ID High Technology Test Bed. (CONFIDENTIAL - Info used is UNCLASSIFIED). (2) Briefing slides, CSA IPR, 16 Apr 81. (3) Msg, HQDA to dist, 221800z Apr 81, sub: Illegible.

Infantry Division 86 was still not a dead issue by far, but now it was understood who was in charge. Henceforth items worked on in HTTB would be at the Test Director's initiative, or at least with his concurrence.

CHAPTER 6

THE DARCOM MATERIEL SUPPORT ACTIVITY

> ...historically, what the Army had done was develop equipment, hand it to the various units, and then operations and tactics had to be developed. That is the wrong way to develop equipment, in my judgment. The right way to develop equipment is through the combination of operations and the technologist working together right in the field....
>
> General E. C. Meyer
> Chief of Staff
> U.S. Army[1]

It was agreed at the 19 June 1980 four-star meeting that DARCOM would provide a Deputy Test Director to head the materiel development support team at Fort Lewis. The 18 July message to the field formally charged DARCOM to provide that deputy, and his materiel development support team. DARCOM, through this team, was to provide advice on materiel related matters; provide the required systems and related support packages; provide technical assistance; and request and allocate funds for the purpose.[2]

The 1980 MOU was delayed from 25 August to 8 October while DARCOM finalized the paragraphs dealing with its responsibilities, and had the changes staffed. Theirs was the final signature on 8 October.[3]

DARCOM was quick to respond in other ways, however. Orders were cut on Colonel Edmund A. Thompson on 15 September which required him to report for duty at Fort Lewis on 1 October, for duty as Chief of the Materiel Support Activity. On 18 September orders were issued establishing the "US Army DARCOM High Technology Test Bed Materiel

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[1]Meyer Interview, 13 Jun 84.

[2](1) Msg, FORSCOM DCSOPS to Cdr 9th Inf Div, 301100z Jul 80, sub: High Technology Test Bed (9ID). (2) Msg, HQDA to dist, 181555z Jul 80, sub: 9ID High Technology Test Bed.

[3](1) DF, TRADOC Dir Test and Eval to TRADOC DCSCD, 11 Sep 80, sub: Read-ahead Package for 9ID HTTB Meeting, 12 Sep 80, Ft Lewis, WA. (2) MOU, 8 Oct 80.

Support Activity" at Fort Lewis, with a strength of three officers and three civilians. The senior officer was to be rated by the Commander, 9th ID and senior rated by Headquarters, DARCOM.[4]

Colonel Thompson reported to Fort Lewis on 1 October as ordered. He promptly received a packet of material from DARCOM which included a table of distribution and allowances (TDA) for his activity. The TDA contained pen and ink changes that reduced the number of officers to two (colonel and major) and increased the civilians to four (GS-4, GS-5, GS-12, GS-13). The cover letter authorized the hiring of the civilians, and stated that the DARCOM Manpower Office had initiated action on its Officer Distribution Plan to reflect the officer slots. The Materiel Support Activity (MSA) TDA stated the activity's missions as: "Serves as the official representative of the Commanding General, US Army Materiel and Development Command, at the High Technology Test Bed, Fort Lewis, for all HTTB materiel support matters and coordinates the resolution of policy matters between DARCOM and the director of the HTTB at Fort Lewis."[5]

Colonel Thompson lost no time in beginning to recruit personnel to fill his office. In a report to DARCOM dated 14 October he stated that he had hired his GS-5 secretary, and was interviewing for the GS-13, the GS-4 and the major positions.[6]

In spite of this auspicious start, it should be noted that the MSA organization, both in terms of numbers of people and in some instances quality of people, was considered inadequate. This, coupled with the sensing that DARCOM as an organization was less flexible and responsive than the other organizations involved, led to a general belief that DARCOM was a very reluctant participant in the Test Bed experiment. This was a persistent theme throughout the interviews conducted by the author, from the HTTB level on up through CAC to the DA staff. This negative perception continued until the summer of 1982, when changes in personnel and organization in place.[7]

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[4](1) Orders, MDW 180-24, 15 Sep 80, as pertaining to COL Edmund A. Thompson. (2) Permanent Orders, DARCOM 71-2, 18 Sep 80.

[5](1) TDA XXW4GEAA, HQ DARCOM, effective date 801001. (2) Ltr, HQ DARCOM to Chief MSA, 10 Oct 80, sub: Program Budget Guidance (PBG) for FY81, 82, and 83.

[6]Ltr, Chief MSA to DARCOM, 14 Oct 80, sub: Significant Activity Report.

[7](1) Interview, author with LTC (Ret) Wynn G. Richards, 22 Mar 84. (Hereinafter, W. G. Richards Interview, 22 Mar 84.) (2) Meade Interview, 12 Jun 84. (3) Montgomery Interview, 5 Jul 84. (4) Prisk Interview, 12 Sep 82.

At a 15 October 1980 program review held at TRADOC, Colonel Thompson presented a summary of DARCOM initiatives in support of the Test Bed:

- Loan and transportation at DARCOM expense to and from the initial HTTB test site, any type classified item currently in the DARCOM inventory.
- Product improve all type classified material in response to an approved requirements document.
- Product improve any type classified item which can be incorporated in an existing advance technology development or strategic development funding program, provided the cost does not exceed $1.99 million.
- Loan developmental prototypes to HTTB.
- Test all non-developmental items (NDI) which can be associated with an existing research, development, test and evaluation program element.
- Test all non-developmental items in response to an approved requirements document.
- Loan to TRADOC any non-developmental item procured for testing by DARCOM.

Two of the seven initiatives were caveated with the term "in response to an approved requirements document." This was to cause the Test Bed some difficulty initially, for the normal requirements document included many pages of detail. The Test Bed was not inclined to prepare such a document, even had it known how. To the people at Fort Lewis this was a signal that the requirements of the test bed were being treated as business as usual by DARCOM. As time went on, however, a much simplified requirements document was worked out which was acceptable to DARCOM.[8]

Colonel Thompson had two formal methods of communicating with his senior headquarters: the submission of a weekly significant actions report and quarterly briefings to the DARCOM commander. The first of these briefings took place on 30 January 1981.

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[8](1) Briefing Charts presented by DARCOM at the MACOM FY81-82 HTTB Program Review, 15 Oct 80. (2) Braun Interview, 30 Sep 82. (3) Prisk Interview, 12 Sep 82.

Both of the MSA's senior civilian technicians reported in during the last half of January. Apparently there had been some question as to who would pay the personnel costs associated with the establishment and operations of the MSA, particularly the GS-12 that had been substituted for the third officer. This was clarified when, on 5 February, DARCOM agreed to pay the salaries, moving costs and TDY for all six MSA personnel.[9]

A minor administrative oversight between the MSA and Fort Lewis was cleared up on 8 May by the publication of DARCOM Permanent Orders 89-12. The MSA was attached to Headquarters and Headquarters Company, 9th Infantry Division, for the administration of military justice.[10]

As time progressed, DARCOM recognized the size and complexity of the HTTB tasks. It repeatedly increased the personnel authorizations for the MSA, beginning in the summer of 1981. By 8 October 1982, the authorized staff was seventeen military and civilians, almost a threefold increase over the initial staffing.

Also in October 1982, the second chief of the Materiel Support Activity, Colonel John S. Ott, began the publication of Notes from the DARCOM Materiel Support Activity. This was a brief two or three page summary of MSA activity that was periodically circulated both on Fort Lewis and within the DARCOM and TRADOC communities.

The MSA's TDA was formally revised to reflect the personnel increases effective 5 January 1983. The revision also reflected a new internal organization within the MSA. The MSA Office consisted of two officers and two civilians; the Materiel Support Division, one officer and four civilians; and the Technical Requirements Division, four officers and three civilians. Both of the divisions were headed by civilians.[11]

Parallel development of another entity dealing with materiel development was taking place which would effect the MSA. It may be remembered that the 1980 Army Science Board Summer Study produced a recommendation that an adoptive engineering team, or "Skunk Works"

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[9](1) Ltr, Chief MSA to DARCOM, 7 Jan 81, sub: Significant Activities Report. (2) Ltr, Chief MSA to DARCOM, 14 Jan 81, sub: Significant Activities Report. (3) Memo, HTTB Admin and Log Div to COL Thompson, 5 Feb 81, sub: DARCOM Funding.

[10]Permanent Orders, DARCOM 89-12, 8 May 81.

[11](1) Pub, Notes from the DARCOM Materiel Support Activity, 25 Oct 82. (2) TDA XXW4GEAA, effective 5 Jan 83.

should be established to provide on-the-ground capability to alter or produce hardware. It was 1 May 1981 before any formal action was taken to establish such an organization. The 9th Division Assistant Division Commander for Support was the program manager for the Skunk Works. The trail of responsibility flowed from him through the Fort Lewis Director of Industrial Operations (DIO) to the Installation Maintenance Officer (IMO). On 1 May, the DIO forwarded an implementation plan for the Skunk Works to the Chief of Staff of the 9th. The proposal was to hire four additional civilian engineers to staff the project. There would be a Skunk Works director, an industrial engineer, an electronics engineer, and a mechanical engineer who would do the adoptive engineering. The Installation Maintenance Division's journeyman tradesmen would do the actual fabrication. It was proposed that projects would come from a military/civilian think tank, yet to be formed, and from HTTB. Estimated costs were $135,427 annually for the four civilians, plus $5,000 for office supplies to set them up.

The proposal was forwarded from Fort Lewis to FORSCOM requesting that slots for the four engineers be recognized. Thus began a struggle that was to last for over two years. FORSCOM refused to grant the positions, on the basis that this was not truly a base operations function. Fort Lewis resubmitted its request with further justification. FORSCOM again refused. The problem was raised to general officer level by a series of messages between Fort Lewis and FORSCOM, but FORSCOM stood fast in its refusal. In the meantime, Fort Lewis had hired the engineers, on a temporary basis, using its own funds.

On 3 December 1981, Fort Lewis sent a message to CAC asking that the four spaces be provided by TRADOC. The response is unknown but it was obviously not positive, for a year later on 15 December 1982, the request was again submitted to FORSCOM. In the meantime, the installation continued to fund the unauthorized and unrecognized positions, but had recruiting and retention difficulties because of the uncertain future of the positions.

FORSCOM's response is not known, but again it could not have been positive, for it was only while HTTB was restructuring itself in preparation for becoming the Army Development and Employment Agency (ADEA) that the four spaces were finally recognized--by DARCOM. Thus, the Skunk Works became the Adoptive Engineering Team, a division of the DARCOM ADEA Materiel Support Activity.[12]

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[12](1) DF, Ft Lewis DIO to 9th Inf Div CoS, 1 May 81, sub: Implementation Plan for SKUNK WORKS, W/Attachments. (2) DF, HTTB to 9th Inf Div COS, 1 Dec 81, sub: Four Engineer Spaces for Skunk Works, W/Attachments. (3) DF, HTTB to 9th Inf Div COS, 4 Jan 83, sub: Recognition and Authorization of Skunk Works Field Lab, W/Attachments.

As a result of activities surrounding the effort to formalize HTTB into the Army Development and Employment Activity, the MSA submitted a proposed TDA to DARCOM on 14 March 1983. It reflected the Office of the Director and two divisions; the Materiel Support Division, containing a Supply Branch and Plans, Programs and Transition Branch, and the Technical Requirements Division with a Materiel Requirements Branch and a System Engineering Branch. The staffing requested was for nine officers, one NCO, and one EM for a total of eleven military. Twenty-two civilians were requested for a grand total of thirty-three persons.

After undergoing, along with ADEA, a DA manpower survey in August, the final organization bore little resemblance to the TDA proposed by the MSA. As of 1 October 1983, the MSA had assumed control of the Skunk Works. It had picked up responsibility for all aspects of industry interface, and was responsible for all ADEA-related materiel research, development and acquisition. It was organized into an Office of the Director, the Adoptive Engineering Team (Skunk Works), the Technical Requirements Division and the Materiel Support Division. It was staffed at seven officers and eighteen civilians for a total of twenty-five. This was obviously far short of what was requested from DARCOM, but it was still over 400 percent of the original staffing. On 6 May 1983, DARCOM formally redesignated the MSA as the "US Army DARCOM Development and Employment Agency Materiel Support Activity" on Permanent Orders 34-1.[13]

On 13 April 1983, the MSA assumed responsibility for the idea management and industry interface functions previously performed by the HTTB Concepts and Analysis Division. Internal adjustments were made to handle the four functional areas that were involved with the transfer: industry interface, idea management, processing requests for use of the Test Director's Initiative Fund, and processing requests for Skunk Works projects.

As part of the new duty, the MSA assembled a 13-page booklet entitled ADEA Challenge to Industry, which outlined what ADEA and the 9th was doing, how industry could help and how industry could interface with ADEA. The booklet was distributed through various channels, but the most productive seemed to be a 25 August announcement in the Commerce Business Daily. By 15 December 1983, the MSA had received 234

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[13](1) Ltr, Chief MSA to Cdr DARCOM, 14 Mar 83, sub: TAADS Document Submission of Update FY84 TDA for DARCOM Army Development and Employment Activity Materiel Support Activity, XXW4GEAA. (2) Hist Rpt, DARCOM ADEA MSA, FY83. (3) DARCOM Permanent Orders 34-1, 6 May 83.

requests for the booklet. The new program appeared to be well assimulated into the MSA.[14]

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[14](1) Ltr, Chief MSA to dist, 16 May 83, sub: Idea Management and Industry Interface (IMII). (2) DF, Dir MSA to CG ADEA, 15 Sep 83, sub: DARCOM MSA Sig Acts Report, (1-15 Sep 83).

CHAPTER 7

GATHERING MATERIEL

> We have expedited and streamlined it [the acquisition process]; we have not missed any of the gates. We have forced provisions of regulations to be applied by people who were totally against applying them.... It is amazing how you fly through gates if you tell them "If you cannot give us a good reason for not doing it, then we are going to do it."
>
> Colonel Paul G. Cerjan
> Chief, HTTB[1]

Near-Term Enhancements

It had been recognized quite early that there should be hardware and organizational changes that could be implemented fairly quickly in the 9th. These came to be known as "near-term enhancements," and their selection and implementation was a major effort throughout 1980. As time went on, these enhancements came to be absorbed in the testing machinery and lost their uniqueness.

In February 1980, the Department of the Army Deputy Chief of Staff for Operations (DA DCSOPS) had developed an approach to the selection of these items and a candidate list. "Near-term" was defined as within thirty-six months. The enhancements were to increase the 9th's:

- Strategic deployability.
- Flexibility and sustainability.
- Tactical mobility.
- Antitank firepower and survivability.
- Intelligence, surveillance, target acquisition, electronic warfare, and command, control and communications capability.

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[1]Cerjan Interview, 17 Feb 83.

The DCSOPS proposal placed emphasis on combat in Europe, consistency with the present force structure, and compatibility with ID86. The recommended list of enhancements included three basic actions: change or add hardware, reorganize units and expedite issuance of emerging new equipment. These recommendations were staffed through the MACOMs.[2]

At the 19 June 1980 four-star meeting, it was agreed that this list would be reviewed again to ensure the enhancements were attainable. Near-term Test Bed activities were to concentrate on "...command and control, EW [electronic warfare], intelligence, target acquisition, ACAB [Air Cavalry Attack Brigade] implementation, antitank, logistic support and air defense."

This guidance resulted in DCSOPS calling a meeting on the topic to be held at FORSCOM on 22 July. At that meeting a number of new enhancements were surfaced, and the decision was made to delay any proposals to General Meyer until after the results of the Army Science Board study were known. After the Science Board briefed General Meyer on its findings on 31 July, and it was obvious that there was no conflict over the enhancements, work resumed.

On 18 August, DA sent a message to the MACOMs asking their reconcurrence on the enhancements agreed upon earlier. The enhancements were separated into two categories. Category I was those agreed to earlier in the summer, which were: "up-gunning" the division direct support artillery battalions from 105mm to 155mm; adding TOW antitank missiles and forming an antitank company; and adding backhoes and bulldozers to the engineer battalion. Category II proposals were those that had been submitted during the 22 July meeting and as a result of the Army Science Board recommendations. These included "up gunning" the general support artillery battalion, retention of 105mm Howitzers for special contingencies, expedited fielding of new helicopters and missiles, for example, and a number of similar actions. Special attention was called to enhancing night fighting and intelligence capability.[3]

FORSCOM asked for the 9th's input, and received a considerable list of added suggestions. Both the Army Personnel Center and DARCOM

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[2]Briefing Charts, DA DCSOPS, Feb 80.

[3](1) Msg, FORSCOM DCSOPS to Cdr, 9th Inf Div, 031100z Jun 80, sub: High Technology Test Bed (9ID). (2) Msg, HQDA to dist, 111940z Jul 80, sub: 9ID Near Term Enhancements. (3) Msg, HQDA to dist, 181444z Aug 80, sub: 9ID Near Term Enhancements.

responded concerning lead times, costs and the priorities for manpower and equipment.[4]

FORSCOM and TRADOC both responded to DA with lengthy messages addressing specifics of the proposal. FORSCOM suggested DA host a meeting "...to consider intensive management, implementation and addition of any new 9ID Near-Term Enhancements." HTTB began to consider implementation requirements, but could only adopt a wait and see attitude until DA decided what, and to what degree, would be adopted.[5]

General Stone received an update briefing on HTTB activities on 2 October, in which it was pointed out to him that no decision had yet been made at the DA level concerning the enhancements. Stone expressed impatience, and commented that he would personally call DA DCSOPS to try to hasten a response. General Richardson also had a sense of urgency that was expressed in a message to General Starry on 8 October. In it, he listed a proposed time-phased infusion of equipment and organizations into the 9th beginning immediately and running through fiscal 1985. He suggested his "straw man" proposal be discussed at an already scheduled 15 October MACOM review of HTTB issues to be held at TRADOC. General Meyer made public his priorities for the 9th in a luncheon address presented at the annual meeting of the Association of the U.S. Army on 14 October, in which he stated: "The immediate emphasis is to upgrade the 9th ID's operational capabilities in the areas of command and control, electronic warfare, intelligence and target acquisition, antitank weaponry, logistic support, air defense, and implementation of the Air Cavalry Attack Brigade (ACAB)."[6]

DA responded on 17 October. It stuck to the original Category I proposals which were: up-gunning the artillery; adding TOW antitank missiles and forming anti-armor companies; and adding backhoes and

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[4](1) Msg, Cdr FORSCOM to CG 9th Inf Div, 201600z Aug 80, sub: 9ID Near Term Enhancements. (2) Msg, Cdr 9th Inf Div to Cdr FORSCOM, 251000z Aug 80, sub: 9ID Near Term Enhancements. (3) Msg, Cdr MILPERCEN to HQDA, 251300z Aug 80, sub: 9ID Near Term Enhancements. (4) Msg, Cdr DARCOM to HQDA, 271730z Aug 80, sub: 9ID Near Term Enhancements.

[5](1) Msg, Cdr TRADOC to DA, 101930z Sep 80, sub: 9ID Near Term Enhancements. (2) Msg, Cdr FORSCOM to DA, 102000z Sep 80, sub: 9ID Near Term Enhancements. (3) Msg, Cdr 9th Inf Div to Cdr FORSCOM, 151800z Sep 80, sub: Test Bed Periodic Update NR 1.

[6](1) Memo, HTTB to Record, 7 Oct 80, sub: HTTB Update Briefing. (2) Msg, Cdr CAC to Cdr TRADOC, 181700z Oct 80, sub: 9ID HTTB Plan. (3) Address, General Meyer to AUSA Convention, 14 Oct 80.

bulldozers to the engineers. DCSOPS made a significant move, however, in its recommended methodology: for the first time, it suggested that hardware be diverted from units scheduled to receive it to go first into the 9th. It also noted that all proposals were consistent with the ID86 structure. The message requested comments by 23 October in order to prepare a decision package for General Meyer.

Meanwhile, the 15 October two-star MACOM meeting had produced a quite different set of candidates. The results were published by message on the same date that DCSOPS had sent out their message, 17 October. At that meeting General Stone had reiterated the 9th ID position that the near-term enhancements were an objective in and of themselves, and that there was no relationship between them and the ID86 force structure.[7]

At a four-star meeting held at TRADOC on 21 October 1980, TRADOC presented the Category I enhancements for discussion, but went much further. It proposed complete test programs for fiscal year 1981 and 1982, which included many more items and organizations. General Shoemaker, the FORSCOM Commander, had a number of comments which outlined his attitude toward the Test Bed. He made it clear that he and his command would stay completely away from HTTB and the tests. DA and TRADOC would have to provide all the required resources. General Shoemaker expressed a desire that all testing be performed in one battalion of the 9th, if possible, in order to disturb unit readiness as little as possible, and reiterated that FORSCOM expected the 9th to continue to handle its fair share of chores within the command. Shoemaker stated that he felt that the near-term enhancements and the HTTB tests were all one and the same, as they all required resources.

General Starry, as TRADOC Commander and host of the meeting, issued a message on the 23d in which he reviewed the results. He stated that in general the HTTB-CAC-TRADOC approach had been agreed upon as briefed. He listed the expanded number of tests agreed upon (eleven), with their proposed start dates, and tasked HTTB to prepare Outline Test Plans for them. Starry restated the agreement that HTTB and CAC, in coordination with the MACOM staffs, would submit candidate tests to TRADOC for ultimate MACOM review and approval. The words, "near-term enhancements" did not appear in the message.[8]

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[7](1) Msg, HQDA to dist, 171935z Oct 80, sub: 9ID Near Term Enhancements. (2) Msg, Cdr TRADOC to dist, 171420z Oct 80, sub: 9ID HTTB Proposed Candidate Reviews. (3) Preparation Packet for MG Stone, 15 Oct 80, sub: Test Program MACOM Coordination Meeting.

[8](1) TRADOC Briefing Slides, 21 Oct 80. (2) Memo, DA DCSOPS to Record, 21 Oct 80, sub: Trip Report; 9ID High Tech Test Bed (HTTB) Test Candidates FY81-82. (3) Msg, Cdr TRADOC to dist, 232015z Oct 80, sub: MACOM Review of 9ID Proposed Candidates.

While the key commanders may have reached some conclusions, the staff action officers were still trying to catch up. On 24 October, FORSCOM responded to DA's message of the 17th, in which the Category I enhancements had been proposed. FORSCOM's position was that, since "the scope and content of enhancements is a fast moving train that is changing several times daily," they would respond to proposals individually rather than collectively. HTTB responded to the same proposals with a concurrence, but it also pointed out that "...comprehensive HTTB planning for FY81-82 requires resolution of Category II and new/alternative near-term enhancement proposals."

At an in-progress review for General Meyer on 20 November 1980, he was presented a total of forty-three tests proposed under the title "Enhanced Near-Term Fightability." The "near-term enhancements," as such, had been swallowed up by the testing program. They had served yeoman duty as the vehicle around which that testing program had been evolved.[9]

The Initial Search for Items to Test

In addressing near-term enhancements, the 9th had been quick to seize on the several statements that said one objective of the Test Bed program was to improve, in the near term, the 9th's deployability, mobility and combat power. That was irrefutable, and was even plainly stated in the MOU. The stated objective lent weight to the 9th's request to be moved up on the Master Priority List (DAMPL). The first item on the early list of missions briefed to General Meyer by General Stone in November 1980 was "enhance near-term 'fightability' through the infusion of new & more capable equipment options." One section of the briefing dealt almost exclusively with requests for replacement of on-hand equipment with accelerated-issue new items.

There were a series of meetings held in December and January 1980-1981 by General Stone in his quarters at Fort Lewis. The people invited to these "kitchen cabinet" meetings varied, but usually included one or both of the ADCs, the Chief of Staff and the G3. Others were occasionally invited such as Colonel Van Meter and Mr. Jolley. It was apparent to those attendees interviewed by the author that General Stone called these meetings, usually on weekends and holidays, out of fustration that things were not moving rapidly enough. A number of decisions dealing with HTTB and the 9th came out of these meetings, such as the decision to concentrate the new division on the Middle East, the decision to form Task Force Stone (which will be addressed later), etc.

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[9](1) Msg, Cdr FORSCOM to Cdr 9th Inf Div, 241745z Oct 80, sub: 9ID Near-Term Enhancements. (2) Msg, Cdr 9th Inf Div to Cdr FORSCOM, 271800z Oct 80, sub: 9th ID Near-Term Enhancements. (3) Briefing Charts, CSA IPR, 20 Nov 80.

Most relevant to this topic, however, was the decision that an immediate search had to be mounted to find objects to test.

This combination of decisions, that is, to take advantage of the situation to "up-gun" the 9th, and the shotgun approach to finding hardware, was viewed as detrimental by some participants at all levels. To quote Colonel Kenneth H. Montgomery, who was at CAC at the time: "The tendency of the 9th Infantry Division was to begin to equip themselves with new equipment, not necessarily to test new concepts or to be a test bed for structure. You had cross-purposes working. The 9th wanted to procure items for fiscal year 1985 fielding of the High Technology Light Division. This situation added confusion and tended to slow the progress of the Test Bed." General Meyer, speaking of his fustrations with the Test Bed during 1981, said: "What happened at that point in time was that I found that the division had focused more on equipment than they had on the operational techniques that were necessary. It had been focused more on equipment and not enough on the operational tactics. I had hoped they would understand the criticality of the integration of new equipment with changed tactics and so on."[10]

The hardware search began in two ways: an inventory of what had already been collected by, or was due into, the Test Bed and a request for nominations of candidate equipment. On 26 January 1981, Colonel Thompson sent a message to all of DARCOM's subordinate commands, laboratories and arsenals soliciting candidate items. General Stone was provided a list of items on hand and due in on 17 February.[11]

General Stone also asked that the discretionary funds, commonly called "screw-around" money, that he had been granted be released to allow him to spend it on base-level commercial equipment. This would allow him to purchase off-the-shelf items at his discretion, and in an expeditious manner. Stone also had Colonel Thompson report to him the various ways in which the 9th could procure equipment. He informed General Richardson, at CAC, of fifteen major items of equipment that he felt would significantly increase the 9th's combat power, and which he intended to brief to the Chief of Staff during the April IPR. He did indeed do so.[12]

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[10](1) Briefing Charts, CSA IPR, 20 Nov 80. (2) Arnold Interview, 6 Jul 84. (3) Jolley Interview, 27 Jun 84. (4) Montgomery Interview, 5 Jul 84. (5) Meyer Interview, 13 Jun 84.

[11](1) Msg, Cdr 9th Inf Div to dist, 261745z Jan 81, sub: High Technology Test Bed. (2) DF, HTTB to 9th Inf Div CofS, 17 Feb 81, sub: CG Request for a List of Hardware on the Ground.

[12](1) Msg, Cdr 9th Inf Div to HQDA, 162000z Mar 81, sub: Base-Level Commercial Equipment (BCE) and High-Technology Test Bed (HTTB). (2) Memo, Chief MSA to CG 9th Inf Div, 4 Mar 81, sub: HTTB Equipment Procedure. (3) Briefing Charts, CSA IPR, 16 Apr 81.

DARCOM's representatives at that IPR were the Commander, General John R. Guthrie, and Brigadier General Arthur Holmes, Jr., the DARCOM Director of Readiness and HTTB Project Officer. General Stone began a dialog with General Holmes. They discussed means of acquiring the fifteen items Stone had identified, and Holmes forwarded to Stone a consolidated response from the DARCOM subordinate commands to Colonel Thompson's earlier request for nominations. Procedures for making loans in out-of-DAMPL sequence issues, and methods of funding transportation of these items of equipment were worked out between HTTB, DARCOM and DA.[13]

The Quick Reaction Program

A letter was circulated by DARCOM among all its subordinate agencies during March 1981 in which these agencies were alerted as to DARCOM's role relative to HTTB. The agencies were requested to cooperate in the expeditious handling of HTTB matters, but were cautioned to be "prudent and proper" in their dealings with the Test Bed, and particularly with those contractors wishing to provide material to the Test Bed.

DARCOM's sense of urgency was increased as a result of the 16 April IPR. General Guthrie and General Holmes came away from the briefing with five actions they felt should be addressed:

- Determine how the acquisition cycle could be shortened to support the HTTB program.
- Determine proper procedures for rapidly acquiring small quantities of items for HTTB use through purchase, lease and loan.
- Determine quickly, in coordination with TRADOC and HTTB, those items needed to support HTTB programs, to include near-term enhancements and surrogates, and take action to provide them.
- Monitor the limited hardware testing that would take place in the 9th to ensure it did not duplicate other programs and to assure its rapid inclusion in approved programs.

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[13](1) Msg, Cdr DARCOM to Cdr 9th ID, 271400z Mar 81, sub: High Technology Test Bed (HTTB). (2) Msg, Cdr DARCOM to Cdr TSARCOM, 291600z Apr 81, sub: Materiel RQMTS to Support High Technology Test Bed (HTTB). (3) Msg, DA to Cdr DARCOM, 301457z Apr 81, sub: Exception to the DAMPL to Support 9th ID HTTB.

° Establish procedures to equip the Air Cavalry Attack Brigade.

By 14 May actions were underway to address each of these tasks. For example, the need to streamline the requirements documents had been recognized.

Colonel Thompson sent copies of all these various actions to General Stone, who noted on the routing slip, "DARCOM is off and running. Am very pleased."[14]

General Holmes' responsibilities as the "DARCOM Staff Task Force Leader" were formalized by message to the field on 16 June. The message requested that all correspondence concerning HTTB be routed through his office.[15]

The next Chief of Staff IPR was scheduled for 30 July. In preparation for it, Colonel Thompson coordinated with DARCOM to get their latest thinking on how to shorten the materiel acquisition process. The answer was simply to provide HTTB requests high priority handling--"to run faster on the same track." This was not satisfactory to General Stone. As far as he was concerned, this approach was inadequate, and he told General Meyer so during the briefing. He felt that there must be some way to eliminate some to the steps in the procedure, and asked that Meyer authorize the establishment of a Quick Reaction Program (QRP). This was, in essence, what occurred.[16]

DARCOM forwarded a proposal for a QRP to DA in early November. This called for a much simplified requirements document, and outlined methods for funding the items. This QRP process was discussed at the Chief of Staff IPR on 13 November 1981, and at a conference held on Fort Lewis for the purpose, 1-3 December. At that conference HTTB, TRADOC, FORSCOM and DARCOM, along with representatives from all of DARCOM's major subordinate commands, reviewed the whole of the equipment picture.

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[14](1) Ltr, DARCOM Dir of Proc to dist, 10 Mar 81, sub: Procurement Support to the High Technology Test Bed (HTTB). (2) Memo, DARCOM Dir of Readiness to Record, 20 Apr 81, sub: Chief of Staff, Army (CSA) High Technology Test Bed (HTTB) Briefing. (3) Memo, DARCOM Acting Dep Dir for Readiness to Cdr DARCOM, 14 May 81, sub: High Technology Test Bed (HTTB), w/6 enclosures.

[15]Msg, Cdr DARCOM to dist, 171430z Jun 81, sub: DARCOM POC for All Actions Relating to the High Technology Test Bed.

[16](1) Msg, DARCOM Dep Test Dir to DARCOM, 13 Jul 81, sub: Request for One Page Summary by COB 15 Jul. (2) Briefing Charts, With Narrative, CSA IPR, 30 Jul 81.

Organizations, functions, responsibilities and the entire materiel acquisition process were discussed.[17]

The QRP recommended to DA, and finally put in place, consisted of five steps:

- HTTB, with DARCOM, prepared a simplified requirements document.
- The QRP was forwarded through CAC to TRADOC for approval.
- DARCOM provided costs scheduling and a technical assessment to DA DCSOPS, utilizing adopted engineering rather than the conventional development methodology.
- DA DCSOPS approved the QRPs based on their relative priority and availability of funds.
- DARCOM then acquired or developed the item according to the approved procurement plan.

The first series of equipment QRPs for the HTTB were developed in a joint TRADOC, CAC and DARCOM meeting on 11 and 12 January 1982. It had taken eighteen months to develop a reponsive procedure, and the equipment was just being requested. It was still not on hand. It is little wonder that DARCOM was viewed as a reluctant player in the HTTB process.[18]

That this perception existed was admitted by General Holmes in a message that he sent to the DARCOM subordinate commands in March 1982. He requested that they take personal interest in HTTB affairs and actively seek ways to assist. He emphasized the point by chairing a meeting of all of the DARCOM elements on 8 April. There he emphasized that this was not business as usual, and that HTTB was not something that would go away.

Of interest is a note attached to a copy of the minutes of that 8 April meeting by the commander of one of the subordinate commands:

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[17](1) Memo, HTTB to Record, 16 Nov 81, sub: HTLD IPR for CSA, 13 Nov 81. (2) Msg, Cdr 9th Inf Div to dist, 180900z Nov 81, sub: DARCOM-MSA-HTTB Functional Review Conference.

[18]Msg, Cdr DARCOM to dist, 301920z Dec 81, sub: High Technology Test Bed (HTTB) Equipment Requirement Documents.

> We will no longer run away from the unusual, and therefore dumb requests we get on the telephone or in writing from the 9th ID/DARCOM on-site reps to lease or procure equipment. We must proceed to find the most appropriate way to legally get the job done, using whatever funds are available.
>
> We must be flexible and responsive. That's in spirit and action, not just lip service that say [sic] "We will help in any way that we can."[19]

It appears that General Meyer's wishes, through General Holmes, were beginning to take effect.

The QRP process was addressed again in early 1983, as preparations were being made for the establishment of ADEA. Annex F to the draft ADEA charter outlined the QRP process. This annex, along with the entire charter, was sent out for staffing. During the relook, DA pointed out that the staff handling of individual QRPs had stretched to the point that it averaged seven months from the time one left CAC until it received DA approval. DA asked that everyone along the chain try to speed this up, and pledged to do better itself. The message was plainly pointed at Headquarters TRADOC, which promptly responded with a promise to do better.[20]

In July, DA hosted a workshop on a new draft of the QRP procedures, now proposed in the form of a Letter of Instruction (LOI). The background paragraphs in the LOI stated that the validity of using the QRP process for Army-wide use would be considered. A refined draft of the LOI was issued after the workshop, on 3 August, for staffing. As fiscal year 1983 ended the staffing was being completed.[21]

In the meantime, the QRP process had been underway since the 11-12 January 1982 meeting where the first candidates were developed.

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[19](1) Msg, Cdr DARCOM to dist, 252205z Mar 82, sub: HTTB. (2) Ltr, DARCOM Dir of Readiness to dist, 21 Apr 82, sub: High Technology Test Bed In-Process Review, 8 Apr 82, w/Inclosure.

[20](1) Msg, Cdr USALOGC to Cdr TRADOC, 081617z Feb 83, sub: QRP Processing Procedures. (2) Msg, HQDA to dist, 032016z Jun 83, sub: QRP Processing. (3) Msg, Cdr TRADOC to dist, 171750z Jun 83, sub: Quick Reaction Program 9ID QRP Requirements Document Processing.

[21](1) Msg, HQDA to dist, 082135z Jul 83, sub: Quick Reaction Program (QRP) Procedures. (2) Draft LOI, 15 Jul 83, sub: LOI for Quick Reation Program (QRP) Procedures. (3) DF, CofS ADEA to CG ADEA, 15 Sep 83, sub: Letter of Instruction (LOI) for Quick Reaction Program (QRP) Procedures.

From that meeting between HTTB, CAC, TRADOC and DARCOM, twenty-three QRPs were developed. The second meeting was held at Fort Lewis 2-4 June which resulted in fifty-five new QRPs, and a third meeting, 18-21 January 1983 resulted in an additional twenty. Thus, a total of ninety-eight QRPs were initiated. A further meeting was proposed for 29 August-1 September 1983, but was postponed until November and finally until 1 March 1984.[22]

Once initiated, many things could happen to a QRP. Changes to the design of the division could eliminate the need for an item. It might be discovered that the Army, or some other service, was already working on a suitable item. For various reasons the list of QRPs could change in number, and occasionally in the title of a specific item as the requirements documents were rewritten for some reason. Thus, on 7 October 1983 there were forty-seven active QRPs.

As mentioned, the quantities of the items requested through the QRP process also varied. These variations were caused by changes in division design and operational concepts. The changes often had to be timed in relation to budget and organizational change pacing dates.[23]

Go-to-War Supportability

As the 9th Division began to receive equipment and transition units into the High Technology Light Division configuration in the fall and winter, 1982-1983, the two-part question of equipment supportability became more acute. The two problems were, first: if the 9th had to go to war right then, how could the mix of standard, surrogate and developmental equipment it had be supported, and second: as new equipment came into the division, be it standard or non-standard, the division combat service support (CSS) structure would have to be molded to support it, staying within the HTLD CSS concept.

In early 1983, DA Operations and DA Logistics Offices became interested in the problem, and they and DARCOM became involved.

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[22](1) List, 4 Jun 82, sub: Current Status QRPs Phase I. (2) Msg, CAC to dist, 212359z May 83, sub: HTTB Requirement Document Workshop. (3) List, 4 Jun 82, sub: QRP Phase II. (4) Msg, Cdr CAC to dist, 111612z Jan 83, sub: Third HTTB Quick Reaction Program (QRP) Workshop. (5) Ltr, HTTB to dist, 29 Dec 82, sub: Third Series Quick Reaction Program (QRP) 9ID Requirements Documents. (6) Ltr, 9ID CofS to dist, 17 Jul 83, sub: Phase III QRP Workshop. (7) DF, CofS ADEA to CofS 9ID, 4 Aug 83, sub: Phase IV QRP Workshop. (8) DF, Chief FDD to DCDR ADEA, 25 Oct 83, sub: Phase IV QRPD Workshop.

[23](1) List, HQDA, 7 Oct 83, sub: Active Quick Reaction Program (QRP) Documents. (2) Msg, Cdr ADEA to HQDA, 080900z Jul 83, sub: HTLD QRP Quantities.

Colonel John S. Ott was then the Chief of the DARCOM MSA at Fort Lewis. He proposed that the 9th provide him with a periodic list of the equipment they expected to take to war with them at that moment. The standardized items were not the problem, but the surrogates, the commercial Apple computers, Hughes radios, Emerson Electric dune buggies, etc., would have to be handled differently. Colonel Ott suggested that when these periodic lists were provided him, he would present DARCOM with a request that they provide wartime support packages or contract emergency support.

In the meantime, General Richardson, as DA DCSOPS and later as CG, TRADOC, was working with DA DCSLOG on the question. The DARCOM commander was developing methods of supporting the non-standard equipment, and Colonel Ott was getting his list of equipment together.

On 27 April DARCOM distributed a letter to all its subordinate agencies outlining the problem. It identified four classes of equipment:

- Standard Army.
- Developmental items.
- Surrogates.
- Hybrid surrogates (combination of standard Army and commercial items).

The letter directed each of DARCOM's proponent activities to be prepared to respond with regular support or contractual support, when the 9th decided that a particular item of equipment would go to war.[24]

Also in April, the DA DCSLOG visited the Test Bed. Colonel Ott's comment on the visit was that the DCSLOG's chief concern was wartime support of commercial surrogate equipment.

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[24](1) Memo, Chief MSA to CG 9ID, 17 Mar 83, sub: CSS, ISS, ILS, etc. (2) DF, Chief MSA to CofS 9ID, 18 Mar 83, sub: Wartime Supportability of Surrogate Systems. (3) Memo, DA DCSOPS to DA DCSLOG, 24 Feb 83, sub: Integrated Logistics Support (ILS) for 9th High Technology Light Division (HTLD) Systems. (4) Ltr, DA DCSLOG to Cdr TRADOC, 14 Mar 83, sub: Integrated Logistics Support (ILS) for 9ID High Technology Light Division (HTLD). (5) Memo, Chief MSA to CG 9ID, sub: Supportability of Surrogate Systems. (6) Ltr, Cdr DARCOM to dist, 27 Apr 83, sub: Supportability of Materiel for the High Technology Light Division (HTLD) w/Enclosure.

Colonel Ott's list of eighteen HTLD-unique items elicited a response from DARCOM early in May 1983. A message went out to the various proponent commands requesting they develop Integrated Logistics Support (ILS) plans for the non-standard items in the 9th. The Tank-Automotive Command had proponency for 120 surrogate Fast Attack Vehicles and forty-four motorcycles, for example. This set off a flurry of messages and meetings in the DARCOM commands.

In an effort to formalize these support procedures, DARCOM hosted a three-day meeting in August. At that meeting, fifty-two representatives of all the involved commands worked up a draft DA Pamphlet titled Materiel Support of the U.S. Army Development and Employment Agency. A final draft of the pamphlet was forwarded to DA in October with a recommendation that it be approved and published. Ultimately the draft was published as DA Circular 750-84-6 on 15 July 1984.[25]

Interface with Industry and Foreign Sources

With the obvious intent on the part of General Meyer that high, or advanced technology hardware become a part of the Test Bed effort, a need to interface with industry was immediately apparent. Contact with a wide variety of firms was made early in the Test Bed existence. This seemed to be in an uncontrolled manner during the early period. HTTB was talking with industry representatives, but so were various organizations within the 9th Division. After some potentially embarrassing breaches of contractual etiquette, an effort was begun by the Test Bed to ensure that the contacts with industry were consolidated in the HTTB Concepts and Analysis Division, Idea Management/Industry Interface (IMII) Branch. After the round robin circulation of a growing stack of notes, comments and memos, the conclusion was reached that while most industrial interface would be through HTTB, there were certain units in the 9th that had a valid need for direct contact. It was agreed that all contacts would be done with full knowledge of the Test Bed.

The IMII Branch did become the focus for industry interface. An HTTB steering committee was established in the Test Bed. This committee, consisting of representatives from the HTTB divisions and the MSA, evaluated the many unsolicited proposals received from industry. If the steering committee felt that the proposal was worthwhile and not repetitive of other efforts, it was forwarded to an executive committee for review. This executive committee was made up of members of the 9th Division staff and its subordinate commanders.

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[25](1) Memo, Chief MSA to Record, 29 Apr 83, sub: Briefing to LTG Thompson, DCSLOG-27 Apr 83. (2) Msg, Cdr DARCOM to dist, 051416z May 83, sub: Supportability of Materiel for the High Technology Light Division (HTLD). (3) Ltr, Cdr DARCOM to HQDA, 4 Oct 83, sub: Supportability of Materiel for Army Development and Employment Activity/High Technology Light Division (ADEA/HTLD).

The IMII Branch also developed its own internal procedures. It assigned control numbers to the proposals received. Over time it developed standardized statements of policy and information forms which were provided to industry.[26]

On 13 April 1983, the DARCOM Materiel Support Activity assumed responsibility for the Idea Management and Industry Interface functions from the HTTB Concepts and Analysis Division as described in Chapter 6.

Also implicit in General Meyer's guidance was the need for the Test Bed to consider foreign material. DARCOM established a procedure for this in February 1982.

HTTB requests for information on the technical characteristics, costs and availability of foreign material would be sent to DARCOM. DARCOM would then query the Foreign Science and Technology Center (FSTC) in Charlottesville, Virginia, for any information they might have on the item. Then DARCOM would contact the foreign government or industry. When the Test Bed was seeking information only, it could contact the FSTC or the Missile Intelligence Agency directly, with an information copy provided to DARCOM.

The Test Bed evaluated a wide range of foreign item. Some examples: German, Austrian and Canadian vehicles; Israeli mortars; Norwegian decontamination devices; and a British palletized loading system.[27]

The Fast Attack Vehicle and Mark 19

In order to give an example of the equipment acquisition and development process, the following is a sampling of actions taken relative to two related items. The Fast Attack Vehicle (FAV), originally referred to as the Quick Kill Vehicle, was and is an agile and fast cross-country vehicle that became closely identified with the 9th. The fact that the Army was experimenting with racing dune buggies quickly

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[26](1) Note, Chief HTTB to ADC-O, 12 Nov 81, sub: Interface with Civilian Industry and Schools, w/Attachments. (2) DF, Chief IMII Br to Chief HTTB, 5 Aug 82, sub: Executive Committee Analysis-Idea No. 2075-1 (SPIDER). (3) Ltr, Chief HTTB to Pak-Trak Ind., Undated, no sub, w/Attachments. (4) Ltr, Chief HTTB to Vought Corporation, 11 Feb 83, sub: Request for Visit-Vought Corporation, Laser Guided MLRS.

[27]Msg, Cdr DARCOM to Cdr 9th Inf Div, 101600z Feb 82, sub: High Technology Test Bed (HTTB) Request for Information on Foreign Equipment/Materiel.

caught and held the attention of the news media. The Mark 19 40mm grenade machine gun was one of the weapons eventually to be mounted on the FAV. These two items are chosen as examples for several reasons:

- They were consistently listed as two of the top three items in acquisition priority by HTTB, usually as the top two.
- One was procured from a sister service, and one from civilian industry.
- One was an automotive item that had to be modified to become a suitable surrogate; the other was a weapon that would not be a surrogate but for which suitable ammunition had to be developed.
- The Mark 19 was an item the Army as a whole was interested in. The FAV was a result of a totally new concept.

In other words, most of the problems encountered by any piece of equipment are exemplified by these two items and they were treated with a high priority by the Test Bed.

The Mark 19

During 1978, the Mark 19 (MK19) 40mm grenade machine gun began to surface in Army channels. The gun had been standard in the Navy for some years for shipboard use. Its short overall length, relatively light weight, and gentle recoil, however, lent it to a number of possible mountings. The Navy was just developing an improved version, the Model 3, and a new type of ammunition, the M430, which could penetrate three inches of armor at 2,200 meters. This could be effective against the Soviet BMP armored personnel carrier and against exposed troops. The Test Bed monitored, with interest, a demonstration of the new Mark 19 Mod 3 and the new ammunition which was held at Fort Benning, Georgia, on 4 June 1981. As a result, HTTB decided to get a few for tests.

HTTB submitted a request to DA for eight machine guns on 30 June 1981. Estimated costs were $21,000 dollars for the eight guns and $95,000 for ammunition and technical support.[28]

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[28](1) DF, DARCOM Dep Test Dir to 9th Inf Div CofS, 1 Jun 81, sub: HTTB Response to CG's Note on ARRADCOM Message dtg 201300z May 81-MK19 Briefing/Demonstration at Ft Benning. (2) Memo, DARCOM Dep Test Dir to CG 9th Inf Div, sub: MK-19 40mm Machine Gun.

Surprisingly, the Army Military Police School had proponency for the weapon. They had worked with it since 1978 in their rear area security role, and were well pleased with the result. They had already discovered that the total Army needs for the weapon exceeded 8,000 guns, but no procurement action had taken place because of its relatively low priority. The Air Force and Marines had taken advantage of the MP School's studies, however, and were further along than the Army in procurement. The improved M430 High-Explosive Dual Purpose Cartridge had been developed in 1971, but only small quantities had ever been produced because of the large numbers of older high-explosive rounds in the inventory.

Suddenly in the spring of 1982, all eyes seem to have focused on the MK19. The Infantry School selected it as the preferred armament for the Light Armored Squad Carrier. CAC supported the Infantry School's selection. The Infantry School urged the MP School to rapidly type classify the gun. DARCOM called for a "highly accelerated acquisition strategy," and stepped up its activity in an effort to get the gun to the 9th.[29]

As of 21 September 1982, there were six MK19 Mod 1s at Fort Lewis. Production schedules had been established for Mod 3s and the M430 ammunition. There were two different proposals to further improve the M430 cartridge under study. An HTTB representative attended an MK19 Mod 3 firing demonstration at Quantico, Virginia, in late September. He came away impressed with the weapon's accuracy.

By 15 January 1983 the Test Bed had an additional ten MK19 Mod 1s on loan from the Coast Guard. Type classification testing of the Mod 3 began on 17 January.[30]

A meeting was held at Fort Lewis 19-20 January at which the Navy, the MP School, and DARCOM and its involved subordinate commands were brought up to date on the 9th's intentions relative to the MK19.

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[29](1) Msg, Cdt USA MP Sch to Cdr TRADOC, 111800z Sep 81, sub: MK19 40mm Grenade Machine Gun. (2) Msg, Cdr CAC to Cdr TRADOC, 172216z Mar 82, sub: Army Requirement for 40mm Grenade Machine Gun (GMG), MK19. (3) Msg, Comdt Inf Sch to Comdt USA MP Sch, 232000z Apr 82, sub: MK19 Mod 3 40mm Grenade Machine Gun Program Status. (4) Msg, Cdr DARCOM to HQDA, 231830z Aug 82, sub: MK19 Mod 3 Grenade Machine Gun.

[30](1) Info Paper, 9th Inf Div, 21 Sep 82, sub: MK19 Grenade Machine Gun (GMG) Availability, Mod 1/Mod 3. (2) Memo, HTTB for Record, 24 Sep 82, sub: Trip Report to Quantico Marine Base, Virginia-22-23 Sep 82. (3) Msg, COMNAVSEASYSCOM to Comdt CoGard, 121201z Dec 82, sub: MK19 Mod 1 40mm Machine Gun, Temporary Loan to U.S. Army. (4) Msg, Cdr ARRAD Com to Cdr DARCOM, 071830z Jan 83, sub: Required Army Testing to Type Classify the MK19 Mod 3 40mm Grenade Machine Gun (GMG).

In the meantime, an internal discussion had developed in the 9th. It was obvious that there were not enough MK19s, even Mod 1s, to equip the units which were transitioning in the division. A surrogate had to be found. Fifty caliber and 7.62mm machine guns were discussed along with plastic MK19 mockups. The surrogates' interface with the Multiple Integrated Laser Engagement Simulation (MILES) system for training had to be considered, as did the availability of different types of ammunition. The division commander selected the .50 caliber machine gun as the surrogate.

The 9th was scheduled to start receiving MK19 Mod 3s in October 1984. The new guns would allow them to fire the improved M430 ammunition, but the Army had not funded any M430 production. The 9th pointed this out in February 1983 and asked for DA's assistance. DA addressed the problem and responded that the 9th should begin receiving some of the M430 ammunition by early 1986. It would have to use the older ammunition in the interim.[31]

On 15 March representatives of the Test Bed briefed the Committee for Ammunition Logistics Support, and received an oral commitment of support with the older ammunition. The question was still unsettled on the M430s to support the division's 951 MK19 Mod 3s when they arrived. In the meantime, the division anticipated an additional 150 Mod 1s from the Navy before October 1983. The 9th also lent its support to a program to provide a high-velocity practice round for the MK19 in fiscal 1985. In February and April 1983 the MP School produced Operational and Organizational Plans for the use of the MK19 in MP units for rear area combat operations. These were quickly followed by a personal appeal from the commandant of the MP School to the TRADOC Commander for support of MK19 procurement programs. He pointed out that what little success the MK19 program had had in the Army had been due to the efforts of the 9th Division Commander. He also noted that the recognized total Army requirements were now up to 14,000 guns.[32]

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[31](1) Msg, Cdr 9th Inf Div to dist, 101625z Jan 83, sub: MK-19 Working Conference. (2) Info Paper, HTTB, 25 Jan 83, sub: MK-19 Grenade Machine Gun (GMG) Surrogate in Light Attack Battalion, w/Attachments. (3) Msg, Cdr 9th Inf Div to HQDA, 031730z Feb 83, sub: MK-19 Ammunition Availability. (4) Msg, DA to Cdr 9th Inf Div, 042058z Mar 83, sub: MK19 Ammunition Availability.

[32](1) DF, Chief MSA to dist, 6 Apr 83, sub: MK-19 40mm Grenade Machine Gun. (2) Msg, Cdr 9th Inf Div to HQDA, 241900z Mar 83, sub: High Velocity 40mm Practice Round. (3) USAMP Sch Operational and Organizational Plan for Military Police use of the MK19 40mm Grenade Machine Gun, Feb 83. (4) USAMP Sch High Technology Light Division (HTLD) Military Police Company Operational Concept, n.d. (5) Msg, Comdt MP Sch to Cdr TRADOC, 081445z Apr 83, sub: Funding for the MK-19 40mm Grenade Machine Gun in 85-89 POM.

The issue of requirements documents for both the guns and the improved ammunition surfaced in April and May 1983. Delayed procurement would result unless proper documentation could be worked out. TRADOC directed the involved parties to review, rewrite, etc., the documents and have them to TRADOC by 22 July in order to meet fund cycle deadlines.

Another threat to production appeared when endurance testing revealed an ammunition feeding problem in the Mod 3. It would take an additional two months to correct the production drawings.[33]

The 9th was still trying to get MK19 Mod 1 guns to use as surrogates for the Mod 3. In February the division asked the Navy for all they could provide up to 156, as quickly as they could be made available. The Navy offered seventy-three guns, which were currently unserviceable, if the Army was willing to pay up to $3,000 each for overhaul. A memorandum of agreement was drawn up, and an Integrated Logistic Support Plan. The commander of the 9th approved the distribution plan for the guns within the division.

Finally, on 4 October, Colonel Ott sent a note to the division commander stating that the guns were starting to arrive and be issued.[34]

In the meantime, during the summer, work had progressed in all of the peripheral areas: training aids were being worked on, a need had been identified for smoke cartridges and work had begun on development, and maintenance training courses had been conducted by the Navy.[35]

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[33](1) Msg, Cdr TRADOC to dist, 271347z May 83, sub: Review of Requirement Document for the 40mm Grenade Machine Gun (S: 22 Jul 83). (2) Msg, COMNAVSEASYSCOM to dist, 161427z Jun 83, sub: MK19 Mod 3 Production Delay.

[34](1) Msg, Cdr 9th Inf Div to COMNAVSEASYSCOM, sub: MK19, Mod 1 40mm GMG. (2) Msg, Cdr DARCOM to Cdr ARRCOM, 061400z Apr 83, sub: MK-19, Mod-1 40mm GMG. (3) Msg, Cdr AMCCOM to Cdr DARCOM, 082130z Jul 83, sub: Draft to ILS Plan for MK19 Mod 1 Machine Gun. (4) DF, ADEA to Cdr 9th Inf Div, 1 Sep 83, sub: Distribution of MK19 Mod 1 GMG. (5) Note, Chief MSA to CG 9th Inf Div, 4 Oct 83, no sub.

[35](1) Ltr, MP Sch to Tng Spt Ctr, 20 Apr 83, sub: Mark 19, 40mm (Grenade) Machine Gun (Mod 3) MILES. (2) Msg, Cdr Cml & Ord Cen to Cdr 9th Inf Div, 071500z Sep 83, sub: 40mm Smoke Demonstration. (3) Msg, COMNAVSEASYSCOM to NAVORDSTA, 081200z Sep 83, sub: Factory Maintenance and Gunnery Training on MK19 Mod 3 40mm Machine Gun.

The Fast Attack Vehicle

In the summer of 1981, when the elemental conceptual work was beginning on the HTLD as described in the chapter entitled Concepts and Concepts Group, the need for a fast, agile armed vehicle was recognized. By November 1981 a requirements document had been developed for a "Quick Kill Vehicle."

The requirement was validated by DARCOM by 18 January 1982, and the Tank-Automotive Command (TACOM) was tasked to develop funding estimates on the vehicle. TACOM, in its response, recommended that a modified High-Mobility Multi-Purpose Wheeled Vehicle (HMMWV, then under development) be considered for the Quick Kill Vehicle. It did admit, however, that such a vehicle would not meet the UH-60A Blackhawk helicopter transportability requirements stated in the requirements document. The 9th Division did not accept this recommendation.

In May, the 9th asked CAC to validate eighty "desert vehicles" to be used in the evaluation of the Light Attack Battalion, to be delivered in August and September. They would be modified by installing the following:

- Weapons mounts and ammunition cans.
- Communication system mounts.
- Gas can mounts.
- Position locating devices.
- Indirect sighting systems.
- Airmobile lifting shackles.
- Night vision devices.

The vehicle should be leased for two years, with driver training and a maintenance support package, to include maintenance training, included. CAC approved.[36]

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[36](1) Note, Chief HTTB to CG 9th Inf Div, 17 Nov 81, no sub, w/Attachments. (2) Msg, Cdr DARCOM to dist, 291230z Jan 82, sub: High Technology Test Bed (HTTB) Equipment Program Resource Requirement. (3) Msg, Cdr TACOM to Cdr DARCOM, 081330z Feb 82, sub: HTTB Equipment Program Resource Requirement. (4) Msg, Cdr 9th Inf Div to Cdr CAC, 211530z May 82, sub: Surrogate Vehicles for Light Motorized Bn and Light Attack Bn Operational Evaluations. (5) Msg, Cdr CAC to Cdr 9th Inf Div, 13[sic]1330z May 82, sub: 9ID HTTB Equipment Validation Request.

A set of system specifications for a surrogate "fast attack vehicle" (FAV) was worked up by TACOM engineers, HTTB and personnel from the Skunk Works. TACOM handled the details of selecting and awarding a lease agreement for eighty FAVs to the Chenowith Racing Company, an element of Emerson Electric Company. The result was strong protest from the other contenders, who claimed Emerson had been shown favoritism by the Army, and more particularly by HTTB and the 9th. Colonel Ott refuted, in detail, each of the thirteen allegations. The first twenty-five FAVs were on Fort Lewis by 18 October 1982, when a week-long driver's course was started. One week later a second driver's course began, as did a maintenance course.[37]

Everything had moved so fast that TACOM was still trying to translate the requirements document and the QRP into a full-blown hardware program. This was the first QRP to get this far along the process, and the abbreviated requirements document baffled them.

The Test Bed moved quickly, however. They fired Tube-Launched, Optically-Controlled, Wire-Guided (TOW) Missiles off the FAV successfully.

By 1 November it had become clear that funding was going to limit the numbers of equipment that HTTB was going to receive off its various want lists. The Test Bed was asked to prioritize its equipment lists, and meld them into one. When that was all done, the FAV and the MK19 were priority one and two.

The lease agreement with Emerson Electric provided an option to lease forty additional FAVs. At HTTB's request that option had been exercised by mid-December.[38]

In late December TRADOC informed TACOM that the Infantry School had been identified as the proponent school for the FAV, based on the fact

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[37](1) Msg, Cdr TACOM to Cdr DARCOM, 060800z Aug 82, sub: FY82 OMA P2 Requirement Fast Attack Vehicle (FAV). (2) Msg, Cdr 9th Inf Div to Cdr TACOM, 270200z Sep 82, sub: Protests Against the Award of the Fast Attack Vehicle to Emerson Electric Company. (3) Note, Chief MSA to CG 9th Inf Div, 8 Oct 82, no sub, w/Attachment.

[38](1) Msg, Cdr TACOM to Cdr TRADOC, 051815z Oct 82, sub: FAV ROC, w/Attachments. (2) Note, Chief HTTB to CG 9ID, 18 Oct 82, no sub, w/Attachments. (3) DF, HTTB Fin Mgt to Chief HTTB, 1 Nov 82, sub: Prioritization of HTLD Equipment Requirements, w/Attachments. (4) Msg, Cdr CAC to Cdr 9th Inf Div, 091925z Dec 82, sub: Validation of 9ID Equipment Requirements. (5) Msg, Cdr DARCOM to HQDA, 171610z Dec 82, sub: Fast Attack Vehicle Option.

that the drivers had infantry MOSs. Shortly thereafter, on 11 January 1983, Colonel Ott received word that TACOM had assigned model numbers to the FAV: XM 1040 for the MK19 version, and XM 1041 for the TOW missile version.

The Tank-Automotive Command was working on developing a specification package for the "objective" FAV, as versus the "surrogate" FAV. They were also working on various other aspects of the vehicle, such as safety when weapons were fired from it, and transportability questions. They therefore requested, and received, the loan of one fully modified FAV from the 9th. In the meantime, TRADOC had granted a safety release on the vehicle allowing it to be transported by UH-60 and CH-47 helicopters and the Test and Evaluation Command had granted a safety release allowing the vehicle to be used at all. The restrictions imposed were that a full safety harness be worn at all times, hearing protection and a helmet were to be worn, as was a full-faced protective shield.[39]

Congress and the Budget

During March 1983 several members of the 9th spent three days in Washington D.C. talking with members of the DA staff and Congressional Committees concerning the FAV. They clarified a number of questions, and returned feeling that they had improved the chances of FAV procurement being funded.

Also in March, CAC responded to a DA message which asked for FAV specifics such as total needed, delivery dates desired, etc. The FY84 Presidential Budget, at that time, contained $4.7 million for procurement of 138 vehicles. CAC's response was that the HTLD was still evolving, but there was now a tentative requirement for 436 vehicles, excluding maintenance floats and war reserves.

Very early in the FAV program, before any of the Emerson vehicles were delivered to Fort Lewis, HTTB had borrowed thirty similar vehicles from the Navy. These had been used by the Navy in a remotely piloted configuration and were commonly referred to as remotely piloted vehicles (RPV). HTTB used them for testing such things as the effects of firing weapons from them, helicopter loading, etc. Now, in an effort to expand

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[39](1) Msg, Cdr TRADOC to Cdr TACOM, 301600z Dec 82, sub: Fast Attack Vehicle (FAV) Requirement Document (ROC). (2) Note, Chief MSA to CG 9th Inf Div, 11 Jan 83, no sub. (3) Msg, Cdr TACOM to Cdr 9th Inf Div, 091530z Feb 83, sub: Loan of Surrogate Fast Attack Vehicle (SFAV). (4) Msg, Cdr 9th Inf Div to Cdr TACOM, 022140z Mar 83, sub: Loan of Surrogate Fast Attack Vehicle (SFAV). (5) Msg, Cdr TRADOC to Cdr 9th Inf Div, 012010z Mar 83, sub: Safety Release for UH-60 and CH-47 Transportability of Fast Attack Vehicles (FAV). (6) Msg, Cdr TACOM to Cdr TRADOC, 021505z Feb 83, sub: Automotive Safety Release: Fast Attack Vehicle (FAV).

the number of FAVs on hand, they looked at altering the RPVs to a man-drivable configuration and getting more from the Navy. After discovering the costs would be over $26,500 each, more than the cost of buying new ones, the idea was dropped.[40]

By late April, DA was circulating an information paper on the FAV in Congress. This identified the need for a total of 545 vehicles in the HTLD, and alerted the Hill that the Army intended to request, in fiscal year 85, $12.9 million to purchase the balance of 407 over the 138 in the fiscal year 84 budget. In the meantime work began on extending the lease on the 120 on-hand vehicles for a second year, until August 1984 for the initial eighty and until 15 December for the add-on forty. The lease was also to have a buy option in it at the end of the lease period.[41]

A minor note, but one of significance, was that during this period work began on a FAV stacking frame. This was an aluminum cage which held two FAVs, one above the other, for administrative, rather than tactical transport. This device almost doubled the number of FAVs that could be carried on a C130 or C141 aircraft.[42]

Evolution of the XM1041

The TOW missile version of the FAV was particularly beset with problems. This began in September 1982 with an in-service squabble.

While the Test Bed was working with the Navy vehicles, prior to the arrival of the leased Emersons, TRADOC issued HTTB a safety release permitting them to fire five missiles to prove TOW/FAV live-fire feasibility. The firing was done. TACOM objected, and would not honor the TRADOC safety release. They claimed $30,000 worth of testing would have

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[40](1) Ltr, Cdr 2/1 Inf to Cdr 3d Bde, 14 Mar 83, sub: Fast Attack Vehicle Support Meetings. (2) Msg, Cdr CAC to DA, 111340z Mar 83, sub: Fast Attack Vehicles (FAV). (3) DF, HTTB to CofS 9ID, 3 Mar 83, sub: FAV Distribution Plan for May FTX. (4) Memo, Chief HTTB to CG 9ID, 8 Apr 83, sub: Navy RPV as a FAV Surrogate.

[41](1) Info Paper, HQDA, 22 Apr 83, sub: Fast Attack Vehicle (FAV) FY84 Procurement Request. (2) Msg, Cdr TACOM to Cdr DARCOM, 040900z May 83, sub: Extension of Surrogate Fast Attack Vehicle (SFAV) Lease. (3) Msg, Cdr ADEA to Cdr TACOM, 061940z Sep 83, sub: Surrogate FAV Loan Agreement DAAE07-82-L-4004 with Emerson Electric Company.

[42](1) Msg, Cdr 9th Inf Div to Cdr TACOM, 112230z Jan 83, sub: Technical Assistance for Surrogate FAV. (2) DF, ADC-A 9ID to Cdr I Corps, 19 Apr 83, sub: Fast Attack Vehicle (FAV) Stacking Frame Prototype.

to be performed before such a release could be issued. Their testing revealed a number of problems, which were brought more acutely in focus when the 9th declared the TOW/FAV a go-to-war system. Finally, on 25 August 1983, a safety release was issued. This release was modified several times.[43]

Considerably more serious were problems related to mounting the TOW launcher on the FAV. When the launcher was mounted on the roll-bar cage of the FAV, the shock and vibration of cross-country driving caused a number of problems within the system. The Missile Guidance Set suffered internal damage, the traversing unit needed some sort of external locking device, and the unit's optics were knocked out of alignment. All of these problems surfaced during a May 1983 training exercise, where, in addition, six launch tubes had to be evacuated for repair because FAVs had been rolled over on them.

The Skunk Works tackled the problem. After an engineer from the Skunk Works visited the Missile Command in late June, some relatively simple mechanical "fixes" were applied. Further testing took place which indicated that the fixes were only partially successful. In the meantime, the Missile Command had completed its testing, as part of the TOW/FAV safety release program, and had concluded the two were compatible.

Since the FAV-mounted TOW was considered to be a go-to-war system, and was of such high priority to the 9th, strong concern was voiced. Additionally the 9th did not want a faulty system to be designed into the objective FAV, for which design specifics were being drafted. The ADEA commander sent a message to all involved parties on 6 October asking immediate assistance in correcting the problem. Thus as the division entered fiscal year 1984, a cloud hung over a weapons system that was key to the HTLD operational concept.[44]

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[43](1) Msg, Cdr TACOM to Cdr 9th Inf Div, 181400z Mar 83, sub: Surrogate Fast Attack Vehicle (SFAV) TOW Safety Release. (2) Msg, Cdr TACOM to Cdr DARCOM, 151130z Jun 83, sub: Funding the Safety Release Certification Effort for Firing the TOW Missile System Off of the Surrogate Fast Attack Vehicle. (3) Msg, Cdr TRADOC to Cdr ADEA, 141235z Sep 83, sub: Second Amendment to Safety Release to Fire TOW Missile from Fast Attack Vehicle (FAV).

[44](1) Ltr, Co F MSB to Cdr 9th Inf Div, 12 Sep 85, sub: FAV/TOW Equipment Damage, w/Attachments. (2) Info Paper, DRXB-T, 15 Jul 83, sub: Solutions to FAV/TOW Equipment Damage. (3) Info Paper, PM LAB, 14 Sep 83, sub: FAV/TOW, w/Attachment. (4) Msg, Cdr ADEA to Cdrs TACOM DARCOM MICOM, 061710z Oct 83, sub: Request for Immediate Assistance on TOW Fast Attack Vehicle Weapons System.

Additional Concerns

Throughout this period, some basic questions were still being asked. Was a three-man FAV preferable over the present two-man? Should they be used in reconnaissance squadrons? In MP units? How many did the 9th Division need? Should they be used Army-wide? How many would that total? How should funding be handled? Would even surrogate FAVs be available to the 9th by the target year 1986? What other weapons (25mm, 30mm guns) might be profitably mounted on FAVs? Should the vehicle engine be diesel or gasoline? All of these actions were being worked summer-fall 1983.

A final major question remains to be dealt with concerning the FAV: how maintainable was it?

When the first Emerson FAVs arrived in the fall of 1982 they were put on the road immediately, and run hard because there were so few of them. Emerson provided a sixty-day repair parts package that was quickly consumed. A stockage list of follow-on repair parts was worked up by Emerson and representatives of the 9th. This educated guess stockage list proved to be inadequate. Backup to this list was local procurement (the FAV used a Volkswagen engine) which was subject to the normal delays of the competitive bid process.

The Tank-Automotive Command (TACOM) worked up a Basic Ordering Agreement (BOA) with Emerson, which the 9th thought would cure the problem. When the BOA arrived on Fort Lewis, it was discovered that it still required competitive purchasing procedures, and was viewed as useless. Colonel Ott, as Chief of the MSA, initiated several efforts to correct the problems. He began work on a sole-source justification so that the BOA with Emerson would be as responsive as the 9th wanted. He held meetings with representatives of HTTB, the 9th and Emerson to develop better parts stockage lists, and he worked to institutionalize FAV maintenance training. He devised a system of reporting that would develop a maintenance history of the FAV.

After the May 1983 FTX, Colonel Ott noted that the FAV user, primarily the 2d Battalion, 1st Infantry, had made very little demand on the repair parts and maintenance system. He credited this to his belief that Emerson personnel were not only providing maintenance support, as provided for in the contract, but also repair parts. This placed an unrealistically light demand on the supply system which he considered dangerous.[45]

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[45](1) Memo, Chief MSA to ADC-M, 21 Jan 83, sub: Maintenance Support for Surrogate FAVs. (2) DF, Chief MSA to dist, 24 Feb 83, sub: Maintenance Down Time and Defect Reports, Surrogate FAV. (3) Memo, Chief MSA to CofS 9ID, 1 Jun 83, sub: Parts Support for Surrogate Fast Attack Vehicle.

In the meantime TACOM developed an Integrated Logistic Support Plan (ILS) for the surrogate FAV. This was designed to support the vehicle both in peace and war, and a draft was distributed for staffing in September 1983. Concurrently the Logistics Center was grappling with development of an ILS for the objective FAV. This involved first defining the QRP process at this stage, since the FAV QRP was the first to reach this point in the process.

By the end of FY83, ADEA and the 9th Division had come to recognize that they were not going to be able to field a High Technology Light Division with objective equipment by FY86, and they would be lucky to even have all the needed surrogates by then.[46]

In summary several points should be kept in mind. Primarily there was the case of everything being in an unfinished state: the QRP system had been developed, but not worked completely through; maintenance programs, to include repair parts supply, were still evolving; final configurations of systems had not yet been established; numbers of systems needed were fluctuating. Finally it should be kept in mind that the two examples used in this chapter, the Mark 19 and the FAV, were only two systems of well over 100 being worked by ADEA and the 9th simultaneously.

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[46](1) Draft Integrated Logistics Support Plan Surrogate Fast Attack Vehicle, Sep 83, TACOM. (2) Msg, Cdr USALOGC to Cdr TRADOC, 291830z Jul 83, sub: QRP Process Integrated Logistic Support (ILS) Issues for 9ID. (3) Ltr, CofS ADEA to HQDA, 18 Jul 83, sub: Critical Equipment for 9ID.

CHAPTER 8

FUNDING AND THE TEST PROGRAM

> We saw funding as a big problem.... We started putting in requests for FY 82, 83, 84. This is for the money required to actually test, transition, and field the Division. We had to get some money in the budget and get Congress to approve it. That was one of the big problems we presented to the Chief of Staff at the first in-progress review in November 1980. We had no identifiable line in the budget as HTTB; we were just thrown in with all the rest of the Army...
>
> LTC Bruce A. Braun
> Chief, Plans Division
> HTTB[1]

At the 19 June 1980 four-star meeting, where it was agreed, in broad terms, which organizations would be responsible for what areas relative to HTTB, DCSOPS and DARCOM were charged with funding. DCSOPS was to coordinate with DARCOM to ensure that adequate Research, Development, Test and Evaluation (RDTE) and Other Procurement, Army (OPA) funds were available. They were also to consider the use of Operation and Maintenance, Army (OMA) funds for use as "seed money" for the Test Director.

The 18 July message from DA to the field charged each actor in the HTTB arena with some responsibility relative to funds. DA itself would allocate resources to include money. DARCOM, TRADOC, FORSCOM, and the Test Director were to request and allocate funds. TRADOC and the Test Director were to develop the Test Program. The Test Program and funding were inseparably intertwined. The Test Program drove funding requests, and in turn funding constrained the Test Program.

CAC briefed HTTB on their actions relative to the Test Bed in early August 1980. Several areas concerning funding were discussed, and some differences in understanding of the draft MOU were worked out. At the same time, Ft Lewis, through FORSCOM, requested $201,200 from DA to pay for renovation of facilities and office furnishings to support the Test Bed.

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[1]Braun Interview, 30 Sep 82.

Also in August, another large sum of money associated with the Test Bed was identified. For some time it had been determined that one organization resulting from the Army 86 studies would be tested and fielded by HTTB and the 9th at the outset: the Air Cavalry Attack Brigade (ACAB). Therefore, on August 20, General Stone requested a total of $4,936,000 for construction costs, furnishings, and supplies in support of the ACAB.[2]

After he signed the initial MOU, Major General John B. Blount, the TRADOC Chief of Staff, sent it to DA with a cover letter which outlined TRADOC's cost estimates at that time. Annual recurring costs in support of the Test Bed, not including any testing, came to $386,000, of which $66,000 was to support the DARCOM MSA. Because of civilian hiring lag time, etc., however, the FY 81 costs were estimated at $192,000. General Blount closed by urging DA to provide funding to cover the one-time FY 1980 costs and the recurring out-year costs as quickly as possible to preclude delays in implementing the Test Bed.

The MOU itself outlined in a general way the funding procedures supporting the Test Bed. Appendix C was devoted to spelling out those procedures. Responsibilities for the development of documentation in support of the Test Bed were also covered.

During September work accelerated on plans for fielding the ACAB and on the HTTB Test Program. A meeting was held on the topics on 12 September, wherein HTTB and affected members of the TRADOC community discussed options. The 9th formed a local ACAB Activation Management Group to address problems associated with that action.

At the 12 September meeting, the attendees were in general agreement on the proposed FY 81 and 82 Programs. On 19 September, the Test Bed forwarded copies of the Test Programs to TRADOC. A total of 10 different organizations and concepts were proposed. Examples are: a brigade engineer company; strategic deployability; forward area command, control and communications; and mortar platoons in the infantry battalion. Each of these tests had an abbreviated Outline Test Plan (OTP) included in the packet. The estimated costs of these tests were $6,416,100 for FY 81, $9,882,900 for FY 82. Estimated overhead, in terms of annual recurring costs for operating the Test Bed, were

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[2](1) Msg, FORSCOM DCSOPS to Cdr, 9th Inf Div, 301100z Jun 80, sub: High Technology Test Bed (9th ID). (2) Msg, HQDA to dist, 181555z Jul 80, sub: 9th ID High Technology Test Bed. (3) Memo, 9th Inf Div G6 to Record, 14 Aug 80, sub: HTTB Meeting with CACDA. (4) Msg, Cdr FORSCOM to DA, 141900z Aug 86, 9th Infantry Division High Technology Test Bed (HTTB). (5) Msg, Cdr 9th Inf Div to Cdr FORSCOM, 202245z Aug 80, sub: ACAB Start-Up Cost.

$496,900 for each fiscal year. This was up over $100,000 compared to TRADOC's estimate of a month earlier.[3]

On 29 September, DA outlined the schedule that had to be followed in order to meet the various funding deadlines in the near future. TRADOC was directed to execute a number of actions.

The most immediate problem was to reprogram monies for HTTB in FY 81. The Army staff would start that action, but it was dependent on a sound plan. TRADOC was to submit their plan, in considerable detail, justifying each requirement by program element, by 30 October.

Since DA had to submit its FY 82 budget to Office of Management and Budget/Office of the Secretary of Defense Analysis by 17 October, TRADOC had to submit the FY 82 plan, again in detail, by 15 October.

TRADOC, in conjunction with DARCOM and FORSCOM, was to develop a five-year outline field test plan and have it to DA by 15 December. And, finally, DARCOM, FORSCOM, and TRADOC were to submit their dollar and manpower space requirements, based on that 83-87 plan, via the Program Analysis and Resource Review process in January 1980.

One of the men caught between DA and HTTB was Colonel Kenneth H. Montgomery, Chief of the TRADOC Independent Evaluation Directorate at CAC. He described this period:

> Even though General Meyer wanted it, we still lacked good definitive programs that could be compared to other programs that were being funded. It was extremely difficult. Basically it was kind of a big guess process, as to what programs we would have two, three, four years from now. There was a lot of work put on the DA staff, who was continually on the phone asking us how much money did we need, and what was the definition of the program.
>
> There was a lot of heartburn between the High Technology Test Bed and the Combined Arms Center. TRADOC was responsible for providing the

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[3](1) Ltr, CofS TRADOC to HQDA, 25 Aug 80, sub: High Technology Test Bed (9th ID). (2) MOU, 8 Aug 80. (3) Msg, Cdr 9th Inf Div to Cdr FORSCOM, 151800z Sep 80, sub: Test Bed Periodic Update Nr. 1. (4) Memo, 9th Inf Div G-6 to Record, 22 Sep 80, sub: HTTB Working Meeting. (5) Ltr, Acting Dep Test Director to HQDA, 19 Sep 80, sub: High Technology Test Bed (HTTB) FY 81 and FY 82 Test Program w/Incl.

> information required by HQDA. These programs were not being well defined by HTTB. People just out of a whim said, "I want so much money to do this." When you asked for additional definition, they didn't have it. So part of our problem was trying to help them define it in such a way that it could be justified at the DA level for millions of dollars.
>
> That caused a lot of heartburn, and a lot of people felt CAC was fighting against the program. We were really trying to professionally define things more explicitly, and assist the 9th in that process. In most cases we were asking for large amounts of money with very little definition. When someone asked why they wanted a block of money, their answer was, "Well, I want it because I want it." They couldn't actually explain what they were going to do. They didn't have a concept or an organization distribution plan.[4]

According to periodic reports submitted by the Test Bed during late September and October 1980, HTTB was struggling to provide the detail required by CAC and DA. The 1981-82 Test Programs were being refined, and efforts were underway to predict what the FY 83 through 87 program should include. The ACAB Activation Management Group was working on an integrated activation plan, and were preparing detailed OTPs for the unit's evaluations. This effort was to continue for some months.

At this point the question of ID 86 surfaced. CAC and the 9th disagreed on some points in the Test Program, largely because CAC insisted the program support fielding ID 86. General Stone described this institutional disagreement:

> General Richardson, at that time the CAC Commander, took an entirely different view. As a TRADOC representative and as the CAC Commander, he felt ID 86 was the division design for the light division. Any deviations from ID 86, even the authority to test any deviation from ID 86, had to be approved by him and through TRADOC....

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[4](1) Msg, HQDA to dist, 291611z Sep 80, sub: 9th ID High Tech Test Bed (HTTB) - FY 81, FY 82, FY 83-87 Plans/Funding. (2) Montgomery Interview, 5 Jul 84.

> He was very reluctant to authorize testing outside of what was already organized as a part of ID 86....
>
> The bulk of all Test Bed funding was TRADOC funds handled through CAC. These funds actually came from DA, but they were funneled through TRADOC and controlled by CAC so that all test plans had to be approved by CAC. Where they choose, they could put a strangle hold on any of the test initiatives that I might come up with, and in fact, did....[5]

This conflict was pointed out during an FY 81 through FY 82 MACOM HTTB program review meeting at TRADOC Headquarters on 15 October. At that meeting it was noted that CAC had unilaterally deleted two of the 9th's originally proposed tests, and had significantly modified two others. General Stone's preparation packet, assembled by HTTB, also provided him with information on the Test Bed's preparation of the detailed OTPs. Work was progressing, but due to a lack of on-hand staff, the Test Bed was not going to be able to meet its 15 November suspense to TRADOC.

The HTTB read-ahead packet also encouraged General Stone to pursue the topic of a Test Director's Initiative Fund, the "seed money" mentioned at the 19 June meeting. Nothing had been done to establish such a fund.

Finally, General Stone was encouraged to have clarified HTTB's position relative to the Test Program and ID 86. How much of this was actually discussed during the meeting is unknown. The CAC-proposed program was approved, however.

On 21 October, General Starry hosted a four-star conference at which TRADOC, FORSCOM, DARCOM, CAC and DA were represented. At the conference eight tests were tentatively approved for FY 81. Three additional tests, dealing with ACAB units, were to be added in FY 82. All of HTTB's originally proposed tests were included, but some had been modified by CAC. CAC assigned proponency for these tests to the various

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[5](1) Msg, Cdr 9th Inf Div to Cdr FORSCOM, 020800z Oct 80, sub: Test Bed Periodic Update Nr. 2. (2) DF, 9th Inf Div G-6 to CofS, sub: Bi-Weekly Report of Significant Actions - 26 September 1980 to 9 October 1980, w/Atch. (3) Memo, 9th Inf Div G-6 to Record, 10 Oct 80, sub: Trip Report. (4) Stone Interview, 9 Aug 84.

TRADOC Centers and Schools in a message on 5 November, and hosted a meeting to cover in detail the proponent's responsibilities.[6]

Even before CAC assigned proponents for all the tests, HTTB had been working with the Infantry and Engineer Schools on five of them, and had developed draft OTPs. The Test Bed now felt it could get these five to TRADOC by the 15 November suspense, but requested a delay on the remaining three for FY 81, and on the three ACAB tests scheduled for FY 82. It also asked the TRADOC proponents for Independent Evaluation Plans (IEP) and Test Support Packages (TSP) for their tests. As time passed, lack of input from the TRADOC proponents would be one reason for delayed submission of OTPs and Detailed Test Plans (DTP) by HTTB.

In November, HTTB received $1.8 million in FY 81 OMA funds, and began work on how best to use them.

CAC hosted a meeting on 13 November for the purpose of working on the various test programs and the suspenses and responsibilities for IEP, OTP and TSP. A detailed schedule of meetings and suspenses concerning the ACAB was worked out. Candidates for the FY 83-87 Test Program were discussed, as was funding for the Test Bed.[7]

The Test Director's Discretionary Fund

Formal action began on 24 November to establish a discretionary fund for the Test Director. Also called contingency funds or quick-reaction funds, they were commonly called "screw-around money." This was intended to be a pool of dollars under the control of the Test Director enabling him to buy small numbers of off-the-shelf items, non-standard repair parts, etc., when the thrust of testing so dictated. Virtually everyone, from the Army Science Board onward, had recognized the need for such a fund. The tests surrounding the 11th Air Assault Division at Fort Benning in the 1960s benefited from a similar fund. The topic had arisen at most senior-level meetings dealing with the Test Bed,

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[6](1) Memo, 9th Inf Div G-6 to Record, 30 Oct 80, sub: Trip Report. (2) Conference Report, AFOP-CM, 22 Oct 80, sub: Four-Star MACOM HTTB FY 81-82 Candidate Test Approval Conference. (3) Msg, Cdr CAC to dist, 051707z Nov 80, sub: 9th Infantry Division High Technology Test Bed Proponency.

[7](1) Msg, Cdr 9th Inf Div to dist, 031800z Nov 80, sub: HTTB Outline Test Plan (OTP) Submission. (2) DF, HTTB to CofS 9th Inf Div, 4 Dec 80, sub: Bi-Weekly Report of Significant Actions - 21 November 1980 through 4 December 1980. (3) Memo, HTTB Avn Sys Mgr to CG, 9th Inf Div, 14 Nov 80, sub: Trip Report - 9th ID HTTB Proponent Meeting, 13 Nov 80 at CAC. (4) Memo, HTTB Test Div Chief to Record, 17 Nov 80, sub: Trip Report - CAC Meeting at Fort Leavenworth on 13 November 1980.

including the 19 June four-star meeting, but nothing formal had been done. FORSCOM asked that the Test Bed submit their needs for FY 81 and 82 funds. The Test Bed responded that it wanted $150,000 annually.

TRADOC was notified in early December that DA had reprogrammed $1.8 million in OMA funds for them to use for the Test Bed. Several meetings at CAC followed in which it was decided how some funds would be allocated, and that others would be held in reserve for as-needed use. The first dispension provided for $14,000 to go to FORSCOM for base operations support, $100,000 for civilian salaries in HTTB, and $45,000 for temporary duty costs in HTTB.

In the meantime, the Test Bed had come up with a distinct proposal to begin testing. Four tests were to be conducted:

CONCEPT	FORM UNIT	UNIT TRAINING	TESTING
Anti-Armor Concept	17 Feb 81	9 Mar-30 Apr	o/a 1 May 81
Mortar Platoon	17 Feb 81	9 Mar-30 Apr	o/a 1 May 81
Brigade Engineer Co	1 Feb 81	30 Mar-30 Apr	o/a 1 May 81

Engineer Excavation Concept:

- M-9 Armored Combat Excavator operator training at Fort Belvoir, VA, 1 Feb-15 Mar 81.
- UNIMOG (German vehicle) operator training at Fort Lewis by the contractor after delivery of the equipment.

The 1 May 1981 date was when a major field exercise had been scheduled for the 9th at Yakima Firing Center. This was viewed as an opportunity to test the new organizations.

Funding Channels: TRADOC

TRADOC's funding procedures for the Test Bed were established in some detail by message on 11 Dec. Basically, DA would provide TRADOC funds for routine recurring costs of operating the Test Bed, and TRADOC would pay them directly to the Test Bed by Fund Authorization Document (FAD). This included such things as civilian pay, travel and temporary duty, and office supply costs. Base operations support costs incurred by Fort Lewis would be provided by FORSCOM, and DA was requested to fund FORSCOM directly for them. Test costs would be paid directly to the Test Bed by TRADOC as needed. Samples of acceptable testing costs were outlined:

- Computer and data processing.
- Relocatable buildings.

- Printing and reproduction.
- Contract services.
- Civilian overtime.
- Equipment.
- Petroleum, oil and lubricants.
- Fabrication.
- Maintenance of equipment and vehicles.

The message closed with a request that an interservice support agreement be executed between Fort Lewis and the Test Bed. This was eventually done.[8]

In mid-December, the Test Bed submitted to CAC the FY 81-82 and the FY 83-87 Test Programs. Funding requested to support these programs was:

FY 81	FY 82	FY 83	
$4,548,200	$9,768,400	$11,166,200	
FY 84	FY 85	FY 86	FY 87
$10,651,800	$10,922,500	$5,782,300	$1,932,300

This included $150,000 in the Test Director's discretionary funds in FY 81 and FY 82, and $350,000 each year thereafter. Note that these were only test-related cost estimates. By the time the overhead costs of maintaining the Test Bed were added to these figures, they were:

FY 81	FY 82	FY 83	
$5,200,300	$10,803,200	$12,001,500	
FY 84	FY 85	FY 86	FY 87
$11,487,100	$11,757,800	$6,617,600	$2,767,600

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[8](1) Msg, Cdr FORSCOM to Cdr 9th Inf Div, 241326z Nov 80, sub: 9th ID High Technology Test Bed (HTTB) Discretionary Funds. (2) Msg, Cdr 9th Inf Div to Cdr FORSCOM, 151600z Dec 80, sub: 9th ID High Technology Test Bed (HTTB) Discretionary Funds. (3) Memo, TRADOC Dir of Planning/Air-Land Dir for MG Vuono, 12 Dec 80, sub: 9th ID HTTB Update. (4) Msg, Cdr FORSCOM to Cdr 9th Inf Div, 111935z Dec 80, sub: High Technology Test Bed (HTTB).

At the same time these programs were going to CAC, DA was suspensing TRADOC for their submission. DA required the FY 81 and FY 82 program by 22 January 1981, and the FY 83-87 plan by 31 March.[9]

During December and January, Colonel David C. Meade, on the DA DCSOPS staff, was busy composing backup study sheets and questions and answers to be used to support testimony before Congress in an attempt to get additional monies in the supplemental budget. In those documents he revealed that $1.8 million had already been released to the field as start-up money. The Army was requesting an additional $5 million for the balance of Fiscal 1981, bringing the total to $6.8 million. This total had been coordinated with CAC, for that was the total actually requested in the finalized program forwarded by CAC to DA in February 1981. The FY 82 request in that document had been increased to $15.8 million, an increase of some thirty percent over HTTB's earlier submission.

On 18 February 1981, an HTTB funding conference was held at TRADOC. It was attended by representatives from HTTB, CAC and TRADOC, FORSCOM and DARCOM. DA was invited but did not attend. A number of topics were discussed, but two points that directly affected the Test Bed funding were confirmed: Everything except routine salary and base operations funding requests would be staffed through CAC, and test funding would flow directly from TRADOC to the Test Bed. Major Henry B. Hunt, HTTB's Administrative and Logistics Division Chief and money controller, voiced a concern that his office was not staffed to manage these funds. Both FORSCOM and TRADOC assured him that additional spaces to support the HTTB accounting effort had already been requested and authorized in base operations.[10]

General Stone's discretionary funds had become a reality. The requested $150,000 had been approved, and by mid-March $102,000 was on hand. An HTTB executive committee had been established, which, among other things, made recommendations regarding the use of these funds. This committee consisted of the Division ADCs and colonel-level commanders, plus the engineer, chemical officer, G3 and Command Sergeant Major.

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[9](1) Ltr, TRADOC Deputy Test Dir to CAC, 18 Dec 80, sub: High Technology Test Bed (HTTB) FY 81-82 Plans/Funding. (2) Ltr, Test Dir to CAC, n.d., sub: 9th Infantry Division High Technology Test Bed (HTTB) FY 83-87 Plans/Funding. (3) Msg, HQDA to Cdr TRADOC, 181545z Dec 80, sub: 9th ID High Technology Test Bed (HTTB) - FY 81, FY 82, FY 83-87 Plans/Funding.

[10](1) Note, LTC Meade to COL Van Meter, 2 Feb 81, sub: HTTB, w/Atch. (2) Ltr, Cdr CAC to HQDA, 18 Feb 81, sub: Fiscal Year 81-82 High Technology Test Bed Program. (3) Memo, TRADOC DCSTE to Record, 23 Feb 81, sub: HTTB Funding Conference.

They recommended items for purchase along with HTTB, for General Stone's approval. The initial list included such items as Apple computers, some conversions to expandable vans to make them suitable for use as command posts, and the purchase of motorcycles. As this process evolved, it quickly became evident that more discretionary funds were needed. The Test Bed requested the additional $48,000 that had already been approved, plus an additional $350,000 in a message to FORSCOM on 18 March.

The Test Bed also requested $150,000 from TRADOC to start work on FY 81 testing. This was provided by reprogramming action.

Also during this time the Test Bed received a shock as a result of an HTTB General Officers Workshop held at DA on 6 March. At that meeting HTTB learned that requested Research, Development, Testing and Evaluation (RDTE) funds of $10 million annually for FY 83, 84 and 85 had been eliminated for lack of justification. A result was a plea from General Stone to General Richardson for his support of the one program that Stone felt he could justify: The Cellular Command Post and Division Communication test. Stone was able to provide detailed justification for $8 million in FY 83 and $8.4 million in FY 84. General Richardson not only supported the program as proposed by Stone, but requested that DA reinstate the entire $10-million, three-year program.[11]

TRADOC controlled all travel and per diem for temporary duty (TDY) related to HTTB testing. It issued fund authorization documents for that purpose not only to the Test Bed, but directly to each of the various centers and schools which had proponency for HTTB tests.

The Test Bed clarified a question about the use of the Test Director's discretionary fund. Since these funds were intended for use in quick-reaction testing which complemented that contained in the approved test plan, that meant it might be needed to purchase off-the-shelf items commonly called base-level commercial equipment (BCE). This type of purchase was normally funded with OPA funds and approved on a case-by-case basis, a time consuming process. The Test Bed asked for an exception to policy allowing them to use the discretionary fund, which

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[11](1) Ltr, CofS 9th ID to dist, 17 Mar 81, sub: HTTB - 9th ID Initiatives, w/Atch. (2) Msg, Cdr 9th Inf Div to Cdr FORSCOM, 181015z Mar 81, sub: HTTB - 9th ID Initiative. (3) Msg, Cdr 9th Inf Div to Cdr CAC, 061115z Mar 81, sub: Request for Funds. (4) Msg, Cdr 9th Inf Div to Cdr CAC, 100235z Mar 81, sub: RDTE Funding for HTTB/9th ID. (4) Msg, Cdr CAC to DA, 131305z Mar 81, sub: RDTE Funding for HTTB/9th ID. (5) Msg, Cdr TRADOC to Cdr 9th Inf Div, 131600z Mar 81, sub: Direct Test Funding.

was OMA money to purchase BCE without case-by-case approval. The request was granted by DA to the 9th, TRADOC and DARCOM without limitations on individual item costs. The exemption was removed on 15 June, however.[12]

At the April 1981 IPR, General Meyer stated his desire to have an HTLD on the ground by the close of FY 85. This shifted the focus of financial planning somewhat. It made FY 83 a critical funding year if the division set of equipment was to be physically on Fort Lewis by FY 85. In May, CAC submitted a revised FY 83-85 program to TRADOC which reflected the costs of outfitting the entire division during that period. The totals were $285,905,000 for FY 83, $211,192,000 for FY 84, and $175,025,000 for FY 85. Of course, most of these millions were not unique to the Test Bed, but were for new equipment that was already part of the force modernization process, and would have eventually come to the 9th in any case.

The Test Bed reworked its FY 82 and 83 budgets, and notified TRADOC and FORSCOM of its requirements in June. These totaled $4.43 million in FY 82 and $546,491,000 in FY 83. Throughout the entire process, there continued a demand by DA for greater detail and more justification so that it could effectively justify the program to Congress.

HTTB and the 9th constantly refined their budget estimates during the spring and early summer of 1981. The FY 82 budget began to stabilize at around $18.6 million, the FY 83 at $280.55 million. The Test Bed also worked up a "wish list" of items to be funded should year-end funds come available in August or September 1981.[13]

In late June, 9th Division and Fort Lewis Regulation 3-4, entitled Financial Administration: High Technology Test Bed (HTTB), was distributed. It detailed the procedures to be followed to capture "HTTB

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[12](1) Msg, Cdr TRADOC to dist, 110830z Mar 81, sub: TDY Funds in Support of HTTB Testing. (2) Msg, Cdr 9th Inf Div to HQDA, 162000z Mar 81, sub: Base-Level Commercial Equipment (BCE) in High Technology Test Bed (HTTB). (3) Msg, DA to Cdr 9th Inf Div, 141320z Apr 81, sub: Base-Level Commercial Equipment (BCE) in High Technology Test Bed (HTTB). (4) Msg, HQDA to Cdr 9th Inf Div, 151434z Jun 81, sub: Base-Level Commercial Equipment (BCE) in High Technology Test Bed (HTTB).

[13](1) Ltr, CAC to Cdr TRADOC, 18 May 81, sub: Revised FY 83-85 HTTB Program, w/Incl. (2) Msg, Cdr 9th Inf Div to Cdr TRADOC and Cdr FORSCOM, 192232z Jun 81, sub: High Technology Test Bed. (3) Msg, HQDA to Cdr CAC, 021454z Jun 81, sub: High Technology Test Bed (HTTB) FY 82 Funding (S: 5 Jun 81). (4) Msg, Cdr 9th Inf Div to Cdr TRADOC, 221620z Jun 81, sub: High Technology Test Bed (HTTB).

related costs which will provide a reasonable audit trail for possible review and/or other reporting purposes."

On 6 July, General Richardson told General Stone the schedule to be followed in the development of HTTB's budget program:

- 7 July - General officer meeting to discuss major system requirements and the HTTB FY 83 budget program.
- 14 July - TRADOC Combat Developments Review at CAC to obtain the Centers' and Schools' assessments of the revised FY 81-85 program.
- 15 July - DARCOM research and development commands review the program to assess its supportability and validate the cost data.
- 30 July - CSA IPR.
- After integrating the comments from the TRADOC and DARCOM reviews and any CSA decisions, the program would be finalized. CAC and the 9th would brief TRADOC, DARCOM and FORSCOM prior to forwarding the program to DA on 31 July 1981.

On the next day, TRADOC called for all its Centers and Schools to review their HTTB funds, report any anticipated excess, and report their expeditures monthly through the end of the fiscal year. The message states that $1.7 million had been dispersed to HTTB at that time. On the following day, 8 July, TRADOC granted HTTB an additional $1.3 million, all earmarked for specific programed tests.[14]

The 7 July General Officers meeting on the HTTB programs resulted in the usual findings--not enough detail. This caused a great deal of activity on the part of all concerned in order to be adequately prepared for the CSA IPR.

At the 30 July 1981 IPR, General Meyer issued two directives concerning HTTB funding, both directed at the DA staff: Lay out the dollar

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[14](1) DF, Chief HTTB Resource Mgt Div to dist, 25 Jun 81, sub: Financial Administration (HTTB), w/Incl. (2) Msg, Cdr CAC to Cdr 9th Inf Div, 061849z Jul 81, sub: Revised HTTB FY 81-85 Program. (3) Msg, Cdr TRADOC to dist, 071330z Jul 81, sub: High Technology Test Bed Funding. (4) Msg, Cdr TRADOC to Cdr 9th Inf Div, 081500z Jul 81, sub: HTTB Funding.

costs for fielding the HTLD, particularly for FY 83; and present the options for a plan of action to fund it, and developing a method of budgeting that would provide flexibility and a discrete means of tracking the resources required. These comments guided the discussion at a DA meeting which in turn spawned a series of three messages from DA during August. The messages established policy for the distribution and use of the various monies available. In addition, they tasked the Army Finance and Accounting Center to develop accounting and reporting procedures to capture all HTTB costs and tasked TRADOC to draft revisions for the MOU reflecting the changes.[15]

Also at the 30 July IPR, General Meyer was briefed that the following tests were underway:

- Brigade Engineer Company (ID 86).
- Anti-Tank Company (ID 86).
- Battalion Mortar Organization (ID 86).
- Airspace Management.
- CEWI Concepts.
- Decontamination Procedures.

A large number of other tests were reflected on the upcoming program. The largest of these was the Air Cavalry Attack Brigade, which had been redesignated the Cavalry Brigade (Air Attack) (CBAA).

It was in a discussion following the briefing that General Meyer brought up the point that he wanted greater emphasis on concept development. He implied that HTTB should place a higher priority on concepts of force structure, deployment, and tactics. As noted in other chapters, this redirection began in earnest within a few weeks: Colonel Van Meter left the Test Bed and Colonel Prisk came in, to be followed shortly by Colonel Cerjan; General Richardson moved from CAC to DA

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[15](1) Msg, Cdr TRADOC to Cdr 9th Inf Div, 101948z Jul 81, sub: High Technology Test Bed (HTTB) Resource Requirements - FY 82, FY 83, and FY 84. (2) Memo, Jolley to Record, sub: Periodic HTTB Update by MG Stone to CSA on 30 July 1981. (3) Msg, HQDA to dist, 041500z Aug 81, sub: High Technology Test Bed (HTTB) Funding Policies and Procedures. (4) Msg, HQDA to dist, DTG and sub illegible. (5) Msg, HQDA to dist, 211430z Aug 81, sub: High Technology Test Bed (HTTB) APA Vice RDTE Funds.

DCSOPS; General Stone moved from the 9th to CAC; and General Elton took command of the 9th. All these moves took place in the period August-October 1981.[16]

On 1 October, TRADOC distributed funds to its subordinate organizations for the first quarter, FY 82. HTTB received $2.968 million, CAC $145,000 and the TRADOC Combined Arms Test Activity at Fort Hood, Texas, $900,000 for contract support. There was a change in that HTTB would provide funds to the TRADOC Centers and Schools to pay for their support, rather than TRADOC paying them directly. On 9 October the Test Bed published the procedures by which this would be accomplished. It called upon the Centers and Schools to provide their required dollar estimates, by quarter and by test. It also required a monthly statement of the expenditure of funds from the Centers and Schools. Funds would be disbursed by HTTB to the Centers and Schools on a quarterly basis.[17]

During the fall of 1981 the Test Bed had been working on its input to the FY 84-88 Program Analysis and Resource Review (PARR). The packet, requesting $494.98 million for the five years, was forwarded to CAC on 16 December. There it collided with a message from DA that spelled out in considerable detail just what degree of justification was required. In the meantime, DARCOM was trying to gather lists of material requirements for the transition of the 9th to an HTLD, and material requirements to support the HTTB tests so that it could work up its portion of the PARR input.

All the participants came together for a meeting at DA on 28 January 1982. CAC, TRADOC, DARCOM, and HTTB were all represented. TRADOC had handcarried the HTTB FY 84-88 PARR into the meeting with them and it was gone over item by item. DA declared that the submission was not in sufficient detail, and sent the attendees back to their tasks. TRADOC objected to DA's conclusion that there was not enough detail, both at the meeting and in a follow-up message. Another meeting was held, however, on 25 February at Fort Lewis during which the final submission was developed. By mid-March, the FY 84-88 PARR had been partially approved. One Program Development Increment Package (PDIP) line, 3SX6,

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[16](1) Briefing Slides and Narrative, CSA IPR, 30 Jul 81. (2) Memo, Jolley to Record, n.d., sub: Periodic HTTB Update by MG Stone to CSA on 30 July 1981.

[17](1) Msg, Cdr TRADOC to dist, 011300z Oct 81, sub: Funds in Support of First Qtr FY 82 HTTB Activities. (2) Msg, Cdr 9th Inf Div to dist, 090700z Oct 81, sub: Support of FY 82 Activities.

for a total of $167.9 million, had been approved. A second PDIP line, 3U4P, totalling $242.6 million was "in the competitor file."[18]

On 11 January 1982, HTTB began what was to become a quarterly routine. They reported to TRADOC what its first quarter FY 82 receipts and expenditure had been, and requested funds for the second quarter. TRADOC responded with less than HTTB requested, citing its reasons for the curtailment.[19]

In January 1982, the following financial procedures were being used relative to the Test Bed effort.

The Test Bed itself handled only OMA funds. These were requested and allocated principally from TRADOC in the form of test funds. FORSCOM provided the Test Director's Initiative Funds and DARCOM resourced the MSA. The Test Bed identified OPA and RDTE items needed for testing and/or transition, and funds were allocated by DA to DARCOM for procurement. The Fort Lewis Director of Facilities Engineers handled funding for occasional construction projects through engineer channels.

Establishing Internal Control

Internal HTTB funding was managed by the Financial Management Division, which stayed in close contact with the various DA and MACOM financial staff elements. The Division also coordinated with the 9th Division Comptroller for reimbursement to the 9th for funds expended by them in support of testing, and with numerous other installations, usually in connection with Centers and Schools, in support of travel and other services rendered in support of HTTB. The Financial Management Division maintained separate commitment, obligation and disbursement

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[18](1) Ltr, Acting Cdr 9th Inf Div to Cdr CAC, 16 Dec 81, sub: High Technology Test Bed (HTTB) FY 84-88 PARR Input. (2) Msg, HQDA to Cdr TRADOC, 292120z Dec 81, sub: High Technology Test Bed FY 84-88 Program Budget Policy. (3) Msg, Cdr DARCOM to HQDA, 061410z Jan 82, sub: High Technology Test Bed FY 84-88 Program Analysis Resource Review (PARR) Submission. (4) Msg, DA to Cdr TRADOC, 021805z Feb 82, sub: High Technology Test Bed (HTTB) Test Plan for FY 84 through 88 and Analysis and Resource Review. (5) Msg, Cdr TRADOC to DA, 052022z Feb 82, sub: High Technology Test Bed (HTTB) Test Plan for FY 84 through FY 88 Program Analysis and Resource Review. (6) Msg, Cdr CAC to dist, 191347z Feb 82, sub: FY 84-88 HTTB PARR Submission. (7) Note, Chief HTTB to DARCOM MSA and HTTB Financial Mgt, 18 Mar 82, no sub, w/Atch.

[19](1) Msg, Cdr 9th Inf Div to Cdr TRADOC, 111700z Jan 83, sub: Request for Second QTR Funds and Report of First QTR Expenditures. (2) Msg, Cdr TRADOC to dist, 261930z Jan 82, sub: Funds in Support of Second QTR FY 82 HTTB Activities.

ledgers, which were reconciled monthly with standard financial system output data. They were fully aware that they were sure to be audited at some point in the future.

In late January, procedures were formalized for the utilization of the Test Director's Initiative Fund, resourced at $500,000 for FY 82. All requests to use the fund were forwarded to the HTTB Idea Management Division, which orchestrated the entire process. The recommendation went through a steering committee for preliminary approval, then to the Conceptual Analysis Division. If it meshed with viable concepts, the recommendation went to the various test functional managers. The functional managers did the detailed work of writing the Concept Evaluation Programs, initiating requisitions, monitoring acquisition, writing after action reports, etc. The DARCOM MSA worked with the functional manager in procurement and costing. Financial Management handled funding and prepared a monthly status report to the Chief, HTTB. As winter faded into spring, concern arouse that the fund was not being fully utilized. As of the end of March, only 12.4 percent of the funds had been committed, and the fiscal year was half gone. General Elton distributed a letter to his commanders encouraging them to use the fund.

The procedures used to initiate a request for use of the fund were promulgated in 9th Division Policy Statement 37-1, dated 22 March 1982. A sample one-page DF showing the format of the request was enclosed. Limitations on the use of the fund were listed as: civilian salaries and overtime, TDY, supplies (including fuel and repair parts), non-sole-source personnel service contracts, $2,500; competitive personnel services contracts, $10,000; equipment, $3,000 per item.

Colonel Cerjan altered the internal HTTB funding process slightly in February 1982 by establishing a Program Review Advisory Committee. Meeting monthly, the committee consisted of the HTTB Division Chiefs and Test Officers. The current funding status was provided by Financial Management in order to update all concerned.

Also in February, the second iteration of the HTTB Memorandum of Understanding was signed and took effect. Appendix C had been expanded to outline in greater detail the various MACOM's responsibilities relative to HTTB funding.[20]

The Test Bed began work on its FY 83-84 Command Operating Budget (COB) in March. They asked TRADOC to clarify how funding should be

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[20](1) Memo, Ch Fin Mgt to Colonel Cerjan, 18 Jan 82, sub: HTTB Financial Management Procedures. (2) DF, HTTB to C/S 9ID, 28 Jan 82, sub: Test Director's Initiative Fund. (3) 9th ID Policy Statement 37-1, 22 Mar 82, sub: Test Director's Initiative Fund. (4) Briefing Slides, HTTB PRAC, 19 Feb 82. (5) HTTB MOU, 27 Feb 82.

handled relative to TRADOC Center and School support to the Test Bed. The Test Bed had been unprepared to support these activities when responsibility for doing so was transferred to them from TRADOC on 1 October 1981. TRADOC responded that this was not a proper topic to address in the COB, but that these funds should be covered in each individual test's Outline Test Plan.[21]

Reprogramming of Test Monies

There was also a misunderstanding as to HTTB's authority to reprogram money within its budget. The Test Bed had understood that it had authority to reprogram as it saw fit, as long as TRADOC was kept informed, and had been doing so. This resulted in a lengthy message from TRADOC in which the Test Bed was directed to not reprogram funds without prior approval of CAC. In order for CAC to approve such a request, HTTB had to state the reason for the request, recommend where the funds were to come from, and state the impact if the new project were not resourced. The message reviewed the entire FY 82 budget posture to date, and noted that certain tests included in the original program had been dropped. This was borne out by the funds granted HTTB for the third quarter FY 82, which totaled $3.6 million, $1.4 million less than requested. This large shortfall was of considerable concern to TRADOC, and left them somewhat questioning of HTTB's procedures. They pointed out that the Test Bed had requested and received funds in FY 81 that were unneeded.[22] CAC reviewed the Test Bed's unfunded requirements, and validated $211,500 worth. TRADOC issued funds to support that amount.

It should be understood that the dynamic nature of the Test Bed meant that tests of concepts, units, and equipment were being constantly adjusted. Funds for such tests were added, deleted, or reprogrammed on virtually a week-by-week basis.

On 24 May 1982, General Meyer was presented a decision briefing on funding and material requirements for the HTLD/HTTB. Additional FY 82 requirements were approved for reprogramming; additional FY 83 requirements would be handled along with the FY 84 budget; and increases in the

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[21](1) Msg, Cdr 9th Inf Div to Cdr TRADOC and Cdr CAC, 192150z Mar 82, sub: FY 83-84 COB Guidance. (2) Msg, Cdr TRADOC to Cdr 9th Inf Div, 251500z Mar 82, sub: FY 83-84 COB Guidance for High Technology Test Bed (HTTB).

[22](1) Msg, Cdr 9th Inf Div to Cdr TRADOC, 221600z Mar 82, sub: Financial Administration Policy for the High Technology Test Bed. (2) Msg, Cdr CAC to Cdr TRADOC and Cdr 9th Inf Div, 312359z Mar 82, sub: HTTB Funding Requirements. (3) Msg, Cdr TRADOC to Cdr CAC, 312043z Mar 82, sub: Funds in Support of Third QTR FY 82 HTTB Activities.

FY 84-88 program would be sought during the 1982 summer Program Review process. Seventeen items, including the FAV and the MK 19, were approved for accelerated acquisition or initiation of procurement, dependent upon fall program funding. Distribution of twenty existing systems would be accelerated into the 9th on a case-by-case basis. For the first time it became evident that the HTLD could not be fully equipped by end of FY 85.[23]

The Test Bed published HTTB Policy Letter 82-8 on 14 June that formalized internal HTTB financial administration. Work on the FY 83-84 COB culminated with the budget submission on 16 July 1982. It reflected a total requirement for FY 83 of $112.6 million. This was broken down as $43.2, OMA; $58.6, OPA; $10.8, RDTE.[24]

The Test Bed reported the status of its FY 82 OMA funds to CAC in August. The report revealed that a total of $10.5 million had been received by the Test Bed, $.7 million of which had been returned unused, and that excess remained of $.5 million to be expended on year-end projects.

In late September, CAC requested the first quarter FY 83 funds to support HTTB: $2.3 million in test costs, and $4.6 million in overhead, to be provided directly to the Test Bed. An additional $1.8 million was requested for CAC itself to use in support of the Test Bed. Also, during October, requests began to come in to HTTB from the various TRADOC Boards, Centers and Schools for the funds they required to support the Test Bed.[25]

In late October, General Meyer approved reprogramming action for the FY 83 program, and shortly thereafter was presented with a detailed plan of action for HTTB funding. Very briefly, the main points of this strategy were:

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[23](1) Msg, Cdr CAC to Cdr 9th Inf Div and Cdr TRADOC, 122125z Apr 82, sub: HTTB Funding Requirements (II). (2) Msg, Cdr TRADOC to dist, 151838z Apr 82, sub: Funds in Support of Third QTR FY 82 HTTB Activities. (3) Msg, DA to dist, 282122z May 82, sub: High Technology Light Division (HTLD) Resourcing Guidance.

[24](1) HTTB Policy Letter 82-8, 14 Jun 82, sub: Financial Administration Policy. (2) Ltr, Chief HTTB to Cdr CAC, 16 Jul 82, sub: FY 83-84 Command Operating Budget (COB) Submission, w/Incl.

[25](1) Msg, Cdr 9th Inf Div to Cdr CAC, 202325z Aug 82, sub: HTTB FY 82 Program End-of-Year Projects. (2) Msg, Cdr CAC to Cdr TRADOC, 151610z Sep 82, sub: Request for First Quarter FY 83 HTTB Funds. (3) Msg, Cdr CAC to Cdr TRADOC, 271615z Sep 82, sub: Request for First Quarter FY 83 HTTB Funds. (4) Msg, Cdr CAC to Cdr TRADOC, 271621z Sep 82, sub: Request for First Quarter FY 83 HTTB Funds.

- The Army would reprogram, where possible, within its resources to handle FY 83.
- With OSD concurrence, the Army would ask Congressional approval to reprogram both RDTE and procurement funds above what the Army could do internally.
- Prior to OSD receiving the programming package, the CSA would send memorandums to key OSD staff members asking their approval.
- Similarly, before the formal hearings by Congress on the reprogramming, key members should be informally briefed and letters from the VCSA should go to the Congress and Senate Committee and Subcommittee Chairman asking their support.
- Backup study sheets and information papers on each system would be prepared for use within the Army community to ensure everyone spoke with one voice.

The FY 83 reprogramming action was seen as critical. If it went well, it would have a positive effect on approval of the Army's FY 84 requests and those of future years.

During this action, there is no mention of fielding an HTLD by the end of FY 85. FY 86 became the target date, and the big spending year was slipped to FY 84. The enclosed backup study sheet, dated 17 January 1983, reflects the following profile, in millions:

FY 83	FY 84	FY 85	FY 86	FY 87	FY 88
$49.8	$225.2	$212.7	$165.1	$110.7	$199.6

These were later estimates, and somewhat higher than those reflected in the HTTB FY 84 budget and FY 85-89 PARR, which the Test Bed had submitted on 16 November 1982. The PARR submission was not satisfactory to CAC and was returned to be reworked.[26]

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[26](1) Memo, DCSOPS Dir of Requirements Through DCSOPS and DCSA to CSA, n.d., sub: High Technology Light Division (HTLD) FY 83 and FY 84 Funding Requirements--ACTION MEMORANDUM, w/Incl. (2) Ltr, Cdr 9th Inf Div to Cdr CAC, 16 Nov 82, sub: High Technology Test Bed (HTTB) Test Plan for the FY 84 Budget and FY 85-89 Program Analysis and Resource Review (PARR). (3) Ltr, Deputy Cdr CAC to Cdr 9th Inf Div, n.d., sub: High Technology Test Bed (HTTB) Test Plans for the FY 84 Budget and FY 85-89 Program Analysis Resource Review (PARR).

It should be kept in mind that DARCOM also submitted an FY 85-89 HTLD/HTTB PARR, in which material acquisition costs were covered. This was composed of input it received from its various subordinate commands, who were proponents for the various systems. TACOM, for example, was a proponent for the Fast Attack Vehicle QRP, and had to budget for acquisition of these vehicles. The DARCOM budgeting cycles dealing with HTTB/HTLD were every bit as complex as those in TRADOC, and usually amounted to greater dollar values.

In late December, DA reminded the MACOMs that their PARRs were due in by 1 February 1983. Preparation responsibilities were listed as:

° Acquisition	DARCOM
° Force Structure	FORSCOM
° Testing	FORSCOM, TRADOC, DARCOM
° Reserve Component HTLD	FORSCOM, DARCOM, National Guard Bureau (NGB)

HTTB reworked its FY 85-89 PARR according to CAC's guidance, and resubmitted it. CAC forwarded the package to TRADOC on 21 January.[27]

The Test Bed also provided manpower data on the proposed 16,000-man HTLD to FORSCOM, so that FORSCOM could develop its force structure PARR costs.

Over the months, use of the Test Director's Initiative Fund had become largely routine. Requests for use of the fund were handled expeditiously, and a monthly status report rendered to the Division Commander. It became obvious, however, that there needed to be a report back to the Test Bed on accountability of equipment purchased and what the conclusions were as a result of the use of that equipment. This process was formalized in April 1983. Instruction and sample formats were sent to fund users in April.

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[27](1) Msg, Cdr DARCOM to dist, 151600z Dec 82, sub: High Technology Light Division (HTLD) Materiel Funding. (2) Msg, HQDA to dist, 202358z Dec 82, sub: HTTB/HTLD FY 85-89 Program Development Guidance. (3) Ltr, Cdr 9th Inf Div to Cdr CAC, 14 Jan 83, sub: High Technology Test Bed (HTTB) Test Plan for the FY 84 Budget and FY 85-89 Program Analysis and Resource Review (PARR). (4) Ltr, Cdr CAC to Cdr TRADOC, 21 Jan 83, sub: High Technology Test Bed (HTTB) Test Plan for the FY 84 Budget and FY 85-89 Program Analysis and Resource Review (PARR).

As a result of an expressed concern of the I Corps Commander over HTTB accounting for TDY funds, the Test Bed requested a travel pay audit through the Army Audit Agency. This was performed from September to December 1982, and a report rendered in February 1983. The Test Bed was generally given high marks, but there were some loose ends concerning funds provided other agencies for TDY in support of testing. These procedures were rectified.[28]

Since October 1982, a major effort had been underway to reprogram FY 83 funds. The approval of the HTLD, at least insomuch as transition had begun, completely altered the complexion of the FY 83 budget. All thought of fielding an HTLD in FY 85 was gone. In order to attain an FY 86 fielding date, the FY 82 program was reprogrammed internally within the Army, and the FY 84 program had been developed with the HTLD FY 86 fielding in mind. However, the FY 83 program was in Congress at the time, and it was too late to alter the submission. For such a massive reprogramming effort to take place within the current budget year, approval had to be obtained from the office of the Secretary of Defense and Congress.

The reprogramming actions had been presented to the House Committee on Appropriations, Subcommittee on Defense, by DA on 10 May. The Committee on Armed Services notified the Deputy Secretary of Defense on 28 June that the reprogramming action, affecting $49.5 million of the HTTB (now ADEA) program, had been approved.

DA took action the next day by directing accelerated use of the reprogrammed money, and report of any excess. ADEA responded that $3.7 million was excess, and later identified an additional $3.3 million, all of which was withdrawn by TRADOC.[29]

After considerable discussion and coordination, some of the excess FY 83 funds were able to be utilized to begin work on FY 84 programmed items. The FY 84 Test Program itself, after four months of coordination

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[28](1) Msg, Cdr 9th Inf Div to Cdr FORSCOM, 282000z Jan 83, sub: HTTB/HTLD FY 85-89 Program Development Guidance. (2) DF, HTTB to CofS 9th Inf Div, 21 Apr 83, sub: FY 83 Test Director's Initiative Funds Evaluation Documentation, w/Incl. (3) Note, Cdr 9th Inf Div to Cdr I Corps, 23 Feb 83, no sub, w/Atch.

[29](1) DF, DA DAMA to DA DAB, 2 Feb 83, sub: DD Form 1415-1 Reprogramming Action, Army, w/Incl. (2) Msg, HQDA to Cdr TRADOC and Cdr ADEA, 292150z Jul 83, sub: FY 83 ADEA Funding Program. (3) Msg, Cdr ADEA to dist, 031600z Aug 83, sub: FY 83 ADEA Operating Program. (4) Msg, Cdr ADEA to Cdr TRADOC, 231300z Aug 83, sub: FY 83 Funding Program for ADEA. (5) Msg, Cdr ADEA to Cdr TRADOC, 131800z Sep 83, sub: Excess ADEA Funds (TRADOC).

and staffing, was finalized in early September. It listed twenty-six formal tests for the year.[30]

The FY 84 Command Operating Budget for ADEA, in support of the Test Program, had been in progress since May. Since ADEA was a field-operating agency of DA, it no longer had to submit its budget through CAC and TRADOC, but sent it directly to DA. It did, however, thoroughly coordinate that budget with TRADOC and DARCOM.

The FY 84 budget was submitted to DA in August 1983. Portions were approved, but others were not. The package was resubmitted on 1 September. It was designed to fund twenty-eight programs, twenty-six tests, and twelve equipment lease continuations, and totaled $51.6 million. As the fiscal year ended, again part of the budget had been approved, and part was held pending further justification.

A summary of the FY 83 program reveals that ADEA had expended 99.99 percent of its budgeted $16.85 million during the year. This did not include OPA funds.[31]

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[30](1) Memo, ADEA Fin Mgt to CG ADEA, 25 Aug 83, sub: Utilization of FY 83 Funds to Pre-Finance FY 84 Tests. (2) Msg, Cdr CAC to Cdr ADEA, 072300z Sep 83, sub: FY 83 ADEA Funds for FY 84 Tests. (3) DF, CofS ADEA to CG ADEA, 1 Sep 83, sub: FY 84 Test Schedule.

[31](1) Ltr, CofS ADEA to HQDA, 1 Sep 83, sub: Resubmission of the ADEA FY 84 Test Program/COB Summary. (2) DF, ADEA FDD to CofS ADEA, 15 Sep 83, sub: Things Financial. (3) Memo, DA DCSOPS to Cdr ADEA, 26 Sep 83, sub: FY 84 COB Review. (4) Chart, n.d., sub: ADEA Operating Program, FY 83 Summary.

CHAPTER 9

CONCEPTS AND CONCEPTS GROUP

> I recommended to General Stone that we form a concepts group. A group of smart guys from the Division, the best minds we could find, to take a look at not only Infantry Division 86 but other kinds of arrangements.
>
> COL Joseph H. Felter
> Chief of Staff
> 9th Infantry Division[1]

A predecessor, if not the lineal ancestor, of the Concepts Group was a small organization called Task Force Stone. The basis for these off-line organizations seems rooted in some of the "kitchen cabinet" meetings held by General Stone during the Christmas holiday period of 1980. By January and early February 1981, the decision had been made to pull together a small group of action officers who could react quickly to General Stone.

Stone had become exasperated with seeing nothing but ID86. He felt that General Meyer's guidance demanded a fresh look at division structure. To do otherwise would result in a lengthy evolutionary process based on ID86, which was precisely what Meyer did not want. Stone viewed the Test Bed as all-consumed with what was already in their in-basket. Therefore, he determined he would pull together a small group to do some brainstorming for him.

Task Force Stone existed for only a few weeks. It came up with a skeletal test program, which was admittedly centered around already existent force modernization equipment that was coming into the system. It recommended that commanders in the 9th be involved in the developmental process by involving them with committees. Through those committees, their expertise could be tapped as a source of ideas, and they could also be used to evaluate ideas from outside sources. The Task Force recommended interweaving the test program with the 9th's training program, and finally they felt that a Concepts Group should evolve from Task Force Stone. Then the Task Force was disbanded and the officers returned to their units.

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[1]Felter Interview, 4 Dec 82.

The civilian head of the Task Force, Mr. Bobby Jolley, remained. So did Captain Thomas N. Harvey, who was acting as Deputy Chief of Staff of the 9th. It was also during this period that the TRADOC-supplied HTTB Scientific Adviser, Mr. Thomas Rorstad, arrived on Fort Lewis, and was diverted from HTTB to Concepts Group. These three individuals provided a thread of continuity in March and April, and were a nucleus around which a Concepts Group could be formed. They also, with Colonel Felter, put together the 16 April briefing presented to General Meyer, which resulted in some major decisions.

General Stone began to recruit for members of Concepts Group. Most came from within the 9th Division, but as time went on others were added. Stone asked for the TRADOC Commander's assistance in acquiring one officer, LTC James Channon, by reassignment. This request triggered some doubts in the TRADOC Commander's mind. He stated that he felt that there were not enough "...resources to provide two separate groups to do essentially what one was to do at the outset." Nevertheless, Concepts Group was formed during June and July 1981.[2]

Concepts Group and Task Force Stone were both formed outside the HTTB's structure. This led to considerable friction, as related in the chapter entitled Command Relations.

Colonel Courtney E. Prisk, the man who was to become Chief of Concepts Group, had been looking for an assignment at Fort Lewis beginning in February and March 1981. He attended the April Chief of Staff IPR, and arrived at Fort Lewis in mid-May. He was assigned as the Director of Conceptual Development (the Concepts Group), with a staff of some eight people. General Stone had given the group authority to grow to about twenty-five.

In Colonel Prisk's view, the 16 April IPR had resulted in some major shifts in the way people viewed HTTB, two of which motivated the formation of Concepts Group. The Test Bed was not to be a test board that worked only with outside ideas, but was to develop its own ideas; and it was charged with fielding a High Technology Light Division by 1985. Prisk's mission was to develop ideas for General Stone, which would then be tested by the Test Bed, and implemented in the HTLD.

During June and July, Concepts Group grappled with ID86. "We almost fell into the trap of saying 'Okay, if ID86 is as good as everybody says, then let's just modify it,'" to quote Prisk. By the end of June

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[2](1) Jolley Interview, 27 Jun 84. (2) Stone Interview, 9 Aug 84. (3) Interview, author with CPT Thomas N. Harvey, 4 Dec 82. (Hereinafter: Harvey Interview, 4 Dec 82.) (4) Msg, Cdr TRADOC to 9th Inf Div, 181533z May 81, sub: Concepts and Analysis 9th ID Test Bed.

the realization that ID86 was simply too heavy to meet the requirement began to dawn on Concepts and the 9th Division Command Group. This was reinforced by General Meyer at the next IPR on 30 July. Meyer was impatient, and wanted to see more movement. Prisk and Concepts Group were sent back for a fresh start.

Evolution of the Light Infantry Division Structure

Prisk began to look at a drastically revised division structure. He realized this had to be tied to an operational concept, and that the organizations could not be designed in a vacuum. He stated he looked to the Hussars as a historical example; a force that was light and quick which could get behind the enemy, continually moving, harassing and depleting the enemy force.

He assigned the project of roughly designing such a division to Major Robert L. (Lyle) Testerman. Major Testerman began to experiment with organizations. A third party, Lieutenant Colonel James Channon, had been working with the motion picture industry. He was an illustrator, and whether the idea of using a dune buggy originated with him or with MAJ Testerman after Testerman saw one in an illustration done by Channon is unclear.

Testerman began to investigate designing a unit around the dune buggy. He visited the post library to study historical examples, such as General George S. Patton, Jr.'s thoughts on how speed and maneuverability reduced losses, and General Thomas J. (Stonewall) Jackson's campaign of maneuver in the Shenandoah Valley during the Civil War. He took ideas from John S. Mosby in the Civil War and from the Plains Indian Wars of the 1870's and 1880's.

Testerman's ideas meshed with COL Prisk's concepts, who said:

> ...We talked about fielding twenty-five Baha racers, with a mounted TOW or with a mounted Mark 19 or with a mounted chain gun. You can field twenty-five of those for every tank you can put in the field. It goes back to the old story that five good dogs can kill a bear. With the Quick-Kill Vehicle, what the new High Technology Light Division will produce is twenty-five good dogs for every bear. If the Soviets have a four-to-one ratio on us, in tanks, that means that we can put out six of these teams of racers, six of these weapons systems, if you will, for every tank they have got in the field. The effects will be devastating....[3]

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[3](1) Prisk Interview, 16 Sep 82. (2) Interview, author with MAJ Robert L. Testerman, 13 Oct 82. (Hereinafter: Testerman Interview, 13 Oct 82).

In the meantime, Concepts Group had gotten in the business of idea management. A "Dial HTTB" number had been established, and a lieutenant assigned as action officer to track all incoming suggestions. General Stone had also tasked each major unit of the 9th to come up with ten great ideas. This was productive, and other idea sources were sought.

The Concepts Group became involved, usually in a peripheral way, with a number of topics and organizations that were to become important later in the evolution of the Test Bed. It was a member of Concepts Group who first suggested the use of a Quick Reaction Program (QRP) for materiel acquisition. In an effort to develop some of the ideas that had come in, an interface was developed with the Installation Materiel Office that evolved into the Skunk Works. Also as part of the idea development process, procedures were evolved concerning the use of the Test Director's Initiative Fund.[4]

The divided Concepts Group/HTTB structure began to correct itself in August 1981. On Monday, 3 August, COL Van Meter was relieved as Chief of the Test Bed. COL Prisk took control as acting chief on 10 August. On the 11th, General Elton replaced General Stone as Commander of the 9th Division, while Stone was promoted to three-star rank and moved to Fort Leavenworth as Commander of CAC.

General Elton had been briefed by General Meyer on what he should do at Fort Lewis. Meyer told him to focus on integrating operations and equipment. Elton found that: "The Division had not at that time adopted a concept of operations with which to drive the HTTB. We had no direction as far as what it was we were trying to achieve with regard to the light division other than testing a number of ideas that were given to us by the TRADOC community. The HTTB and the 9th Infantry Division Command had not worked together to develop a unified concept. It was really a loose group of small tests that were being accomplished here."[5]

Colonel Prisk and Concepts Group moved from Division Headquarters to the Test Bed area. A delicate integration began. Ultimately, Concepts Group became the Concepts and Analysis Division of the Test Bed.

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[4](1) Ibid. (2) Interview, author with LTC David S. Blodgett, 10 Apr 84. (Hereinafter: Blodgett Interview, 10 Apr 84.) (3) Prisk Interview, 16 Sep 82.

[5](1) Meyer Interview, 13 Jun 84. (2) Interview, author with MG Robert M. Elton, 29 Nov 82. (Hereinafter: Elton Interview, 29 Nov 82.)

Work continued on basic concepts. Lieutenant Colonel David S. Blodgett, who with Testerman and others, was intimately involved, described the evolution of the Group's thinking.

It seemed apparent that armor and the ability to defeat it were evolving at about the same pace. Therefore, for the foreseeable future, any force that could meet Soviet forces head on was armored and, de facto, too heavy to deploy quickly. What happens if armor is completely done away with? The force can be made very light with great mobility and agility. These characteristics could be meshed with the then-emerging AirLand Battle Concept. AirLand Battle, in essence, dictates that forces can win at the front line by preventing the enemy from getting all his force forward to that line.

Concepts Group pushed this further. The goal was to be able to determine what subsystem in the enemy rear was most critical during a given campaign. In the desert it might be water, or it could be fuel, ammunition, or any number of things. When that crucial subsystem or set of subsystems was determined, the new division should concentrate its power on attacking that "seam" in the enemy force. The attack should not be diluted by attacking other subsystems.

The objective was twofold. The enemy front line would not be getting the crucial item, or at least not enough of it, to operate the way it would like. Secondly, the enemy would have to divert forces moving to the front to meet the attack in his rear. The enemy might even have to pull forces from the front. Thus, he can be more easily defeated where he had wanted to do the fighting.

The complete concept evolved into a formal document in March 1982, but it was in the early fall of 1981 that the ideas began to take shape. An undated document from HTTB files for that period reflects much of the thinking outlined above.

CAC was also working on concepts for the HTLD. There was an interchange of documents between them and the 9th during September 1981.[6]

Colonel Cerjan Assumes Command

Upon learning that COL Van Meter was gone, and even before taking command of the 9th, General Elton had decided who he wanted as his chief of HTTB. He called Colonel Paul G. Cerjan on 9 August, and told him that he wanted Cerjan to come to Fort Lewis. General Elton told Cerjan that as Chief of the Test Bed he would be co-equal to the Division Chief of Staff.

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[6](1) Blodgett Interview, 10 Apr 84. (2) Undated Draft Document, sub: Light Division/Heavy Mission. (3) Msg, Cdr CAC to Cdr 9th Inf Div, 091353z Oct 81, sub: HTLD Operation Concept.

Colonel Cerjan did not report to Fort Lewis for duty until late October. In the interim, he stayed busy educating himself on HTTB and the 9th. He and Elton agreed they wanted an organizational and operational concept (O&O) by the end of 1981, and a division organizational structure shortly after that.

A peripherally related effort was going on in the 9th Division at the same time. General Elton was working the Division's major commanding officers through two CAC-developed map exercises centered on Southwest Asia. The first exercise, using the ID86 organization and the AirLand Battle Concept, did not go well. It was evident that ID86, on that terrain, with those tactics, would not work. The second exercise, using an embryo HTLD structure, went well. These efforts were the genesis of the 9th's "how to fight" studies, which were published as time went on. Initially these were developed outside the Test Bed, but later they became a Concepts project. All of this was done in close coordination with CAC.

By the end of 1981, Concepts Division had a draft O&O concept that had General Elton's approval. They had also roughed out a division organization of around 15,500 men, which was considered, even by Concepts, as only a starting point. These two documents were used as just that, a point of departure, by the work groups who designed the HTLD during January and February 1982. See the chapter entitled Designing the Division.[7]

While the draft O&O had been developed in conjunction with CAC and the various TRADOC centers and schools, it had not been staffed through HTTB and the 9th. This was done during February, and the first official Operational Concept for High Technology Light Division was published on 10 March 1982.

General Elton briefed the O&O to CAC and representatives of the TRADOC centers and schools in April. CAC staffed the concept through the centers and schools following that briefing and forwarded their comments to COL Cerjan.[8]

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[7](1) Interview, author with COL Paul G. Cerjan, 17 Feb 83. (Hereinafter: Cerjan Interview, 17 Feb 83.) (2) Elton Interview, 29 Nov 82. (3) Testerman Interview, 13 Oct 82.

[8](1) DF, HTTB to CofS 9ID, 29 Jan 82, sub: Operational Concept for High Technology Light Division. (2) DF, HTTB Force Design Div to HTTB Concepts Div, 12 Feb 82, sub: Review of "Operational Concept for High Technology Light Division (20 Jan 82 Version)." (3) Ltr, CAC FDD to Chief HTTB, 5 May 81, sub: Review of High Technology Light Division Organization and Operation Briefing.

Test Bed and the 9th also got some comments from outside experts, such as Mr. Walter W. Hollis, Deputy Undersecretary of the Army for Operations Research, and Lieutenant Colonel Huba Wass de Czege, one of the authors of the AirLand Battle Concept. Mr. Hollis expressed concern that not enough effort had been put into devising a method of evaluating the concept, and LTC Wass de Czege put forth a number of suggestions. Wass de Czege was concerned that the concept might place too much reliance on the deep battle aspects, and he pointed out that it was not a cure-all.

The various TRADOC centers and schools became involved with the evolution of conceptual documents during 1982. In April the Infantry School published an Operations Manual for the Light Attack Battalion, and later began working on manuals for the Assault Gun Battalion and the Light Motorized Infantry Battalion. The Army Logistics Center drafted an operational concept for HTLD combat service support.[9]

In early 1983, CAC began an effort to revise and update the 9th's O&O concept. It directed all the involved centers and schools to develop their input, and have it to CAC by 1 April. The 9th was also working on the update, providing answers to inquiries from the centers and schools. As the input from the centers and schools came in, it was staffed through CAC, and the input, along with the staffing comments, were forwarded to HTTB/ADEA for consideration and inclusion in the revised concept. The revision was published on 14 May.

As time passed, a discussion of the reduction of the total size of the HTLD began in the fall of 1983. ADEA stood ready to alter the concept again, as required.[10]

In the meantime, the two map exercises set in the Middle East, mentioned above, had resulted in the publication of two "How to Fight"

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[9](1) Memo, DUSA-OR to DA DCSOPS, 7 May 82, sub: 9th Division Test Bed. (2) Ltr, LTC Huba Wass de Czege to G3 9th Inf Div, 27 Aug 82, no sub. (3) Manual, Apr 82, sub: High Technology Test Bed Operations Manual for Light Attack Battalion. (4) Ltr, LOGCEN to dist, 17 Jun 82, sub: Operational Concept for the High Technology Light Division, Combat Service Support (CSS).

[10](1) Msg, Cdr CAC to dist, 241658z Jan 83, sub: Operational and Organizational Plans (Formally Concepts) for the HTLD. (2) Msg, Cdr 9th Inf Div to Cdr CAC, 280100z Jan 83, sub: Operational and Organizational Plans (Formally Concepts) for the HTLD. (3) Ltr, CAC FDD to Chief HTTB, 18 Apr 83, sub: Operational and Organizational Plans for the HTLD. (4) Operational Concept, 9th Infantry Division, 14 May 83. (5) Msg, Cdr ADEA to Cdr CAC, 311600z Oct 83, sub: HTLD Operational Concept.

manuals by the 9th. Colonel Craig H. Boice had arrived on Fort Lewis in the late summer of 1981. While he was awaiting taking command of a brigade in the 9th, he was assigned as a Special Assistant to the Assistant Division Commander for Operations, and was charged with the How to Fight effort. He worked quite closely with HTTB and it was recognized that what he was doing drove much of what Concepts was doing. Thus the two parallel and interrelated efforts evolved simultaneously.

The two Middle East volumes dealt with combat in mountains and combat in high desert, and both were classified secret. Later, Concepts produced more in the How to Fight series. How to Fight--Europe concentrated on combat in the Northern Army Group Area and was published on 9 May 1983. How to Fight--Korea was published 25 May 1983. Neither of these latter were classified. Both were developed within exercise scenarios, as the first two had been.[11]

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[11](1) Cerjan Interview, 17 Feb 83. (2) Note, CofS 9th Inf Div to ADC-O, 25 Oct [81], sub: "Staff Tilt." (3) Ltr, Cdr 9th Inf Div to dist, 9 May 83, sub: The High Technology Light Division (HTLD) How to Fight-Europe. (4) Ltr, Cdr ADEA to dist, 25 May 83, sub: How to Fight-Korea.

CHAPTER 10

OUTSIDE ADVICE

> We asked a whole host of people to give us ideas so that it was not just my ideas, because I wanted all the best ideas to surface.
>
> General E. C. Meyer
> Chief of Staff
> US Army[1]

As already noted, one of the earliest actions that gave the Test Bed some direction was the Army Science Board Summer Study of 1980. General Meyer used such panels of experts, and a number of individuals, not only as sources of ideas but also as a method of keeping track of what was happening at Fort Lewis. The Test Bed was barely beginning to take shape when he began to ask the first of his "whole host" of advisers to visit the 9th.

The first of the host was his own Vice Chief of Staff, General John W. Vessey, Jr. General Vessey visited the Test Bed on 20-21 October 1980. He commented on a number of topics, but one statement in particular stuck in the minds of the leaders at Fort Lewis: "We want a light division that is easy to move; strategically deployable quickly; one that is easy to move now and is tough when it gets there; one that can attack as well as defend and can fight Soviets and Soviet-equipped forces anywhere." The statement was quoted in many briefings that followed, and was weighed in the computation leading to a final mission statement for Test Bed and the 9th.[2]

General Vessey was followed by Doctor Eugene G. Fubini, the Vice Chairman of the Defense Science Board. General Meyer had great respect for his judgment, and considered him "...one of the most influential gurus in Washington..." On 6 September 1980 General Meyer asked Doctor Fubini to visit Fort Lewis. A visit was scheduled for 3 December. General Stone found Doctor Fubini to be "...an engaging free spirit...." For a three-hour visit, the volume of commentary from the Doctor was amazing. Colonel Mead's notes on the trip list thirty-three separate

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[1]Meyer Interview, 13 Jun 84.

[2]Memo, Asst Chief, HTTB Ops Spt Div to Chief, HTTB, 23 Jul 84, sub: Response to MG Elton's Questions Pertaining to Quotes from General Vessey's Remarks on HTTB, w/Attached List of Quotations.

points on which Doctor Fubini offered suggestions or comments. Among them were such things as a suggestion that the Test Bed send a representative to Texas Instruments, Inc., to investigate the way that company elicited ideas from its employees; the Test Bed should first develop a light forces concept; establish a correspondence with him so that he could continue to input; there should be a scientist on the ground at Fort Lewis to help the effort.

Doctor Fubini stated the purpose of his visit was threefold:

- Report back to General Meyer.
- Help tell the HTTB and Light Division story at DOD level.
- Involve himself and the Defense Science Board.

He did indeed involve himself and the Defense Science Board. The Board conducted a summer study in 1981 at Fort Lewis, and Doctor Fubini made several other visits to the Test Bed independently of the Board.[3]

Others of General Meyer's "host" were invited after his initial IPR on 20 November 1980. One of his comments was that the 9th should invite Retired Generals Kinnard and Howze to Fort Lewis. The first of these to arrive was Lieutenant General (Ret) Harry W. O. Kinnard, who had been the commander of the 11th Air Assault Division in the mid-1960's. The 11th had been involved in air assault and airmobile concept testing before it became the first cavalry division and was deployed to Vietnam. This testing was probably the closest historical parallel to HTTB in the Army's experience.

General Kinnard spend a very full 22 January at Fort Lewis. His comments to the people at Fort Lewis and to General Meyer are startling in that he sensed precisely those areas that were to give the Test Bed its greatest difficulties. Some examples: the command arrangements would work only if the Chief of Staff got Generals Richardson and Stone together and ensured they understood and agreed to his desires; the mission was ill-defined and needed to be clarified; ID86 should only be

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[3](1) Meyer Interview, 13 Jun 84. (2) Memo, Dir Requirements DA DCSOPS to CSA, 24 Sep 80, sub: Doctor Fubini Visit to 9th ID--Information Memorandum. (3) Msg, Cdr 9th Inf Div to Dir Requirements DA DCSOPS, 102135z Dec 80, sub: Visit of Doctor Fubini to Ft Lewis 3 Dec 80. (4) Memo, DAMO-RQS to DA DCSOPS, n.d., sub: Trip Report-Doctor Fubini Visit to Ft Lewis/HTTB on the Afternoon of 3 Dec. (5) Memo, DA DCSOPS to CSA, n.d., sub: Doctor Fubini's Visit to Ft Lewis--Information Memorandum.

a point of departure; the Division had to have a combat scenario against which to be optimized. He urged General Stone to develop his own mission statement and scenarios, and then have them approved, which is essentially what Stone did.

On 10 February Kinnard sent Stone a copy of his memo to General Meyer. In the handwritten letter that accompanied the memo, Kinnard stated that he had additionally written an "eyes only" report to Meyer that emphasized in much stronger terms the need for clarification of organizational structure, mission, scenario and conflicts caused by readiness, contingency missions, etc.[4]

Retired General Hamilton H. Howze visited the Test Bed on 26 February. His comments were narrower in scope than those of either Kinnard or Fubini, dealing almost exclusively with Army aviation.[5]

These early visitors, logically enough, had greater impact on the Test Bed than those who followed. As the missions and organizations evolved and solidified, there was less need for seminal input and the nature of the outside advice became more routine.

The enormous volume of visitors to the Test Bed served a number of functions outside of those stated by General Meyer, which were to surface ideas and report their thoughts back to him. In the case of political figures and their staff members, they carried the HTTB message back to Congress, encouraging the passage of funding measures in support of the experiment. In the case of senior Army officers, they were educated on the Test Bed and encouraged to involve their various organizations in support. The same is true of foreign visitors and industry representatives.

One good example of the use of industry representatives was the two-day meeting of a panel of the American Defense Preparedness Association, 14-15 December 1982. This panel consisted of sixteen senior executives from major defense contractors. They commented on a range of topics, most of which reinforced the positions which HTTB had expressed. The final report was submitted to General John A. Wickham, Jr., the Vice Chief of Staff of the Army, on 9 February 1983.

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[4](1) DF, G6 HTTB to CG 9th Inf Div, 21 Nov 80, sub: CSA Comments. (2) Itinerary, HQ 9th Inf Div, 211130z Jan 81, sub: Lieutenant General (Ret) Harry W. O. Kinnard. (3) Memo, DAMO-RQS to DA DCSOPS, 27 Jan 81, sub: Trip Report-LTG Kinnard's Visit to 9ID HTTB-22 Jan 1981. (4) Memo, LTG Kinnard to CSA, n.d., sub: Visit to 9th ID on 22 Jan 81 of LT Gen (Ret) H W O Kinnard. (5) Ltr, LTG Kinnard to MG Stone, 10 Feb 81, no sub.

[5]Msg, CG 9th Inf Div to dist, 031624z Mar 81, sub: GEN (Ret) Howze Visit to HTTB, 25-27 Feb 81.

This meeting was followed shortly by a similar one held by the Association of the U.S. Army (AUSA) Industry Symposium on 25-27 January 1983. This was done at the request of General Elton as Commander of HTTB and the 9th, to "...inform industry on the High Technology Light Division program and to establish a working relationship with industry in order to seek ideas and technology which might enhance the mission performance capabilities of a new light division." The Symposium members divided into ten work groups, each dealing with a given topic such as aviation, fire support, communications, etc. The final report was issued 11 April 1983.

As a result of this symposium, the AUSA Director of Industry Affairs suggested to General Elton that a standing committee, called a "Super Green Team" be assembled. The committee would assemble at the request of the 9th to review and advise on activity in the 9th. General Elton agreed, and proposed the team be kept to twenty individuals, representing each of the ten battlefield work groups. He proposed to call on them in October-November 1983. The AUSA Director of Industry Affairs responded in May with a suggested slate of members. Planning went forward for a meeting of the team on 1-2 November. Ultimately, however, the new 9th Division Commander, Major General Robert W. RisCassi, requested the meeting be delayed until spring 1984. This was due to ongoing force structure actions taking place in DA and TRADOC concerning force structure changes, particularly the 10,000-man Light Infantry Division, the results of which were still unclear.[6]

Also during the course of 1983, the 9th was visited by or briefed a staff assistant to Senator Gary Hart; the Deputy Undersecretary of Defense for Research and Evaluation; the Deputy Undersecretary of the Army for Operations Research; and the 1983 Army Science Board. These are only examples of the normal flow of visitors to Fort Lewis, but each had observations and suggestions, some good, some redundant, that had to be responded to.[7]

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[6](1) Ltr, Pres American Preparedness Assn to VCSA, 9 Feb 83, no sub, w/Attachments. (2) DF, HTTB to CofS 9ID, 11 Apr 83, sub: AUSA Symposium Wrap-Up Report. (3) Ltr, CG 9th Inf Div to AUSA Dir of Ind Affairs, 31 Mar 83, no sub, w/Attachments. (4) Ltr, AUSA Dir of Ind Affairs to CG 9th Inf Div, 16 May 83, no sub, w/Inclosure. (5) DF, ADEA to CG ADEA, 26 Aug 83, sub: Super Green Team Conference, w/6 Inclosures. (6) Ltr, CG 9th Inf Div AUSA Dir of Ind Affairs, 16 Sep 83, no sub.

[7](1) Memo, ADC 9ID to CG 9ID, n.d., sub: Visit by Doctor James Wade, Principal DUSD (R&E), 20 January 1983. (2) Memo, HTTB to Record, 25 Feb 83, sub: Mr. Hollis, DUSA/OR Visit, 24 Feb 83. (3) Ltr, DA Dep DMPP to DA HTTD, 14 Apr 83, sub: Army Science Board Summer Study on the Future Development Goal.

CHAPTER 11

ALLIED INVOLVEMENT

> We have a fantastic association here with the Allied Liaison Officers.
>
> Colonel Paul G. Cerjan
> Chief, HTTB
> 17 February 1983[1]

Allied involvement in the Test Bed had been encouraged even before there was a Test Bed. General Meyer, during a visit to New Zealand in March 1980, invited their army to participate in the project. At a conference in April 1980, General John R. Guthrie, the DARCOM Commander, explained to the British, Canadian and Australian Army Chiefs of Staff what was intended for the 9th Division. He extended an invitation to their armies to participate. This was done in compliance with General Meyer's wishes. The 19 June four-star meeting, where agreement was made to establish the Test Bed, also resulted in the affirmation of the desirability of allied participation and directed that the MOU "include appropriate provision." The MOU included, under TRADOC responsibilities, the statement "Establish in coordination with DARCOM appropriate interfaces with allies to facilitate test and evaluation of allied equipment and their observation of HTTB testing."

General Meyer maintained a correspondence with the New Zealand Chief of Staff. In a letter to him on 15 August, Meyer mentioned the possibility of establishing a position for a New Zealander at Fort Lewis.[2]

Also in August, work began on a formal invitation to the BCA (British, Canadian, Australian) Army Chiefs of Staff to participate in the HTTB effort. The message was dispatched 9 September, with the New Zealand Chief of Staff added as an addressee. During this staff action, the question of which other nations should be invited to participate was surfaced. DA DCSOPS stated in a memorandum to General Meyer that they would take the lead in developing this, but that the allies' primary

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[1]Cerjan Interview, 17 Feb 83.

[2](1) Msg, NZDEF Army to Cdr WESTCOM, 080430z Oct 80, sub: US/NZ Exchanges. (2) Ltr, CG DARCOM to CSA, 18 Aug 80, no sub. (3) Msg, DCSOPS FORSCOM to Cdr 9th Inf Div, 031100z Jun 80, sub: High Technology Test Bed (9th ID). (4) MOU, 8 Oct 80. (5) Ltr, CSA to NZ CSA, 15 Aug 80, no sub.

point of contact would be the TRADOC Deputy Chief of Staff for Combat Developments. TRADOC Combat Developments was already at work on a step-by-step plan on how to integrate the allies into the effort.[3]

The Commander of the Army Aviation Center sent a message to TRADOC on 29 September. He had become aware of General Meyer's invitation to the BCA nations and had a nominee for the Canadian officer. He was aware of a Canadian major, an aviator, who had expressed a great deal of interest in the formation of the Air Cavalry Attack Brigade which was to be one of the first tests performed in the 9th. Informal discussion with the Canadian liaison officer at the Aviation School had revealed support for such a proposal. The Aviation Center Commander closed with the suggestion that either TRADOC or the 9th formally pursue the matter. Whether they chose to or not is unknown, but the nominated officer was not the one ultimately assigned.

New Zealand accepted General Meyer's invitation to place an officer at Fort Lewis. This was desired on an exchange basis, with the US sending an officer to New Zealand in return. DA considered taking the US exchange officer slot from the Test Bed TDA, but dropped that idea when TRADOC and the 9th adamantly objected.

By early October, Australia had also expressed an interest in sending an officer.[4]

It should be kept in mind that all this activity took place very early in the history of the Test Bed. At this point, the Test Bed consisted of approximately seven people, and the two Deputy Test Directors were just arriving at Fort Lewis.

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[3](1) Draft msg, HQDA to dist, 11 Aug 80, sub: Invitation of BCA Armies' Chiefs of Staff to Participate in 9th Infantry Division High Technology Test Bed Activities (9ID HTTB). (2) Msg, HQDA to dist, 091320z Sep 80, sub: Invitation of BCA Armies' Chiefs of Staff to Participate in 9th Infantry Division High Technology Test Bed Activities (9ID HTTB). (3) Memo, DCSOPS to CSA, no date, sub: Invitation of BCA Armies' Chiefs of Staff to Participate in 9th ID High Technology Test Bed Activities--Decision Memorandum. (4) DF, Dir IAPD to Dir TED and Dir PALD, 10 Sep 80, sub: 9ID HTTB - Sequence of Steps for Allied Involvement, w/Atch.

[4](1) Msg, Cdr USAAVNC to TRADOC DCSCD and CG 9th Inf Div, 291930z Sep 80, sub: Canadian Liaison Observers for ACAB. (2) Msg, NZDEF Army to Cdr WESTCOM, 080430z Oct 80, sub: US/NZ Exchanges. (3) Msg, TRADOC DCSCD to dist, 212000z Nov 80, sub: 9th ID HTTB Allied Involvement - NZ PEP. (4) Info Paper, HQDA, 14 Oct 80, sub: High Technology Test Bed.

A draft message composed by TRADOC began formal staffing in late November. It was dispatched as a personal message from General Meyer on 6 February 1981 to fifteen NATO and BCA Army Chiefs of Staff. It invited them to participate in the Test Bed, and again, designated the TRADOC Deputy Chief of Staff for Combat Development, Major General Carl E. Vuono, as the US point of contact.

In anticipation of responses to the Meyer message, General Vuono began work on a much more detailed message in early December 1980. This outlined the proposed tests HTTB would be coordinating and different ways the allies could participate. First, they could submit operational and organizational concepts for evaluation; second, they could send observers for specific tasks; third, they could send a staff officer as a special project officer (SPO) for a full-time two- to three-year working tour. In the third case, HTTB only had room to accept ten SPOs. This message was dispatched on 6 March 1981 to those allies who had made a positive response to General Meyer's invitational overture. Australia and New Zealand had already stated they wanted to place SPOs at Fort Lewis, and Canada and the United Kingdom were similarly inclined.

As with the HTTB involvement with other services, General Stone was informed during his 20 February visit to the Pentagon that General Meyer fully believed this effort with the allies was moving rapidly forward.[5]

Indeed, the effort was moving rapidly. By January 1981, an Allied Involvement Plan had been developed by TRADOC, staffed, and was in its final form. In mid-March TRADOC began staffing on a detailed memorandum of understanding to be executed by the US Army and the armies sending SPOs to HTTB. The MOU made every effort to integrate the SPO into HTTB as though he was an American officer. The duties, responsibilities and efficiency evaluations would be essentially the same as for US officers.

By 1 April, Britain, Australia, Canada and New Zealand had indicated that they would, or probably would, put SPOs in the Test Bed. France, Italy, Turkey, Denmark, Norway and Belgium had expressed interest, but had not committed themselves to a degree of participation. The Netherlands, Luxembourg, Greece, West Germany and Portugal had either not responded, indicated they would participate short of sending an SPO or had declined participation. Those who had responded at all were sent

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[5](1) Msg, HQDA to dist, 212000z Nov 80, sub: 9th Infantry Division High Technology Test Bed. (2) Msg, HQDA to dist, 062138z Feb 81, sub: 9th Infantry Division High Technology Test Bed Allied Involvement Plan. (3) Msg, HQ TRADOC to dist, 061845z Mar 81, sub: 9th ID HTTB Allied Involvement Plan. (4) Info Paper, HQDA, 13 Nov 80, sub: CSA Visit to Fort Lewis--9th ID High Tech Test Bed. (5) Memo, CG 9th Inf Div to various staff (dictated), 20 Feb 81, no sub.

a brief description of the duties which the SPOs would be charged with, should their nation decide to send one.[6]

The Army attaches of the fourteen nations that had expressed an interest in HTTB were invited to Fort Lewis for an orientation. They spent the day of 8 June 1981 receiving briefings and viewing equipment in HTTB and the 9th.

In a letter to the Chief of Staff of the New Zealand Army dated 27 July 1981, General Meyer commented on the auspicious arrival of Major Neal A. Bradley, the New Zealand SPO and the first to arrive at HTTB: "...apparently he is adapting well to his American environment; as a brand new arrival on July 4, he promptly won the watermelon seed spitting contest at the Independence Day picnic..."

By 1 September, DA had approved a general MOU covering the assignment of SPOs, with the understanding that it would have to be tailored to some degree for each nation involved. The British SPO was expected on 27 October, the Australian in December, and the Canadian during the first half of 1982. The British and the Canadians were to serve a three-year tour, and the Test Bed tried to see that all of their allied officers, and their liaison officers from other US branches of service as well, were stabilized for three years.[7]

The SPOs were authorized to make reports to their armies, but those reports were to be passed through the 9th and the TRADOC International Collaboration Office. This procedure was rather clumsy, and at least in the case of the Australian, the requirements for formal written reports

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[6](1) Draft Allied Involvement Plan, no date. Attached note states 9th ID provided staffing input to TRADOC on 24 Dec 80. (2) Msg, Cdr TRADOC to dist, 171900z Mar 81, sub: Draft Memorandum of Understanding Between US Army and Allied Armies Concerning Allied Special Project Officers at 9th Infantry Division High Tech Test Bed (HTTB), Ft Lewis, WA. (3) Msg, Cdr TRADOC to dist, 011315z Apr 81, sub: Update on Allied Involvement in 9th Infantry Division High Technology Test Bed (HTTB) at Fort Lewis, WA.

[7](1) Schedule of Events, 7 through 12 Jun 81, HTTB. (2) Msg, HQDA to USDAO NZ, 302242z Jul 81, sub: Letter from General Meyer to Major General Poananga. (3) Msg, Cdr TRADOC to dist, 101720z Sep 81, sub: Memorandum of Understanding (MOU) on the Placement of a Special Project Officer (SPO) with the 9th Infantry Division High Technology Test Bed (HTTB). (4) Ltr, Cdr 9th Inf Div to Australian Chief of Operations, 14 Jan 83, sub: Stabilization of the Australian Special Project Officer (SPO) at the High Technology Test Bed (HTTB).

was removed because the Australian Attache felt "...that this activity is potentially disruptive of his function as a fully integrated member of the Test Bed....:"[8]

TRADOC itself made an effort to keep the allies informed. In March 1982 it sent a message to the allies with an update on HTTB affairs. In June, TRADOC sent a draft of a second message to the 9th for staffing. Colonel Cerjan attached a note to the draft in which he questioned whether it was appropriate to be so candid and revealing in the contents of the message. In a handwritten response, General Elton stated "Why is this necessary at all? Who wants it done? I think the time has come to stop! Paragraph 2, 4 and 5 are dangerous...." There is no evidence that that message, or any other updates, were ever dispatched.[9]

Throughout the entire topic of allies in HTTB was woven the thread of disclosure. This was a question with many subtleties. All countries have, aside from security classifications, disclosure policies which are often complex. The US has a NOFORN (no foreign) marking in addition to normal security classifications, and so do other countries. This gets even more complex when persons from several different nations are gathered. US disclosure policy for one nation may not be the same as for another, as an example. To further complicate matters in HTTB, materiel and/or concepts provided by one ally for consideration may not be releasable to other allies, or releasable only subject to certain caveats, etc.

The memorandums of understanding drawn up between the US Army and the Allied Armies contained standard paragraphs which dealt with the problem. As stated earlier, the SPO's reports to his nation were to go through U.S. Army channels. He could be exposed to oral and visual material releasable to his government, and within his verified security clearance. Materiel and concepts accepted for tests from his government would have previously agreed upon releasability to others.

Further guidance was provided the Test Bed. An allied officer was not to be used in a position that required access to classified information that was not releasable to his government. He could not be in a

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[8](1) Rept, Australian SPO to Australian Army Staff, 14 Jun 82, sub: Quarterly Report of the Australian Special Project Officer High Technology Test Bed (HTTB) as at [sic] 30 April 1982. (2) Ltr, Australian Attache to CG 9th Inf Div, n.d., no sub.

[9](1) Msg, Cdr TRADOC to dist, 230900z Mar 82, sub: 9th ID High Technology Test Bed (HTTB) Update for Allies. (2) Draft msg, Cdr TRADOC to dist, 2 Jun 82, sub: Second 9th ID High Technology Test Bed (HTTB) Update for Allies, w/attached notes.

position that required policy-making decisions, nor command positions. His primary duties could not include supervision of US personnel. He could not officially represent the Test Bed or the US Army. When traveling on HTTB business he must be accompanied by a US officer of equal or higher grade who could speak for HTTB.

These requirements were a constant source of irritation to the members of the Test Bed who wanted to work their assets, US and foreign, where they were most needed. One example again involved Major Bradley, the New Zealander. HTTB sent a request for an exception to policy to allow Major Bradley access to the Middle Eastern III (ME III) Threat Scenario. The request was denied because the scenario contained threat information and sensitive political material that was not to be disclosed to any foreign government. Instead, TRADOC offered HTTB three other solutions: clear Major Bradley for certain non-sensitive portions of the scenario; produce a new, non-sensitive scenario; or move the major to some other position. The dilemma continued.

In July 1982, TRADOC asked for relief. In a message to DA, the TRADOC Chief of Staff stated that the presence of the allied officers "...puts us in the unfortunate position where we must risk security or lose valuable foreign input to the HTTB." He went on to point out that the officers were knowledgable, experienced and carefully chosen by their countries. They had valuable specialties that could be beneficial to the test effort. The use of these skills was seriously hampered, however, by cumbersome or unworkable disclosure policies. In sum, it was TRADOC's view that the disclosure policies were limiting the Test Bed's ability to comply with General Meyer's desires for foreign involvement in the project.[10]

DA's response contained a three-part proposal: first, the position of HTTB Security Manager should be established to control all aspects of project security; second, classified documents needed by the SPOs on a recurring basis could be cleared in an expedited manner; third, the I Corps G2 could expedite the clearance of FORSCOM documents, the DARCOM colonel at HTTB could expedite DARCOM documents, and the TRADOC Disclosure Office would continue to work TRADOC information. There was some discussion that if this system could not be made to work, the SPOs

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[10](1) MOU, 27 May 82, sub: MOU, US Army and the Canadian Forces on the Placement of a Special Project Officer with the 9th Infantry Division HTTB, Fort Lewis, WA. (2) Msg, Cdr TRADOC to Cdr Fort Lewis, 181915z Nov 81, sub: Foreign Liaison and Disclosure at HTTB. (3) Msg, Cdr TRADOC to Cdr Fort Lewis, 191230z Nov 81, sub: Foreign Special Project Officer (SPO) at HTTB. (4) Msg, CofS TRADOC to Dir Army Staff, 071930z Jul 82, sub: Foreign Officers at the HTTB.

would have to be removed from action officer positions and segregated within HTTB. It was not thought politic to send them home.

In the internal HTTB routing of the DA response, it found its way to Major Bradley's desk. He was Acting Chief of the Force Development Division, in the absence of the Chief. His comments revealed his frustration. After assurances that neither he nor his Army had any intention of violating U.S. Disclosure Policy, he stated "...I jealously guard and respect my association with the HTTB activity. I would hate to think that this could be jeopardized by persons other than those of HTTB...."

Colonel Cerjan noted that the proposals were probably as good as could be expected, and that Test Bed would comply. Lists of documents that needed to be cleared for the SPOs were compiled and forwarded to TRADOC.[11]

In addition to disclosure questions internal to the Test Bed, there were also questions of disclosure to external foreign sources. One example, easily handled, was the case of a US Military Attache writing directly to the Test Bed for information which he intended to pass to his foreign counterpart. The Test Bed referred the attache to the TRADOC and DA Disclosure Offices.[12]

The French had expressed a greater than average interest in the Test Bed from the beginning, and would eventually place an SPO at Fort Lewis. They had offered their expertise in desert warfare, fighting in urban terrain and modular command posts. They were particularly interested, however, in the development and testing of the Cavalry Brigade Air Attack (CBAA). Partially because of French willingness to share their own experiences, they were allowed to observe the major CBAA tests in April 1982.[13]

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[11](1) Facsimile Trans, HQ TRADOC to HTTB, 31 Aug 82, sub: Foreign Officers at the HTTB, w/attached notes. (2) DF, XO HTTB to dist, 14 Oct 82, sub: Disclosure Policy for HTTB SPOs.

[12](1) Ltr, US Army Attache Norway to CG 9th Inf Div, 26 Nov 82, sub: Provision of High Technology Test Bed (HTTB) Information to the Norwegian Army. (2) Ltr, Dep C HTTB to US Army Attache Norway, 10 Jan 83, no sub.

[13](1) Msg, Cdr TRADOC to Cdr I Corps, 221110z Dec 81, sub: French Army Participation in HTTB activities. (2) Msg, Cdr 9th Inf Div to Cdr TRADOC, 041500z Jan 82, sub: French Army Participation in HTTB Activities. (3) Msg, Cdr TRADOC to Cdr 9th Inf Div, 030830z Feb 82, sub: French Army Participation in HTTB Activities.

Further interface with the French occurred in the fall of 1982. The TRADOC and DARCOM colonels from HTTB gave presentations in London and Paris on the Test Bed activities at the Technical Marketing Society of America Seminar on battlefield weapons. They stayed in France several extra days to observe tests and discuss items of common interest, particularly specific items of equipment. The HTTB interest in equipment was actively pursued with the Canadians, Israelis, and the British, as well.[14]

As foreigners began to ask to visit the Test Bed, TRADOC established the command rules for such visits in November 1981. The visits of foreign nationals or the representatives of foreign industry were to be coordinated through the DA and TRADOC Disclosure Offices. In essence, it involved an accreditation procedure whereby TRADOC, after coordination with HTTB and the other MACOMS, would make a recommendation to DA. DA would determine the actual terms of accreditation. The concern over such accreditation was accentuated by a DA message to the field on 4 December 1981.

In August 1982 TRADOC proposed a return visit of the fourteen attaches and liaison officers who had visited the Test Bed in June of 1981. This was considered a gesture evidencing the continued commitment of the US to "harmonize our armies." The 9th concurred, and the visit took place 16-17 November.

By the fall and winter of 1982, the accreditation of foreign visitors appears to have become a routine administrative procedure for the HTTB Executive Officer.[15]

Overall, Colonel Cerjan felt that foreign input was a healthy thing for the Test Bed. He was somewhat disgusted with what he felt was the over-protected disclosure policy, but was generally in favor of the

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[14](1) Memo, Chief HTTB and Chief Maintenance Support Activity (DARCOM) for record, undated, sub: Trip Report to London, England and Paris, France - 25 Oct 82-5 Nov 82. (2) Msg, Cdr TRADOC to Cdr 9th Inf Div, 221559z Nov 82, sub: Update on British Proposals for HTTB. (3) Ltr, Cdr 9th Inf Div to Israeli Defense Attache, 27 Jan 83, no sub.

[15](1) Msg, Cdr TRADOC to Cdr Fort Lewis, 181915z Nov 81, sub: Foreign Liaison and Disclosure at HTTB. (2) Msg, HQDA to dist, 041419z Dec 81, sub: Foreign Visits. (3) Msg, DCSCD TRADOC to Cdr 9th Inf Div, 181300z Aug 82, sub: HQ TRADOC Foreign Liaison Officers (FLO) Visit. (4) DF, DCSCD TRADOC to dist, 5 Oct 82, sub: Liaison Officer Visit to 9th ID/HTTB. (5) Ltr, DA OACSI to Cdr I Corps, no date, sub: Foreign National Request for Visit, w/Atch.

retention of foreign special project and exchange officers in the Test Bed. Their varying attitudes towards the use of light forces, and even varying definitions of light forces, provided the basis for much healthy discourse. His only complaint, other than the disclosure problem, was that the European allies were not represented, particularly the West Germans.[16]

As 1983 arrived, HTTB had a specific request for the United Kingdom. They paid for the British military attache to visit Fort Lewis in order to brief the Test Bed and the Division on British operations against Argentina in the Falkland Islands.

Also in January 1983, the Test Bed began coordination for a visit to Israel. The purpose was to be a general exchange of information and a chance for HTTB representatives to see some of the hardware developed by the Israelis. This visit took place 28 February through 6 March.[17]

The Test Bed's efforts to have the SPOs stabilized for three years met with spotty success. They received word in May that the Australian would have his tour extended to three years, but they also received an accreditation request for replacement of Major Bradley, the New Zealand SPO, who had arrived in the summer of 1981. This was followed shortly by a similar request for a replacement of the British liaison officer.[18]

The departure of Major Bradley presented the Test Bed with its first question of how to recognize an SPO's service. They sent a message to the US Embassy in New Zealand requesting the Ambassador's concurrence with the presentation of the US Army Meritorious Service Medal, which was promptly received.

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[16]Cerjan Interview, 17 Feb 83.

[17](1) Msg, Cdr 9th Inf Div to HQDA, 072230z Jan 83, sub: Briefing from UK Embassy Military Attache. (2) Msg, Cdr 9th Inf Div to USDAO Tel Aviv, 252100z Jan 83, sub: Visit by Representatives from High Technology Test Bed (HTTB), 9th Infantry Division, Fort Lewis, Washington, USA. (3) Msg, Cdr 9th Inf Div to USDAO Tel Aviv, 221830z Feb 83, sub: Visit by HTTB 9th ID Representatives to Israel.

[18](1) Ltr, Australian Embassy to Cdr 9th Inf Div, 2 May 83, no sub. (2) Ltr, New Zealand Embassy to HQDA, 10 May 83, sub: Accreditation Request - Exchange/Integrated Officer, w/Atch. (3) Ltr, British Embassy to HQDA, 15 Jul 83, sub: Accreditation Request Lieutenant Colonel Anthony de Camborne Lowther Leask (473996) Scots Guards, w/Atch.

The same approach did not work so well in the case of the British liaison officer, Lieutenant Colonel Hiscock. The US Embassy in London nonconcurred with the request, based on an informal policy agreed on with the British not to make such awards. The proper procedure, which equated to the British system of being "mentioned in dispatches" was a letter of commendation. This was done for Colonel Hiscock.[19]

On 20 June 1983, the French Embassy notified DA that the French Army Chief of Staff had decided to accept General Meyer's two-year-old invitation to put a French liaison officer in what was now ADEA. A lieutenant colonel had already been identified, and he paid ADEA a pre-assignment visit in July. By early November he had received his initial orientation on his duties and was at work on the ADEA staff. Even though Colonel Cerjan had departed, his desire to see NATO representation in the Test Bed had been partially fulfilled.[20]

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[19](1) Msg, Cdr ADEA to USADAO Wellington, NZ, 111800z Jul 83, sub: US Army Meritorious Service Medal for Major Neal A. Bradley. (2) Msg, USDAO Wellington NZ to Cdr ADEA, 180338z Jul 83, sub: US Army Meritorious Service Medal for Major Neal A. Bradley. (3) Msg, Cdr ADEA to USDAO London UK, 211200z Jul 83, sub: US Army Meritorious Service Medal for Lieutenant Colonel Peter Hiscock. (4) Msg, USDAO London UK to Cdr Fort Lewis, WA, 251946z Jul 83, sub: Award for British Officer. (5) DF, ADEA to CG ADEA, 31 Oct 83, sub: Letter of Commendation, Lieutenant Colonel Hiscock, British Liaison Officer, w/Atch.

[20](1) DF, ADEA to CG ADEA, 25 Aug 83, sub: Assignment of French SPO to ADEA, w/Atch. (2) Memo, Dep Cdr ADEA for Cdr ADEA, 10 Nov 83, sub: ADEA French SPO Responsibilities.

CHAPTER 12

COMMAND RELATIONSHIPS

> High Technology Test Bed cut across all the commands.... This effort threw quite a shock into the traditional charters and the traditional ways that the MACOMs had done business.
>
> Colonel Joseph H. Felter
> Chief of Staff
> 9th Infantry Division[1]

One of the most major shocks relative to the Test Bed was that the MACOMs were given to understand that the Test Director had, if not the actual, at least the implied authority to pick up the telephone and call the Chief of Staff directly if he thought necessary. This was deliberate on General Meyer's part:

> First, I felt that if we wanted to push on we had to be able to cut through DARCOM, TRADOC, the Army staff and everybody else or it would take forever. We had gone through Division 86, and I had watched that go through layers and layers of staff studies and everything else.... [through 11th Air Assault Division experience] I had watched how quickly you could bring new ideas, new concepts, new equipment, new technologies, new tactics, new doctrine into focus when you put one guy in charge. He reported back through maybe one other person, but it would always come back to the Chief of Staff. Everybody knew there was not going to be a lot of layering in between....[2]

This attitude on the Chief of Staff's part was the tip of the iceberg at the top of the DA level. There were other shocks which quickly made themselves felt at the other end of the iceberg, at Fort Lewis.

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[1]Felter Interview, 4 Dec 82.

[2]Meyer Interview, 13 Jun 84.

Command Relations on Fort Lewis

The memorandum of understanding had established three managerial positions on Fort Lewis: the Test Director, provided by FORSCOM; the Deputy Test Director, provided by TRADOC; and the Deputy Test Director for Material Support, provided by DARCOM. Both deputies were rated on their efficiency reports by the Test Director, and senior rated by their parent commands.

The initial managerial structure developed, as recalled by the Division Chief of Staff, Colonel Felter, was General Stone and himself as overall supervisors and coordinators, answering to the rest of the world for HTTB matters. Under General Stone were his Assistant Division Commander for Operations (ADC-O) and the TRADOC Deputy Test Director, who were responsible for testing and operations. On the support side were the Assistant Division Commander for Support (ADC-S) and the DARCOM Deputy Test Director for Material Support, who gathered material and worked it into the installation maintenance and support structure.

As viewed by the first TRADOC Deputy Test Director, Colonel Van Meter, Colonel Felter was the man who was overseeing the Test Bed when Van Meter arrived. Van Meter had understood that he was to be treated as a co-equal to Felter, and be a de facto Chief of Staff for Testing. Van Meter felt this attitude possibly caused some dissatisfaction in Felter, which resulted in Van Meter being informed that he was not, in fact, a co-equal.

Colonel Van Meter found his relationship with the 9th command and staff strange, and strained from the start. He was viewed by them as a creature of CAC, selected by General Richardson, and like Richardson, an advocate of ID 86. In this they were essentially correct. This degree of distrust evidenced itself in a separation, even socially, of the Test Bed from the 9th Division. Van Meter found himself an observer at the HTTB briefings to visitors where the 9th staff were the presenters, and the Test Bed was only called upon to showcase hardware.

Van Meter also found himself frustrated in his relations with the Deputy Test Director for Material Support, Colonel Thompson. As the man responsible for testing, Van Meter felt that he should coordinate material matters with Thompson. There was no conflict between the two colonels on the matter, but one developed when Colonel Thompson began to receive directives from the 9th that had not been coordinated with Van Meter. Thompson's close interface with Van Meter largely overcame that problem.[3]

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[3](1) MOU, 8 Oct 80. (2) Felter Interview, 4 Dec 82. (3) Van Meter Interview, 23 Aug 84.

Task Force Stone

HTTB's feeling of ostracism was intensified in early 1981 when General Stone formed a group in the 9th Division Headquarters called Task Force Stone. This group was headed by a retired lieutenant colonel who had served as the 9th's G3 and was an old acquaintance of Stone, Felter and Van Meter. He was a civilian employee of the Army at the time, Mr. Bobby L. Jolley. Several of the Division's brightest young officers were pulled up to staff the Task Force, which was to operate as a "think tank" for General Stone and Colonel Felter. Mr. Jolley felt that the effort was to reinforce the Test Bed, which was, in his view, overwhelmed by its own organizational efforts and work on several early tests.

Mr. Jolley viewed Task Force Stone as an effort to accelerate the production of ideas, an effort to "get something going." Task Force Stone existed until about the time of the April 1981 IPR for General Meyer, when it was dissolved. It was replaced in mid-May by a second off-line organization called the Concepts Group. While containing a few of the same people as Task Force Stone, Concepts Group's primary efforts initially were to try to restructure ID 86 to meet the High Technology Division goals as understood from General Meyer. After rejecting ID 86, it turned its attention to designing a new division, a new operational concept.

Formalizing Command Relationships

Concepts Group was headed by Colonel Courtney E. Prisk, who came to Fort Lewis by mutual consent of himself, Colonel Felter and General Stone. It contained a GS-15 Scientific Adviser who was a TRADOC man-power resource, sent to HTTB by CAC. The group grew from about eight people to some twenty-five by September 1981. Task Force Stone and Concepts Group were viewed by Van Meter as "smacks in the face" of HTTB. They were blatant efforts of the 9th to reorient the HTTB away from testing ID 86, which was the mission as Van Meter understood it. The Scientific Adviser had been unjustly usurped by the 9th. Harsh words were exchanged between he and Jolley, and in turn, he and Prisk.

In July 1981, Colonel Prisk went to General Stone and presented him with the situation. Prisk stated that either he, Van Meter, or both of them would have to depart, for the two of them could not work together. They were not serving the Army well as a result. While Prisk's differences with Van Meter were apparently far from the only reason that General Stone was dissatisfied with Van Meter, it may have crystalized his resolve. On Monday, 3 August, Van Meter was relieved of his duties as Deputy Test Director by General Stone.

Colonel Prisk was installed as the interim Deputy Test Director on 10 August. With Colonel Prisk came the Concepts Group, and through several months of painful integration, Concepts became part of HTTB. With the integration, much of the "we-they" attitude between the 9th Division and HTTB dissolved.[4]

Formation of I Corps

In the meantime, still another actor was beginning to materialize on the Fort Lewis scene. A corps headquarters was taking shape. This had been another element in the back of General Meyer's mind when he selected the 9th and Fort Lewis as the site for a test bed: "...I had always wanted to put another corps into the Army to control the folks out there on the West Coast. I knew I would be putting a corps there at some time if I were able. That would take some of the pressure off the Division Commander so he would be able to focus solely on doing the testing, and not have to worry about running the post as well...."

At the 16 April 1981 IPR for General Meyer, Meyer brought up the "West Coast Corps" in several aspects:

- With a corps to handle installation functions, he felt there was no need for another general officer in the 9th.
- He would need to explore how the corps commander should fit into HTTB-9th ID-TRADOC chain of command.
- Organizational refinement of the new division must be done with a corps interface in mind. The West Coast Corps would be an excellent vehicle for that.

The second of these items, command relations, was the matter of immediate concern. It became more pressing as the activation day for I Corps, the West Coast Corps, was revised back from 1982 to 1981. These were harrowing times for the 9th, for it was overburdened. It had to care for its internal business; run Fort Lewis; prepare for I Corps, which entailed construction and a physical move; manage HTTB; and support Reserve and ROTC summer activities.

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[4](1) Jolley Interview, 27 Jun 84. (2) Prisk Interview, 16 Sep 82. (3) Van Meter Interview, 23 Aug 84. (4) Richards Interview, 22 Mar 84. (5) Elton Interview, 29 Nov 82.

In response to a request from General Richardson, General Stone addressed the question of I Corps command relations in a 23 July message. He proposed the Corps Commander work corps/division interface issues, provide fiscal management and joint readiness exercise support, and relieve the Division of its protocol functions relative to its many VIP visitors. The Division Commander would remain the Test Director. General Richardson concurred with Stone's comments the next day.

On 29 July, General Shoemaker sent a message to CAC, DA, and the 9th with the counterproposal that the I Corps Commander assume the title of Test Director from the 9th Division Commander. He cited precedents in which three-star generals had been Test Directors in the past: Lieutenant General Charles W. G. Rich, with "Project Team," the 11th Air Assault Division tests; Lieutenant General Powell in MASSTER, the Modern Army Selective System Tests, Evaluation and Review; and the Division Restructure Study in which the III Corps Commander was the Test Director. Shoemaker pointed out this shift would allow the I Corps Commander to act as overwatcher and resourcer with some direct responsibility for HTTB success, while freeing the Division Commander to concentrate on HTTB and 9th Division matters.

In a 31 July 1981 Memorandum for Record, General Stone stated he believed that he and General Shoemaker were in perfect agreement as to the relative functions of the Corps and Division Commanders. Who carried the title of Test Director was unimportant. He had discussed the topic with Shoemaker on that day, and the two agreed.

Later, when Lieutenant General John N. Brandenburg was selected as the I Corps Commander, the functions were straightened out quickly. General Meyer told Brandenburg to go to Fort Lewis and "...unload the Division of its installation responsibilities.... Provide all the support that we [I Corps] could to the command and training of the Division and the HTTB." When General Brandenburg visited General Shoemaker, the question of who should be Test Director arose again. Brandenburg told Shoemaker that it was not his understanding that Meyer wanted the Corps Commander as Test Director. Shoemaker "...called the Chief, and as you might guess, it was decided that I would not be the Test Director," to quote Brandenburg.[5]

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[5](1) Meyer Interview, 13 Jun 84. (2) Msg, HQDA to dist, 221800z Apr 81, sub: Illegible. (3) Msg, CG 9th Inf Div to dist, 231456z Jul 81, sub: I Corps HTTB Functions. (4) Msg, Cdr CAC to Cdr 9th Inf Div, 242055z Jul 81, sub: I Corps HTTB Functions. (5) Msg, CG FORSCOM to dist, 282024z Jul 81, sub: I Corps HTTB Functions. (6) Memo, MG Stone for Record, 31 Jul 81, sub: I Corps HTTB Functions. (7) Interview, author with LTG John N. Brandenburg, 2 Nov 82. (Hereinafter, Brandenburg Interview, 2 Nov 82.)

Headquarters and Headquarters Company, I Corps, was officially organized and activated on 1 October 1981 at Fort Lewis. On 15 October, General Brandenburg surfaced to CAC, TRADOC, DARCOM, and FORSCOM that the initial MOU, now over one year old, needed to be rewritten to include I Corps, and updated in other areas as well. The message called for a working officers conference on the MOU to be held at Fort Lewis on 21-23 October. Representatives were present from FORSCOM, DARCOM, TRADOC, CAC, I Corps and the 9th. A new draft MOU was hammered out.

A copy of the draft was sent to General Shoemaker by General Brandenburg on 28 October 1981, along with a detailed list of I Corps/HTTB functions. The list of functions was forwarded on to General Meyer, who approved them.

The new MOU, which received its final signature on 27 February 1982, charged I Corps with overall on-site administrative and logistical support of the Test Bed. HTTB and the 9th would interface with FORSCOM through the Corps, and the Corps would assist in funding documentation. Finally, I Corps would work with CAC in developing the functional relationships and organizational structure between the Corps Headquarters and the evolving Division.[6]

Of a more mundane nature were the everyday problems to be worked out between HTTB/ADEA and the installation. One example was a difference of opinion concerning whether or not Test Bed officers should be on the Installation Field Officer of the Day Duty Roster. This action dragged on for months, and then was resurfaced periodically, with the decision first going one way, then the other.[7]

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[6](1) Msg, Cdr I Corps to dist, 151400z Oct 81, sub: Revision of the High Technology Test Bed (HTTB) Memorandum of Understanding (MOU). (2) Ltr, Cdr I Corps to Cdr FORSCOM, 28 Oct 81, no sub. (3) Note, CSA to CG FORSCOM, 4 Dec 81, no sub. (4) Memorandum of Understanding Between FORSCOM, DARCOM, and TRADOC, sub: The 9th Infantry Division High Technology Test Bed, S/MG Charles P. Graham, CofS, FORSCOM, 11 Feb 82; MG William E. Schneider, CofS, DARCOM, 12 Feb 82; MG John N. Blount, CofS, TRADOC, 27 Feb 82. (Hereinafter, MOU, 27 Feb 82.)

[7]DF, HTTB to CofS 9th Inf Div, 11 Jun 83, sub: FOD Exemption for HTTB, w/Incl.

Other routine matters that occupied time and effort were the formalization of the 9th Division Assistant Commander's responsibilities relative to the Test Bed: The development of relations with the Fort Lewis Installation Contracting Office; what effect the transition to ADEA would have on the Test Bed's support contract with the BDM Corporation; and the development of an MOU between the Test Bed and the Fort Lewis Automation Management Office to determine the level of automated data processing service the installation would provide. These were only a few examples.[8]

I Corps established an HTTB Coordination Office in April 1982 to work as an interface between the Corps and Test Bed. By August 1982 the office had grown to five people. In June 1983, the office was redesignated the I Corps ADEA Coordination Office. Its initial function was to serve as an agency which ensured HTTB/ADEA actions were routed to the proper I Corps staff agencies for information or action. In the early summer of 1983 this function was enlarged, however, and the office began to actively work the question of Corps-Division interface in combat. It hosted a one-day Interface Conference between ADEA, 9th ID and I Corps in July 1983. As a result of lessons learned from that conference, the I Corps ADEA Coordination Office became an action initiating agency.[9]

Relations with DARCOM - See Chapter entitled The Material Support Activity.

Relations with CAC/TRADOC

TRADOC was the dominant player on the HTTB stage, usually acting through CAC. This dominance was made clear by two sentences in the original MOU:

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[8](1) Memo, HTTB to HTTB and MSA Staff Officers, 30 Mar 83, sub: Duties of the the ADCs. (2) DF, DIO to ADEA, 13 May 83, sub: Projection of Contractual Support Required by ADEA. (3) Msg, Cdr CAC to Cdr ADEA, 212900z Jul 83, sub: Request for Validation of Increase to BDM Support Contract. (4) MOU Between Automation Management Office and High Technology Test Bed, 1 Mar 83.

[9](1) Historical Summary, I Corps, FY 1982, p. 57. (2) Msg, Cdr DARCOM to dist, 171430z Jun 83, sub: Redesignation of the I Corps HTTB Coordination Office. (3) Memo, Chief I Corps ADEA Coordination Office to I Corps CofS, 1 Nov 83, sub: Future Direction of the ADEA Coordination Office (ADCO).

c. TRADOC will:

(2) In coordination with FORSCOM and DARCOM, review, approve, and prioritize organization and material concepts prior to incorporation into the 9th ID. TRADOC chairs this effort and HQDA exercises overall control.

This was in accord with General Meyer's wishes. He had a clear vision of how this should evolve: "TRADOC has to be the center. You can have all these revolutionary outfits out there, but somebody has got to somehow be able to take that data and information and come back to TRADOC. It has to go to the schools, and the schools have to absorb it, and teach it, and get it out to the rest of the Army...." There was one major note of discord in the smooth application of this theory: ID 86.

The institutional disagreement between the 9th, in the form of the Test Director, General Stone, and TRADOC, in the form of the CAC Commander, General Richardson, over ID 86 was to cause waves and ripples until the summer of 1981. Neither CAC nor TRADOC commanded the 9th. FORSCOM did. And, there was a tendency for the 9th to feel they were working for the Army and that their commission came directly from the Chief of Staff. This was not necessarily true of the Test Group itself under Colonel Van Meter as pointed out above, but it came to be the prevailing attitude after Van Meter's departure.

General Meyer's desires relative to this were revealed in an interchange during an interview with the author:

Question: The ID 86 organization was approved by you for planning and testing on 18 September 1980. It was not finalized until the following spring or early summer. How did you envision that organization interacting with the 9th?

General Meyer: That was the Infantry Division 86, which was the light portion of Division 86. I had hoped that the interaction there could be that ideas that evolved from the High Tech Division would be ones that would ultimately filter down into ID 86. That was the interaction I hoped would occur.

Question: Rather than the other way?

General Meyer: Yes, rather than the other way. There were pressures, particularly from Bill Richardson of TRADOC, to try to drive ID 86 into

> the 9th Division and I did not want that to happen. I wanted the 9th Division to evolve on the ground, and then compare it with ID 86 to resolve those issues.

ID 86 was formally laid to rest at the 16 April 1981 Chief of Staff IPR, in which General Meyer said, in effect, that the 9th need not concern itself with ID 86. It was actually cleared from the 9th's slate only after the 9th's Concepts Group rejected ID 86 as unsuited to meet the parameters set for the High Technology Division in the summer of 1981. Traces of ID 86 remained until August-September 1981 when the major players changed: General Richardson left CAC to go to DA, General Stone left the 9th to replace Richardson at CAC, and Colonel Van Meter left HTTB.[10]

So long as Colonel Van Meter was the TRADOC Deputy Test Director, there was a great deal of personal interface between he and key personnel at CAC. He was frequently on temporary duty (TDY) to CAC at Fort Leavenworth and TRADOC at Fort Monroe, and to the various Army schools such as the Infantry School, the Artillery School, etc., all of which were a part of TRADOC. This was done in an effort to learn what they had in the way of new hardware, doctrine, and concepts in their areas of expertise. It was also a form of "missionary work" on behalf of HTTB. Van Meter wanted to raise their consciousness about HTTB and ensure the Test Bed was kept abreast of new developments in their areas. He arranged to have TRADOC and the Schools come to Fort Lewis to brief the 9th and HTTB on their developments. The interest shown by the 9th Division Command Group was much less than Van Meter had hoped.

This close interface with CAC, and specifically General Richardson and Colonel Van Meter, was the cause of considerable discord. General Richardson or key members of his staff would call Colonel Van Meter directly, bypassing the Test Director. Even though Van Meter tried to keep the 9th Command Group informed of the content of these conversations, he sensed that General Stone thought he was going behind Stone's back. The command group began to question Van Meter's honesty. This distrust was another key factor in Van Meter's release as Deputy Test Director.[11]

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[10](1) MOU, 8 Oct 80. (2) Meyer Interview, 13 Jun 84. (3) Prisk Interview, 16 Sep 82.

[11](1) Van Meter Interview, 23 Aug 84. (2) Jolley Interview, 24 Jun 84.

From the outset, the Combined Arms Center (CAC) had been the action agency within TRADOC concerning HTTB matters. Under CAC, the Combined Arms Combat Development Activity (CACDA) was the proponent, with two of its directorates, Force Design under Colonel John Greenway and Independent Evaluation under Colonel Kenneth H. Montgomery, primarily involved. Initial efforts during Fiscal Year 1981 were to get together a Test Program from which a budget could be projected. Once the action officers realized that the 9th Division Commander was to design a new division, not test ID 86, the internal programs of CAC were adjusted to support that goal.

There was a great deal of reeducation that had to take place, both up and down the chain of command, with CAC as the focus. The 9th and the HTTB had to be educated in the testing and force design fields, and TRADOC, DARCOM, and DA staff officers had to be made aware that this project was not to be treated like business as usual. All concerned had to open their budgets and reprogram monies to support HTTB. Colonel Montgomery, for example, recalls he and Colonel Van Meter visiting TRADOC, DARCOM and Headquarters DA weekly for seven weeks in a row trying to get them to reallocate funds to support the test effort.

The 9th Division, including most of the Test Bed, did not help themselves very well in this. There was a tendency for them to be somewhat cavalier about their requests, because of Chief of Staff backing and ignorance of requirements. It took time to educate the HTTB that their proposed programs had to be outlined in considerable detail to allow them to be successfully argued, in competition with other worthy programs, at the MACOMs and DA. Proclamations that "the Chief of Staff wants it that way" did not terribly impress money managers, although if the quotation had not been true the money would not have been forthcoming. To Colonel Montgomery it became obvious that the people at Fort Lewis were more interested in gathering equipment to put a new division on the ground than in testing new organization and structure. This perception was shared by many, including some of those at Fort Lewis, and was considered detrimental to the overall effort.

Because of repeated demands for more detail and more documentation, there was an initial tendency for some in the Test Bed to view the CAC, TRADOC and DA staffs as filled with small-minded officers lacking vision. This was particularly thought to be true of CAC, where the focus was greatest. There was a reverse to this, however, which worked to the Test Bed's benefit. This was that they did not know enough to accept "no" as an answer. They, in their naivete, kept pushing against obstacles and attacking from different directions. In this respect, General Meyer was correct: the Test Bed was a method to overcome cumbersome bureaucracy.[12]

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[12]Montgomery Interview, 5 Jul 84.

CAC formalized its interface with HTTB by the issuance of a Management Action Plan on 10 December 1981. In March of 1982 it designated the Force Design Division of the Combined Arms Combat Development Activity as the CAC point of contact for HTTB matters. This was to be the funnel through which HTTB routed actions to higher headquarters, the MACOMs, etc., and through which these organizations formally reached HTTB.

One tool used to ensure that HTTB and the 9th established good communication was a weekly conference call. Established by newly promoted Lieutenant General Stone shortly after he replaced General Richardson as CAC Commander, it was held each Friday afternoon between Fort Lewis, CAC, and a DARCOM representative. The first of these calls was made on 16 October 1981 and they were held more or less routinely until late April 1983. As time went on, FORSCOM was included, then DA, and finally the Army Logistics Center.[13]

Another interface that developed between HTTB and CAC was related to personnel. A memorandum of understanding between the Adjutants General of CAC at Fort Leavenworth and the 9th Division at Fort Lewis received its final signature and went into effect on 8 June 1981. Its objective was "...to prescribe responsibilities pertaining to administrative and personnel support...." for the personnel assigned to the Combined Arms Combat Developments Activity that had Fort Lewis as a duty station. The MOU was reviewed and updated one year later.[14]

General Richardson, having completed a tour of duty as the DA Deputy Chief of Staff for Operations, returned to the HTTB chain of command briefly in the spring of 1983. As a four-star general, he took command of TRADOC on 11 March, shortly before HTTB became ADEA. After a visit to Fort Lewis, he affirmed his support for the ADEA concept.

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[13](1) Msg, Cdr CAC to dist, 262034z Mar 82, sub: High Technology Light Division (HTLD) Coordination Cell. (2) Memo, CG Secretary to CG 9th Inf Div, 13 Oct 81, sub: Weekly Conference Call w/LTG Stone. (3) Memo for Record, HTTB 26 Jun 83, sub: CAC Conference Call, 27 Jan 83.

[14](1) Memo of Understanding, AG Ft Lewis and AG Ft Leavenworth, S/MAJ A. G. Riolo for LTC D. P. Schneider, AG, Ft Lewis, WA, 8 Jun 81; CPT H. S. Bosi for LTC B. Hyland, AG, Ft Leavenworth, KS, 29 May 81. (2) DF, HTTB to CofS 9th Inf Div, 16 Aug 82, sub: Annual Review of the Ft Lewis/Ft Leavenworth Memorandum of Understanding.

The Transition to ADEA

When HTTB was provisionally reorganized as ADEA on 25 April 1983, it became a Field Operating Agency of DA, and was removed from the TRADOC organizational chain. It was obvious, however, that the close interface between TRADOC and its various Schools, Boards, and Centers would have to be maintained with ADEA. Therefore, General Richardson approved a plan for the establishment of a TRADOC liaison element at Fort Lewis. This plan was made public in a message to the Centers and Schools on 26 July 1983.

The message directed that Colonel Ken Montgomery be transferred from CAC to Fort Lewis to become chief of the element. The element would have three branches, each headed by a colonel or lieutenant colonel from the Logistics Center, the Soldier Support Center, and CAC. Each of the branches would consist of liaison officers (LNO) from the schools that were under that center. The Schools to be represented were listed: The logistics cell would have a Chief from the Logistics Center, and LNOs from the Transportation, Ordnance, Quartermaster, and Missile and Munitions Schools; the Soldiers Support Center which stood alone; the Combined Arms Center cell would have a chief from CAC and LNOs from the Infantry, Air Defense, Armor, Aviation, Signal, Chemical, Engineer, Field Artillery and Intelligence Schools. The LNOs were directed to work very closely with ADEA, and their duties were spelled out in some detail. An efficiency report rating scheme was outlined and CAC was directed to implement the plan.

On 11 August, CAC directed the Logistics Center provide a colonel and CAC itself and the Soldier Support Center provide lieutenant colonels to become the branch chiefs. The thirteen schools were to provide majors as LNOs, all to be at Fort Lewis 15 October. In a separate message, CAC directed Colonel Montgomery to coordinate and develop a memorandum of understanding deciding the relationship between CAC, the TRADOC Liaison Element, and the Centers and Schools.[15]

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[15](1) Msg, Cdr TRADOC to dist, 131300z May 83, sub: ADEA/9th Infantry Division. (2) Msg, Cdr TRADOC to dist, 262124z Jul 83, sub: TRADOC Liaison (LNO) Element to US Army Development and Employment Agency (ADEA). (3) Msg, Cdr CAC to dist, 042115z Aug 83, sub: TRADOC Liaison (LNO) Element to US Army Development and Employment Agency (ADEA). (4) Msg, Cdr TRADOC to dist, 111621z Aug 83, sub: Manpower Staffing and Documentation for TRADOC Liaison Element to US Army Development and Employment Agency (ADEA).

As a result of their activity, the Military Police School made known its desires to have an LNO also. Both ADEA and TRADOC concurred, and CAC was directed to include the MP School on the list. Similarly, the Army Chief of Chaplains noted that his Chaplain LNO position had been deleted from the ADEA TDA. He requested that a Chaplain LNO be added to the Liaison Element. This was done and the position was placed with the Soldier Support Center in the Element.[16]

Thus, as Fiscal Year 1983 drew to a close, an entirely new TRADOC/ADEA relationship was taking form at Fort Lewis.

FORSCOM and the Question of Readiness

From the beginning, FORSCOM was not perceived to be a terribly active participant in HTTB activities. The MACOM MOU tasked FORSCOM with designating the 9th Division Commander as Test Director and providing seven officers to the Test Group. It was to provide facilities support to HTTB primarily through the installation of Fort Lewis. There was no effort of the successive FORSCOM Commanders to become involved in testing, concept development, force structure, or any of the other products of the HTTB effort. That was a responsibility of TRADOC and DA.

Also, however, FORSCOM had been quite concerned about two aspects of the HTTB effort: Its effect on unit readiness, and on the distribution of material.

To General Meyer, 9th Division readiness was a non-problem:

> I also had some problems back in Washington that said you had to be able to show that the Division could pick up and move out at a certain point in time. I did not think that was important.... I was not worried about that division out there with the kind of training they were doing and the kind of leadership they had. They would be able to go anywhere in the world in thirty days, if they had to, with just a little bit of reorganization....

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[16](1) Msg, Cdr TRADOC to dist, 122118z Sep 83, sub: TRADOC Liaison (LNO) Element to US Army Development and Employment Agency (ADEA).
(2) Msg, DA to Cdr TRADOC, 221553z Aug 83, sub: TRADOC Liaison (LNO) Element to US Army Development and Employment Agency (ADEA).

> An important element was that Forces Command was trying to keep the 9th on a certain readiness status. That became a very trying factor for that division commander, because he was being rated by the FORSCOM folks....

The concern over readiness was heightened by the fact that the Rapid Deployment Joint Task Force was being formed in the summer of 1980 and the 9th was scheduled for participation in that.

General Starry, the TRADOC Commander, hosted an HTTB conference on 21 October 1980. At that conference, General Shoemaker, the FORSCOM Commander, repeatedly expressed his concern over the 9th Division readiness, and ways in which it could be preserved. One way he recommended was that testing be confined to one battalion, if at all possible. He voiced concern that the use of surrogate items of equipment might hamper readiness. Shoemaker expressed his intention to tell the 9th that he expected them to be ready to deploy with all but one battalion within a specified time, such as one week.

General Shoemaker stated that he did not feel that it would be wise to redistribute equipment between divisions to enhance the 9th. He emphasized that he did not expect FORSCOM to become involved in HTTB activities, nor did he expect to be tasked for any funds in support of testing. General Stone was informed of General Shoemaker's statements in a report of the conference.

On 10 November 1980, Colonel Van Meter made an initial visit to FORSCOM to meet the members of that staff who were the principal interface with HTTB. He found that those principals admitted that HTTB was not a major concern in their staff. He came away convinced that FORSCOM had a wait-and-see attitude. They were still unsure how much emphasis General Meyer was really going to place on this effort. If Meyer directed that equipment be redirected from other divisions to go to the 9th, then their interest would be heightened.[17]

On 10 February 1981 FORSCOM proposed two methods by which the 9th might report its readiness status: Declare the unit doing the testing unready, or exempt the unit from reporting until it was felt it was ready to deploy in the test configuration. General Stone concurred with the second option.

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[17](1) Meyer Interview, 13 Jun 84. (2) Msg, Cdr FORSCOM to dist, 131335z Aug 80, sub: 9th Infantry Division Missions. (3) Conference Report, HQ TRADOC to dist, 22 Oct 80, sub: Four-Star MACOM HTTB FY 81-82 Candidate Test Approval Conference. (4) Memo, TRADOC Deputy Test Dir, no dist, 12 Nov 80, sub: Trip Report - 10 Nov 80.

General Stone spent some time in the Pentagon on 20 February discussing various HTTB issues with the DA staff. He was told that General Meyer did not want the 9th to turn its back on readiness and totally stand down because of its testing effort, but that readiness considerations should not be allowed to interfere with testing. Stone also found general support for raising the 9th's position on the DA Master Priority List (DAMPL). A raised DAMPL would increase the Division's priority in receiving both men and material and would help preclude repeated requests for exceptional handling of issues. It would also mean, obviously, that other units would be lowered on the DAMPL.

Both readiness and the DAMPL position were discussed at an HTTB General Officer workshop at DA on 6 March. It was admitted that testing would disrupt readiness, but the end result would be a more capable division as test results were integrated into the Division. It was pointed out that General Meyer had repeatedly indicated that the effected parts of the 9th would "...be relieved from readiness requirements as needed to support testing." Also surfaced at this meeting were questions about other FORSCOM missions which the 9th was tasked with, such as ROTC Summer Camp and Reserve Component individual and unit support. The testing impact on these other missions was unclear, but it was recognized that some adjustments might have to be made by FORSCOM, for the 9th might become overcommitted. The recommendation was made that the 9th be raised on the DAMPL.[18]

On 12 March, at a TRADOC Test Schedule and Review Committee meeting, an Operational Test Plan on the Air Cavalry Attack Brigade was presented. In that test plan FORSCOM was tasked to provide Fort Lewis with personnel and equipment from other FORSCOM resources. The FORSCOM reaction was a strong protest, which restated its attitude toward HTTB:

> From the inception of 9th ID HTTB, it has been FORSCOM's position that evaluation support would primarily come from Fort Lewis. Also, we have repeatedly cautioned everyone involved that the FY 81-82 Candidate Test Program could be difficult for Fort Lewis to support. Our concerns are the impact on 9th ID readiness and ability to accomplish other missions. In general, FORSCOM missions/taskings may preclude support of HTTB tests by other FORSCOM units.

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[18](1) Msg, Cdr FORSCOM to Cdr 9th Inf Div, 101450z Feb 81, sub: Unit Status Reporting. (2) Memo, MG Stone to 9th Inf Div Staff and O6 Commanders, 20 Feb 81, no sub. (3) Read-Ahead Package, HTTB General Officer Workshop, 6 Mar 81.

This message placed the onus on General Stone to fend for himself in support of TRADOC testing. It was obviously not reassuring for Stone to receive such a statement from the people who wrote his efficiency report.

In April FORSCOM sent the 9th a specific plan for readiness reporting. Test units would be reported as not combat ready for specific periods of time while testing. At the end of the specified time normal reporting would be resumed. The implications were that FORSCOM was putting time limitations on the tests, after which the 9th was expected to have the test units combat ready.

The DAMPL question was still active. FORSCOM's position was that the 9th should not be raised on the DAMPL, because to do so would impact on other units. General Shoemaker suggested, for example, that the 9th be given priority on prepositioned stocks overseas rather than moved up on the DAMPL. There was investigation of some type of special out-of-DAMPL priority code being established for the Division. In the meantime, equipment was being approved, item by item, at DA as an exception to the DAMPL.[19]

FORSCOM's concern over the 9th's distraction with testing continued. In May 1981 it objected to the 9th receiving first claim on equipment modernization actions, and asked that testing be minimized during the summer months because of ROTC and Reserve Component commitments. In June, while TRADOC was expressing concern over the 9th's ability to absorb all the new equipment they foresaw coming in the future, FORSCOM was still objecting to the 9th receiving it at all.[20]

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[19](1) Msg, Cdr FORSCOM to Cdr 9th Inf Div, 031400z Apr 81, sub: Support for HTTB Evaluations. (2) Msg, Cdr FORSCOM to Cdr 9th Inf Div, 291204z Apr 81, sub: Unit Status Report, 9th Infantry Division. (3) Untitled, Undated Status Paper on HTTB. Internal evidence indicates late May 81. (4) Msg, HQDA to Cdr DARCOM, 301457z Apr 81, sub: Exception to the DAMPL to Support 9th Infantry Division HTTB.

[20](1) Msg, Cdr FORSCOM to Cdr TRADOC, 281730z May 81, sub: MACOM Review of Revised FY 83-85 9ID HTTB Program. (2) Msg, Cdr TRADOC to HQDA, 072135z Aug 81, sub: 9ID HTTB MACOM Decision Briefings, 30-31 Jul 81. (3) Msg, Cdr FORSCOM to HQDA, 191215z Aug 81, sub: 9ID HTTB MACOM Decision Briefings, 30-31 Jul 81.

Ultimately, as the scope of testing grew to the point where the entire 9th Division was consumed by testing and transitioning to a new division, it was, in August 1982, relieved from reporting readiness for ten months. Also on the Fiscal Year 1982 DAMPL, the 9th was moved up to the point where its priority problems for equipment were eased. This priority was continued until the Fiscal Year 1985 DAMPL was published.[21]

In addition to attending meetings and in-progress reviews and normal staff coordination with the 9th, FORSCOM initiated two actions relative to its relations with the Division. In September 1980 it requested the Division to provide an update on its HTTB activities as of the 15th and 30th of each month, or on completion of key milestones. These updates were submitted with increasing irregularity until the final report, Number 8, dated 24 June 1981. Finally, taking its cue from DA, on 16 October 1981, FORSCOM designated its office of the Deputy Chief of Staff for Operations as its operating agency for HTTB matters.[22]

Relations with Other Army Units

General Meyer, in his comments on the 16 April 1981 IPR, pointed out that each active component division had been assigned proponency for some phase of force modernization or force development. He wanted to ensure there was a free exchange of information between them and the 9th, and directed that FORSCOM and TRADOC see that this happened.

FORSCOM took the lead. After coordination with the 9th, it issued a call to the field in July stating "...there is no need to reevaluate a type organization, pieces of equipment, doctrine, etc., if it has been tried (failed or succeeded) before." The FORSCOM "conduit" for that was designated as the Combat Development and Force Modernization Division. Everyone was encouraged to participate.[23]

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[21](1) Msg, HQ FORSCOM to Cdr I Corps and Ft Lewis, 091840z Aug 82, sub: Unit Status and Material Readiness Reporting. (2) Briefing, CSA IPR, 30 Jul 81.

[22](1) Msg, Cdr FORSCOM to Cdr 9th Inf Div, 091927z Sep 80, sub: 9ID High Technology Test Bed (HTTB). (2) Msg, Cdr FORSCOM to dist, 161940z Oct 81, sub: 9th Infantry Division High Technology Test Bed (9ID HTTB).

[23](1) Msg, HQDA to dist, 221800z Apr 81, sub: Illegible. (2) Msg, Cdr FORSCOM to Cdr 9th Inf Div, 281306z May 81, sub: Exchange of Information. (3) Msg, Cdr FORSCOM to dist, 152200 Jul 81, sub: 9th Infantry Division High Technology Test Bed (9ID HTTB).

In October the Test Bed made its own overtures. Major General Robert M. Elton, the new 9th Division Commander, sent letters to the commanders of four other light divisions: 82d Airborne, 101st Airborne, 25th Infantry and 7th Infantry. He requested their ideas and suggestions and enclosed copies of the HTTB Fall 81-Spring 82 Test Schedule. A brief correspondence was established with the 82d, but the response appears to have been lackluster. Later, in June 1982, TRADOC hosted a General Officer Light Forces conference which the 2d, 7th, 9th and 25th Infantry Divisions and the 82d and 101st Airborne Divisions were encouraged to attend, along with I Corps and XVIII Airborne Corps.[24]

During the late summer of 1982 Colonel Paul G. Cerjan, who had come in as Chief of the HTTB in October 1981, visited several American units in Europe. He came away convinced that there were a number of good ideas in the other divisions which HTTB could use. On his return he sent letters to the Chiefs of Staff of the fifteen other Army divisions asking them to supply any local innovations they thought worthwhile. The responses ranged from a few short "one-liner" suggestions to considerable packets of information. The suggestions were screened, and how much ultimately found its way into HTTB test plans is open to speculation.[25]

Relations with Boards, Laboratories, Centers and Schools

At a Division 86 meeting held at Fort Leavenworth in mid-June 1980, a memorandum concerning HTTB was circulated. In that memo, CAC, "...with appropriate support from the TRADOC Centers/Schools...." was tentatively designated as the proponent of HTTB matters within TRADOC. Later, on 26 June, TRADOC directed CAC to get to work on fielding the Air Cavalry Attack Brigade (ACAB) in the 9th. The message got Army Centers and Schools involved immediately "...CAC, along with USAARMC [US Army Armor Center], USAAVNC [US Army Aviation Center], and USAIC [US Army Infantry Center] must also initiate development of how the ACAB will be evaluated." This was followed up by a 16 July message in which it was suggested that initial testing begin within the TRADOC Test Boards and stating that all the School commandants had been requested to provide their full support. The Schools were told that CAC was in charge, and that they should provide CAC with their test ideas by late July.

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[24](1) Ltr, Cdr 9th Inf Div to Cdr 101 Airborne Div, 82d Airborne Div, 25th Inf Div, 7th Inf Div, 15 Oct 81, sub: HTTB Fall-Spring Tests 1981-1982. (2) Ltr, Cdr 82d Airborne Div to Cdr 9th Inf Div, 11 Dec 81, sub: High Technology Test Bed Fall-Spring Tests 1981-1982. (3) Msg, Cdr CAC to dist, 201900z May 82, sub: Light Forces General Officer Conference, 29-30 June 1982. (4) Msg, Cdr FORSCOM to dist, 212100z May 82, sub: Light Forces General Officer Conference, 29-30 June 1982.

[25]Ltr, Chief HTTB to CofSs of Fifteen Active Army Divisions, 25 Oct 82, no sub.

The initial MOU, which was finalized in mid-August, called for TRADOC to appoint "...an appropriate combat development proponent for each concept or material item tested." In most cases this proponent translated into a branch school. On 4 August 1980 the 9th Division G-6, Major Jones, had attended a CAC briefing in which the duties of the proponents were listed:

- Develop, coordinate and provide operational issues and associated test criteria.
- Initiate early coordination on all logistics and support matters.
- Initiate early coordination for personnel with the Military Personnel Center and the Administration Center.
- Prepare scope, tactical content, objectives and other input required for completion of Outline Test Plans for the TRADOC Combined Arms Test Activity (TCATA).
- Conduct or arrange pre-test training of test player personnel.
- Develop and coordinate all required elements of the test support package.
- Responsible for the Outline Test Plans in coordination with CAC and TCATA.

The final details were yet to be worked out, however. A cover DF on a read-ahead package for the TRADOC Deputy Chief of Staff for Combat Developments, preparing him for an HTTB conference at Fort Lewis on 12 September, points out that CAC's management plan for HTTB "...gets very fuzzy, however, regarding the proponents' role in evaluation..."

The 9th had been charged with proposing a 1981-82 Test Program. It submitted a program on 19 September, to which were attached a number of abbreviated Outline Test Plans. Each listed a proponent, such as the Engineer School, Armor School, Infantry School, CAC itself, etc.[26]

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[26](1) Msg, Cdr TRADOC to dist, 261700z Jun 80, sub: 9ID High Technology Test Bed. (2) Msg, DCSCD TRADOC to DCG CAC, 161530z Jul 80, sub: High Technology Test Bed. (3) MOU, 8 Oct 80. (4) Memo, 9th Inf Div G-6 to Record, 14 Aug 80, sub: HTTB Meeting with CACDA. (5) DF, TRADOC Dir of Test and Evaluation to TRADOC DCSCD, 11 Sep 80, sub: Read-Ahead Package for 9ID HTTB Meeting, 12 Sep 80, Ft Lewis, WA. (6) Program, 9th Inf Div G-6 to dist, 19 Sep 80, sub: High Technology Test Bed (HTTB) FY 81 and FY 82 Test Program.

With the arrival of Colonel Van Meter as first TRADOC Deputy Test Director in October 1980, awareness of the potential value of the TRADOC Service Schools, Centers, Branch Boards and Test Activities was heightened. Much of the TDY he performed during his tenure as Deputy Test Director was to spread the word to those activities that HTTB existed, and to try to draw on their expertise. He had just come from the Infantry Center and School, so his consciousness of the value of such liaison was quite high. He arranged for representatives of the Schools to brief on Fort Lewis, but was unable to arouse much interest in the 9th. He suffered a similar experience when he hosted representatives of the DARCOM Laboratories for briefings.

On individual tests, however, the 9th and the appropriate Schools began working together quite early. In late October 1980, representatives of the Engineer School and the Infantry School met with the Test Bed at Fort Lewis to work on Outline Test Plans for tests in which they were proponents. In November, the Test Director requested that TRADOC assign proponents for upcoming tests and task them to follow a suggested time schedule in order to complete pre-test documentation in a timely manner. CAC responded promptly by assigning proponents for the balance of the projected tests, and having a meeting with representatives of the Schools involved to outline time frames and responsibilities. The Schools were reminded that they were expected "...to fully support the CAC's desire to push ahead with an ambitious time schedule at Fort Lewis." At the meeting the Schools were assigned proponency and given suspenses for the submission of various test documents. Their responsibilities were established as:

- Augment the test cell as required.
- Develop, coordinate and provide operational issues and associated test criteria.
- Identify requirements for logistic support and personnel.
- Prepare scope, tactical context, objectives and other required input for completion of outline test plans.
- Develop and coordinate applicable doctrine.

Since most Centers and Schools sent representatives to the meeting, points of contact were established throughout the TRADOC system. Later it was established that in addition to planning and documentation support, proponent schools and agencies would provide on-the-ground personnel at Fort Lewis when test units were being formed and trained,

and when test equipment was delivered, to resolve any problems first hand. The 9th would provide facilities and administrative support.[27]

Thus a pattern was established that continued. As new tests were added, the proponency taskings were expanded and revised. In early 1982 the Centers and Schools were asked to expand their thinking relative to the 9th to include new innovations in training development, for example. A training support working group was established in CAC "...to serve as clearing house for the collection and processing of new ideas."

Also in 1982, the Infantry School and the Field Artillery School determined that their interface with HTTB was such that they needed a full-time liaison officer at Fort Lewis. Letters of agreement were drafted, and the officers were assigned.[28]

One early effort at coordination with the Army War College was aimed at utilization of students as manpower, not utilization of the school per se. In a conversation with the Commandant of the War College in February 1981, General Stone proposed that students be used to assist the Test Bed. The Commandant, Major General Jack Merritt, agreed. Tentative plans included assigning current students, volunteers hopefully, ninety-day study topics. Beginning in March the students were to travel to Fort Lewis for a short stay to become familiar with the Test Bed project. They would be assigned a topic which they would then return to the War College to complete.

Further in the future, it was envisioned that the 1981-82 class would provide some students for long-term study projects. In March, Generals Stone and Merritt agreed not to attempt to use current students for any projects, but to set up a program for the class which was to

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[27](1) Van Meter Interview, 23 Aug 84. (2) Msg, CG 9th Inf Div to dist, 031800z Nov 80, sub: HTTB Outline Test Plan, (OTP) Submission. (3) Msg, Cdr CAC to dist, 051707z Nov 80, sub: 9th Infantry Division High Technology Test Bed Proponency. (4) Memo, HTTB Avn Sys Mgr to CG 9th Inf Div, 14 Nov 80, sub: Trip Report - 9ID HTTB Proponent Meeting, 13 Nov 80 at CAC. (5) Msg, CAC to dist, 090930z Dec 80, sub: 9th Infantry Division High Technology Test Management Planning.

[28](1) Msg, Cdr CAC to dist, 152117z Jan 82, sub: Update of HTTB Proponency Taskings. (2) Msg, Cdr CAC to dist, 131705z Jan 82, sub: Training Development Initiatives for 9ID. (3) Draft Memorandum of Agreement Between Commandant USAIS and Cdr 9th Inf Div, undated. (4) Letter of Agreement Between USAFAS and HTTB, 12 Aug 82.

begin in August 1981. Stone directed that precise topics be developed that the students could work on as part of the normal military studies program of the college. Van Meter responded with a list of sixteen topics, but nothing further seemed to have been done.[29]

The Test Bed had a wide-ranging association with all types of other Centers, Boards, etc. For example, it was briefed by the Foreign Science and Technology Center in early 1982, and made a deliberate effort to maintain contact with the Army Aviation Center after it completed aviation testing; it developed contacts at the Airborne Board, the Jet Propulsion Laboratory and the Tank-Automotive Command. It requested analytical study support from the Army Material System Analysis Agency.

CAC proposed that the Army Research Institute establish a field office at Fort Lewis, and the Soldier Support Center provided a liaison officer. Natick Laboratories provided material and services, and the Human Engineering Laboratory placed a Human Factors Engineer at Fort Lewis. The Army Material System Analysis Agency provided a Supervisory Physical Scientist.[30]

The US Army Logistics Center (LOGC) with its associated Combat Service Support Schools, was a primary point of contact for the HTTB. On 8 January 1982, the LOGC established by-name points of contact for

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[29](1) Memo, CG 9th Inf Div to Record, 20 Feb 81, sub: Telephone Conversation with MG Jack Merritt, Cmdt of Carlisle. (2) Memo, CG 9th Inf Div to BG Jones and COL Van Meter, 19 Mar 81, sub: Utilization of Carlisle Students for HTTB. (3) Memo, TRADOC Deputy Test Dir through BG Jones to MG Stone, 27 Apr 81, sub: Utilization of Carlisle Students for HTTB.

[30](1) Ltr, Cdr 9th Inf Div to Cdr DARCOM, 8 Feb 82, no sub. (2) Ltr, Chief HTTB to USAAVNC, 14 Jul 82, no sub. (3) Msg, ADCSTE (OPS) to President, Airborne Board, 291600z Sep 82, sub: Assistance to 9ID/HTTB. (4) Ltr, DARCOM to Cdr 9th Inf Div, 16 Aug 82, sub: JPL Support to HTTB. (5) Ltr, TACOM to Cdr 9th Inf Div, 19 May 83, sub: TACOM Support to 9th Infantry Division. (6) Ltr, HTTB to DARCOM, 17 Mar 83, sub: Request for Analytical Studies. (7) Msg, Cdr CAC to HQDA, 261438z Mar 82, sub: Request for ARI Support to HTTB. (8) Msg, Cdr USASSC to Cdr 9th Inf Div, 141700z Sep 82, sub: LOI On Soldier Support Center Liaison Office to HTTB. (9) Msg, Cdr NLABS to Cdr 9th Inf Div, 221810z Oct 82, sub: NLABS Support of HTTB. (10) DF, HTTB to I Corps, 15 Jul 82, sub: HEL Representative to 9ID/HTTB.

itself, the Quartermaster School, the Ordnance Center and School, Army Health Services, the Transportation School and the Missile Munition Center and School. On 5 April 1982 a two-man LOGC field office was established at Fort Lewis. Later, in the fall of 1982, the Logistics Center was included in the weekly CAC conference calls.[31]

As movement toward the conversion of HTTB into ADEA began in late 1982 and early 1983 these relationships were changed and TRADOC dictated, in large measure, the Center and School relationships with ADEA. This is discussed earlier in this Chapter under the section entitled Relations with CAC/TRADOC.

Another element of TRADOC support was formalized during this time. In May 1983, General Richardson, as the newly appointed Commander of TRADOC, ordered that the Combat Developments Experimentation Command (CDEC) establish a board at Fort Lewis. An implementation plan was completed by 15 July. The CDEC Board was to "...support ADEA testing requirements and provide instrumentation support as required at Yakima Firing Center." As Fiscal Year 1983 closed, the plan and its related interservice support agreements were being staffed at Fort Lewis.[32]

Relations with Department of the Army

General Meyer, as Chief of Staff, was not in fact the DA action officer for HTTB, as was sometimes jokingly suggested. The action agency was the Requirements Directorate of the Deputy Chief Staff for Operations Office and the action officer in June 1980 was newly assigned Lieutenant Colonel David C. Meade. He arrived in the Directorate only about ten days before the four-star general's meeting of 19 June where it was agreed that the Test Bed would be established. He drafted the 18 July message that announced the HTTB to the Major Army Commands and was named in it as the DA point of contact.

One of Colonel Meade's immediate problems was funding. It was obvious that in order to get the Test Bed started and to get anything for it to test, funds would have to be available. That meant

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[31](1) Msg, Cdr USALOGC to dist, 081430z Jan 82, sub: Support to HTTB. (2) Msg, Cdr USALOGC to dist, 131400z Apr 82, sub: USALOGC Field Office to the HTTB.

[32](1) Implementation Plan for Combat Developments Experimentation Center Board, 15 Jul 83. (2) Ltr, I Corps CofS to CG FORSCOM, 4 Oct 83, sub: Implementation for the CDEC Board.

reprogramming funds already obligated. In his effort to do this LTC Meade discovered, in his naivete, that because General Meyer wanted it did not automatically make it happen. He cited a simplified hypothetical example:

> You go to some guy in the Tank Division. He has all that money spoken for. He's buying tanks or developing tanks. He doesn't want to give you any money to spend out there at Fort Lewis. He doesn't care, and if you say to him, "The Chief said to do this," he says back to you, "The Chief says buy M1 tanks too, fellow. Until the Chief comes down here and tells me 'I don't want to buy M1 tanks, I want to buy Fast Attack Vehicles' or something, you are not going to get my money." Obviously they are not that rude.

So the DA staff joined CAC in pressuring the 9th and Test Bed for more detailed test programs that could be better justified. This at the same time that General Meyer was telling the 9th that detailed testing should not be necessary, that rapid trials combined with experienced military judgment would be enough.[33]

One of the earliest major tests was the fielding of an Air Cavalry Attack Brigade in the 9th. As FORSCOM developed details of that fielding, it began to request not only funds from DA, but equipment and manpower authorizations as well. As discussion developed concerning the near-term enhancements needed in the 9th, General Stone went so far as to call DA direct to encourage a prompt decision. He met with some success, because DA made a formal proposal on near-term readiness ten days later.[34]

Shortly after Colonel Van Meter arrived at the Test Bed, he paid a visit to the various officers in DA which were concerned with Test Bed: DSCOPS, MILPERCEN, DCSLOG, and LTC Meade in Requirements. He came away with the feeling that DSCOPS was solidly behind the project, but

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[33](1) Meade Interview, 12 Jun 84. (2) Msg, HQDA to dist, 181555z Jul 80, sub: 9ID High Technology Test Bed. (3) Msg, HQDA to dist, 291611z Sep 80, sub: 9ID High Technology Test Bed (HTTB) - FY 81, FY 82, FY 83-87 Plans/Funding.

[34](1) Msg, Cdr FORSCOM to HQDA, 052150z Sep 80, sub: Fielding of the Air Cavalry Attack Brigade (ACAB) in 9ID. (2) Memo, 9th Inf Div G-6 for Record, 2 Oct 80, sub: HTTB Update Briefing. (3) Msg, HQDA to dist, 171935z Oct 80, sub: 9ID Near-Term Enhancements.

the other offices had a "wait and see" attitude. Later, in February 1981, General Stone spent a day in the Pentagon. He visited DSCOPS, the Program Analysis and Evaluation Office, the Office of the Deputy Chief of Staff for Research Development and Acquisition, and the Office of Congressional Legislative Liaison.

This later office, and its functions relative to the Test Bed, were to become important. Relations with Congress, who ultimately controlled the purse strings, were assisted by a number of visits of congressmen, senators, and their various staffs to Fort Lewis. Before this interface was developed, however, the Test Bed did not fare too well. For example, the House Armed Services Committee reduced the HTTB funds in President Reagan's 1981 supplemental budget request by $5 million, or nearly fifty percent.[35]

General Meyer's personal sponsorship of the Test Bed resulted in a number of actions which caused a much closer relationship between the 9th Infantry Division and Department of the Army than would normally be found. Although most of the day-to-day actions were filtered through the MACOMs, General Meyer kept a direct relationship open with several techniques. He got the Army Science Board to address the proposed new division in 1980, and the Defense Science Board to do the same in 1981. He deliberately sent a number of visitors to Fort Lewis to render their advice, and to evaluate what they saw. (See Chapter 10, Outside Advice.)

Clearly the most visible technique used by General Meyer was his requirement for a quarterly in-progress review (IPR) to be presented to him by the 9th. The first IPR, which was not a part of the as yet to be established quarterly program, was presented on 20 November 1980. The first of the quarterly IPRs was 16 April 1981, and they continued until May 1983.

At the 30 July 1981 IPR, General Stone recommended that an expediter be established on the DA staff to control HTTB actions. DA announced that Major General Lewis C. Menetrey, the Director of Requirements, would "...act as the HTTB expediter and will ensure that adequate and timely actions are taken by responsible stafl [sic] and MACOMs." The message went on to explain that Requirements had already established a four-man cell to work full time on HTTB actions. As already stated, FORSCOM took a cue from this DA action, and also appointed an expediter within its DCSOPS.

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[35](1) Ltr, TRADOC Deputy Test Dir to CG 9th Inf Div, 24 Oct 80, sub: After Action Report - 22-23 October 1980. (2) Memo, CG 9th Inf Div to Div Staff, 20 Feb 81, no sub. (3) Montgomery Interview, 5 Jul 84. (4) Reproduced Pages 78, 79 of Draft HASC Markup of FY 81 Supplemental Budget, 2 May 81.

The 9th wasted no time in trying to take advantage of the DA expediter. On 18 September, even before the expediter's existence was formally announced, the Test Bed sent a memorandum to General Menetrey listing a number of items it wanted help with. These ranged from items of equipment needed to the general statement that "the HTTB mission is not clearly understood within the DA staff."[36]

The intensity of the DA staff involvement was increased by the announcement of the intention to form a general officer-level High Technology Light Division (HTLD) coordination group. The Test Bed received notice of this on 21 December 1980. The proposal named General Menetrey as chairman and listed regular members from DA Operations, Research and Development, Logistics, Personnel, Comptroller, and Program Analysis and Evaluation, totalling eleven brigadier and major generals. Representatives from FORSCOM, TRADOC, DARCOM, CAC, and the 9th Division would be invited "...when agenda items involved issues within their areas of responsibility."

HTTB and the 9th felt that the purposes of the group, as outlined in the draft letter, might overly constrict the Test Director's perogatives. They also felt that the Test Director should be a regular member of the group, rather than sitting by invitation only. General Elton stated his intentions to surface these points at DA when he visited them on 6 January 1982.

The 9th ID (HTLD) General Officer Coordination Group was finally established in January 1982, consisted of twenty-one senior civilians and major and brigadier generals, designated by position. The Commander of the 9th was included. There were representatives from DA Operations, Research, Development and Acquisition, Logistics, Personnel, Comptroller, and Program Analysis and Evaluation. The Director of Plans from the Air Force staff was a member, as was the Deputy Undersecretary of the Army for Operations Research. From outside the Pentagon, there were representatives from FORSCOM, TRADOC, DARCOM, and CAC. The stated purposes of the group were:

- Provide direction and guidance to the 9th ID/ ADEA.
- Access the various Army and Air Force agencies which contribute to the ADEA program.

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[36](1) Meyer Interview, 13 Jun 84. (2) Briefing, 30 Jul 81, CSA IPR. (3) Msg, HQDA to dist, 212131z Sep 81, sub: General Officer Expediter for HTTB at DA Staff Level. (4) Msg, Cdr FORSCOM to dist, 161940z Oct 81, sub: 9th Infantry Division High Technology Test Bed (9ID HTTB). (5) Memo, HTTB for MG Menetrey, 8 Sep 81, sub: DA Expediter.

- Serve as a discussion forum.
- Review light infantry forces concepts, principals, and requirements as developed by 9th ID/ADEA.
- Review and recommend high technology payoffs to other Army organizations.
- Develop strategies for promoting the 9th ID/ADEA program with the Secretary of Defense and Congress.
- Monitor the implementation of the quick-reaction program.
- Provide periodic updates to the Army Chief of Staff.

The Coordination Group met at the call of the Chairman, Director of Requirements, DA DCSOPS. The meetings do not appear to have been frequent, the only ones recorded being held on 21 May 1982 and 28 June 1983.[37]

A lower-level, full-time HTLD Coordination Group was also formed at DA. This appears to be the result of a recommendation made by General Elton at the 29 April 1982 IPR. Elton asked General Meyer to authorize a Deputy Chief, HTTB, to work out of DA as a coordinator. Meyer went further. The HTLD Coordination Group, headed by Colonel Jerry C. Harrison, was formed as a separate division in the Requirements Directorate, DSCOPS. Its formal title was the High Technology and Testing Division, which started with nine people.

On 11 July 1983 DSCOPS was reorganized to more effectively handle force modernization issues. The High Technology and Testing Division was unaffected, except for a change of office symbols from DAMO-RQT to DAMO-SDT. As of 14 July Colonel Harrison was the Division Chief: there was a Funding Team, a Systems Team, and a Transition Team, each with two

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[37](1) Draft Ltr, DA DSCOPS to dist, n.d., sub: High Technology Light Division (HTLD) Coordination Group, w/Atch Note, Chief HTTB to CG 9th Inf Div, 21 Dec 81, sub: DA HTLD Coordination Group. (2) Msg, HQDA to dist, 150210z May 82, sub: High Technology Light Division (HTLD) GO Coordination Group. (3) Ltr, DAMO-RQT to dist, 20 Jun 83, sub: Read-Ahead for 9th Infantry Division (High Technology Light Division) General Officer Coordination Group Meeting - 28 June 1983.

officers, and a one-officer Testing Section. This office and its successors continued to be the ADEA interface with DA.[38]

Relations with Other Services

The nature of the Test Bed's mission, dealing as it did with a search for new ideas and equipment, meant that other branches of the Armed Services would need to be screened for sources, at a minimum. Heavy emphasis on deployability by aircraft also directed a close interface with the Air Force to work out details of such an airlift.

Detachment 6, 62d Tactical Air Control Wing, was the Air Force liaison to the 9th Infantry Division, and was already on-station at Fort Lewis. The Detachment's officers were included in HTTB activities by early September 1980, when the Test Group was still in its embryo stage. Efforts were also made at that time to have a full-time liaison officer assigned to the Test Bed. On 4 November the HTTB presented a deployability-oriented briefing to the Commander of the 62d Military Airlift Wing at McChord Air Force Base, which borders Fort Lewis. Further briefings to senior Air Force officers were proposed by General Stone.[39]

General Meyer commented on the need to interface with the Air Force several times during his 20 November IPR. He emphasized that Air Force capabilities had to be thoroughly integrated into HTTB planning. A message was dispatched in which the 9th expressed its intention to brief the commanders of the Military Airlift Command, Tactical Air Command, and the air staff.

The need to interface with the other services was emphasized to General Stone again when he visited the Pentagon in February 1981. He was told that General Meyer frequently mentioned how the HTTB was "uptight" with, particularly, the Marines and the allies. This caused Stone to reemphasize the need for a close interface to his staff.

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[38](1) Memo, DAMO-RQT through DSCOPS to CSA, 16 Jun 82, sub: High Technology Test Bed (HTTB)/High Technology Light Division (HTLD) Update--Information Memorandum. (2) Briefing, 29 Apr 82, CSA IPR. (3) Draft Msg, HQDA to dist, Jul 83, sub: HQDA ODCSOPS Reorganization, w/Atch.

[39](1) Ltr, CG 9th Inf to dist, 3 Sep 80, sub: High Technology Test Bed. (2) Ltr, Cdr Det 6 602d TACW to dist, 20 Oct 80, sub: ALO Membership on HTTB Ad Hoc Committees. (3) DF, 9th Inf Div G-6 to CofS, 25 Sep 80, sub: Weekly Report of Significant Actions - 12 Sep 80 through 25 Sep 80. (4) Briefing, HTTB to CG 62d MAW, 4 Nov 80. (5) Memo, HTTB for Record, 7 Nov 80, sub: HTTB Update Briefing.

At the April 1981 IPR, General Stone emphasized the need for close liaison with the Air Force which went beyond that needed to design the HTLD for air deployability. He pointed out the need for the HTLD to be able to interface with all the various Air Force systems, the primary example being intelligence gathered through the Air Force Airborne Warning and Control Systems (AWACS). General Meyer commented that HTTB might need more than one full-time liaison officer. He stated that they "...probably needed some conceptual guys to help with things like air space management, lift, air defense, special operations as well as CAS [Close Air Support]."[40]

In the meantime the Air Force had begun movement to formalize their relationship with HTTB. The immediate focus, somewhat naturally, was the air transportability question. On 6 April Military Airlift Command (MAC) sent a message to the 62d Military Airlift Wing (MAW) at McChord directing them to assist the 9th in their efforts towards downsizing equipment to fit the C-141 aircraft, and outlined the perameters of that assistance. Later, during July, the MAC had a representative of the Air Force Airlift Center evaluate the feasibility of establishing an "operating location" at Fort Lewis. In the meantime, a command master sergeant, who was a C-141 loadmaster, had been placed on loan to HTTB by the 62d MAW.

In August, General Stone initiated action to expand Air Force participation. He proposed to DA that they assist in getting the 9th's Liaison Detachment increased by four spaces. Stone wanted a major, tactical air liaison officer; a major, plans and programs officer; a command master sergeant, C-141 loadmaster; and a captain, air intelligence officer. He noted that the Liaison Detachment commander had already detailed three of his officers to fill the officer requirements on a part-time basis. The Liaison Detachment commander followed with a similar proposal through Air Force channels. The four positions were approved.

The plans and programs officer, requested by HTTB and approved by Headquarters, US Air Force, caught the Military Airlift Command by surprise. MAC invited HTTB to come to its headquarters at Scott Air Force Base, Illinois, to brief so that that they could better understand the requirement. This was done, and the position was initially filled by an on-loan officer from the 62d MAW until the new slots could be authorized for Liaison Detachment 6 in the summer of 1982.

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[40](1) Msg, Cdr 9th Inf Div to Cdr FORSCOM, 261100z Nov 80, sub: Test Bed Periodic Update Nr. 4. (2) Memo, CG 9th Inf Div to Various Members of His Staff (dictated), 20 Feb 81, no sub. (3) Briefing, 16 Apr 81, CSA IPR. (4) Msg, HQDA to dist, 221800z Apr 81, sub: Illegible.

Initially, the Air Force personnel were integrated into the appropriate sections of HTTB, but later they were pulled aside into a separate USAF Liaison Office.[41]

While there was some exchange of information with the US Navy, there was no need for a formal, full-time liaison. The Marines, however, were another matter.

At the 20 November 1980 Chief of Staff IPR, General Meyer told General Stone to be sure he stayed abreast of the US Marine Corps testing of wheeled troop carriers and mobile protected weapons being carried on at Twenty-nine Palms, California. General Stone reacted promptly by sending an HTTB representative to Twenty-nine Palms for a look on 3 December. The comments of General Meyer, quoted to General Stone during his 20 February 1981 visit to DA, concerning how "uptight" HTTB was with the Marines, no doubt helped to keep the liaison high in Stone's consciousness level.

There is no record in HTTB files that indicates how a Marine Corps liaison officer came to be assigned, or when he arrived. There is, however, correspondence that indicates that an Officer Efficiency Report was rendered on Major Gilford Robinson, the Marine Corps Liaison Officer, in October 1982. This would suggest that the major had been for duty with HTTB for one year at that time. There is also a formal letter of instruction to the HTTB Marine Corps Liaison Officer from the Commanding General, Marine Corps Development and Education Command, dated 8 March 1982. There is still a one-officer Marine liaison at ADEA.[42]

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[41](1) Msg, HQ MAC to 62d MAW, 062136z Apr 81, sub: Air Force Assistance to 9th Infantry Division (ID). (2) Msg, HQ MAC to 9th Inf Div, 082131z Jul 81, sub: Air Force Assistance to 9th Infantry Division (ID). (3) Msg, CG 9th Inf Div to DADCSOPS, 010220 Aug 81, sub: Air Force Participation in HTTB. (4) Msg, Cdr Det 6 602d TAIRCW to HQ AF, 130300z Nov 81, sub: Air Force Participation in the 9th Infantry Division High Technology Test Bed. (5) Msg, HQ MAC to 9th ID, 231315z Dec 81, sub: High Technology Test Bed (HTTB) Manning. (6) Ltr, HQ MAC to 9th Inf Div, 22 Jan 82, sub: High Technology Test Bed (HTTB) Support.

[42](1) Msg, Cdr 9th Inf Div to Cdr FORSCOM, 261100z Nov 80, sub: Test Bed Periodic Update Nr. 4. (2) Msg, Cdr 9th Inf Div to CG MCAGCC, 261500z Nov 80, sub: Visit of High Technology Test Bed (HTTB) Representative. (3) Memo, CG 9th Inf Div to Various Members of His Staff (Dictated), 20 Feb 81, no sub. (4) Memo, Chief HTTB to CG 9th Inf Div, 22 Oct 82, no sub. (5) Ltr, CG MCDEC to MC Liaison Officer HTTB, 8 Mar 82, sub: Letter of Instruction (LOI) for Marine Corps Liaison Officer, US Army High Technology Test Bed, 9th Infantry Division.

Colonel Paul G. Cerjan, Chief of HTTB from October 1981 to February 1983, felt the Air Force participants in HTTB were not totally committed to the effort during his tenure. His impression was that they were present at Fort Lewis because of the interest of the Army Chief of Staff, and that they considered themselves observers rather than participants in the HTTB process. This was in marked contrast to Major Robinson, the Marine, who threw himself into the project. It must be pointed out, however, that Colonel Cerjan observed only an initial set of liaison officers assigned. Whether their attitudes reflected those of their services or their personal preferences is not known.

After the provisional reorganization of HTTB into ADEA in April 1983, the agreements with sister services needed to the reexamined. The original intent was that HTTB would work itself out of existence with the FY 85 fielding of the HTLD. Now the Test Bed was becoming a permanent organization. In a 13 June message to DA, ADEA pointed out this fact and made recommendations as to the staffing it felt adequate. Some of these were accepted, others were not, but four Air Force personnel and one Marine were maintained with ADEA.[43]

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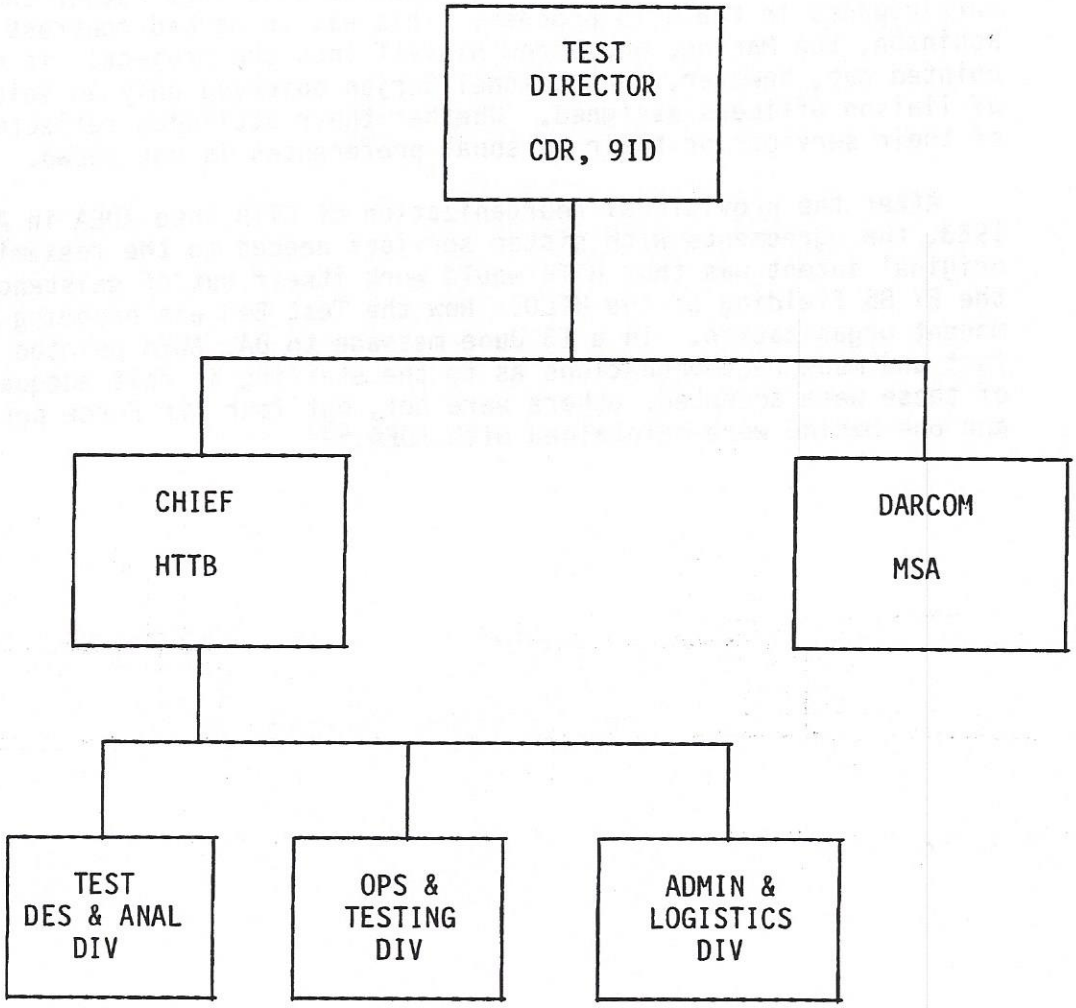
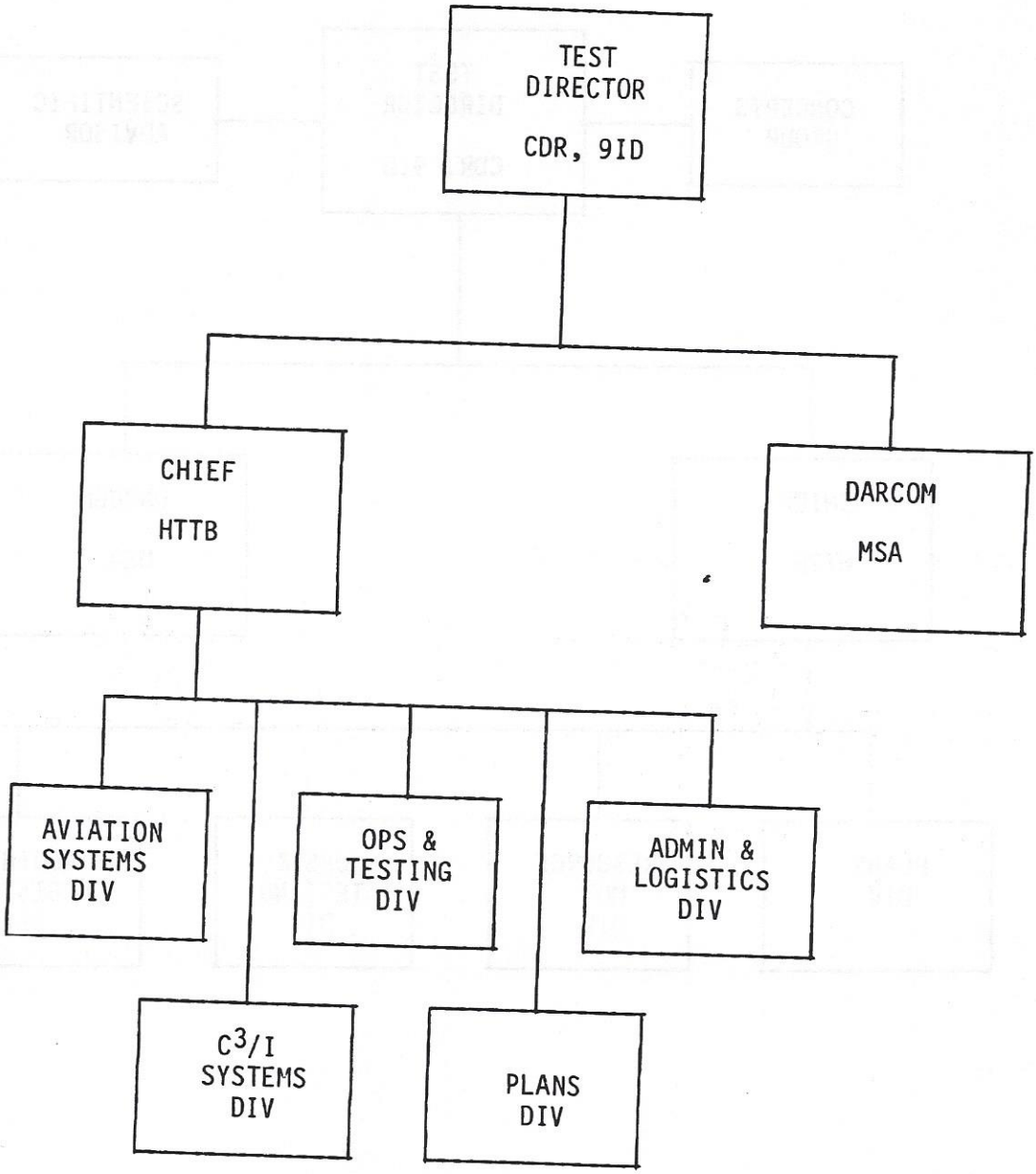
[43](1) Cerjan Interview, 17 Feb 83. (2) Msg, Cdr ADEA to HQDA, 131400z Jun 82, sub: Formalization of Allied and Sister Service Representation to ADEA.

CHART 1



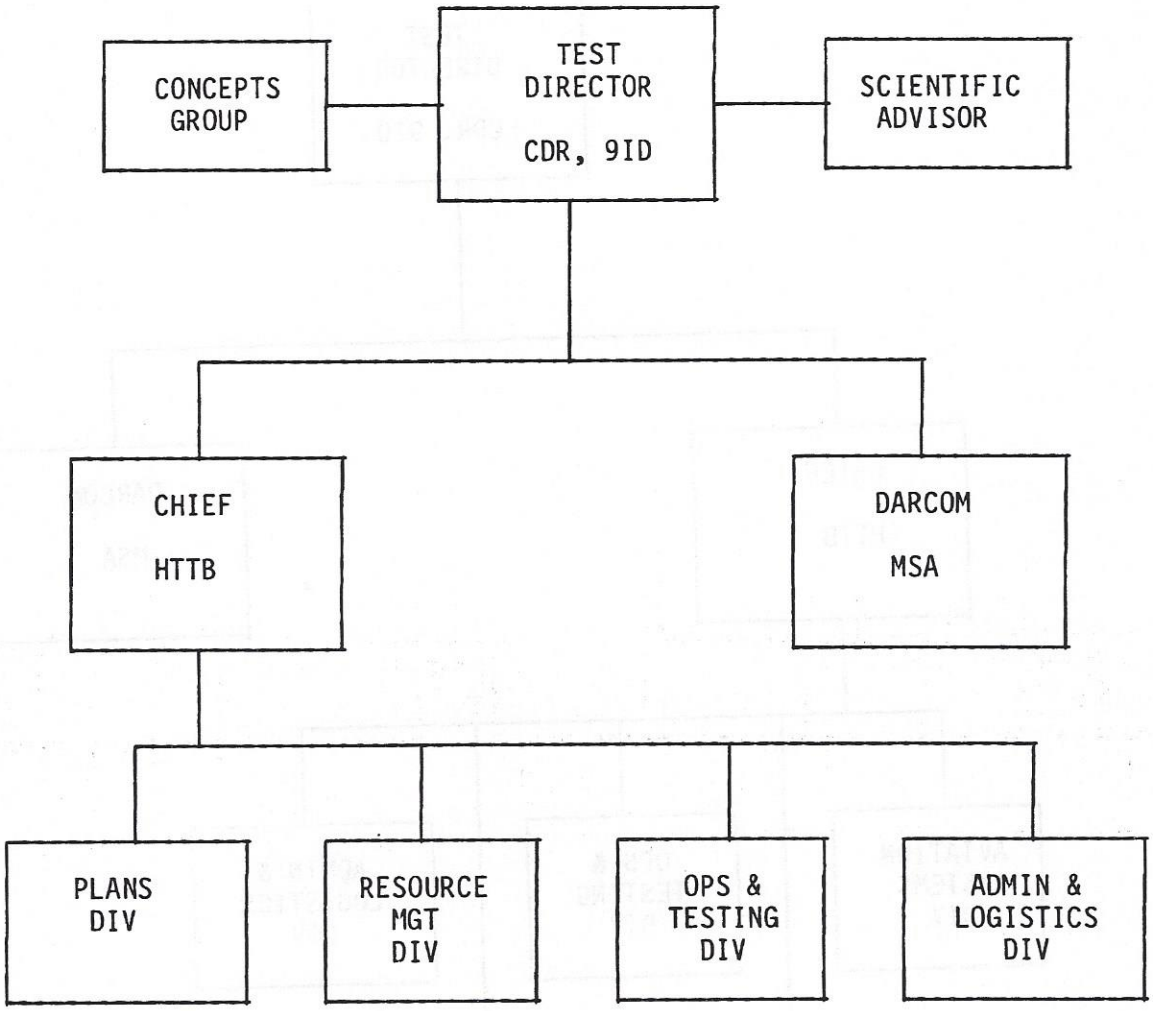
HTTB Organization: 38-space TDA as depicted in the MOU, fall 1980

CHART 2



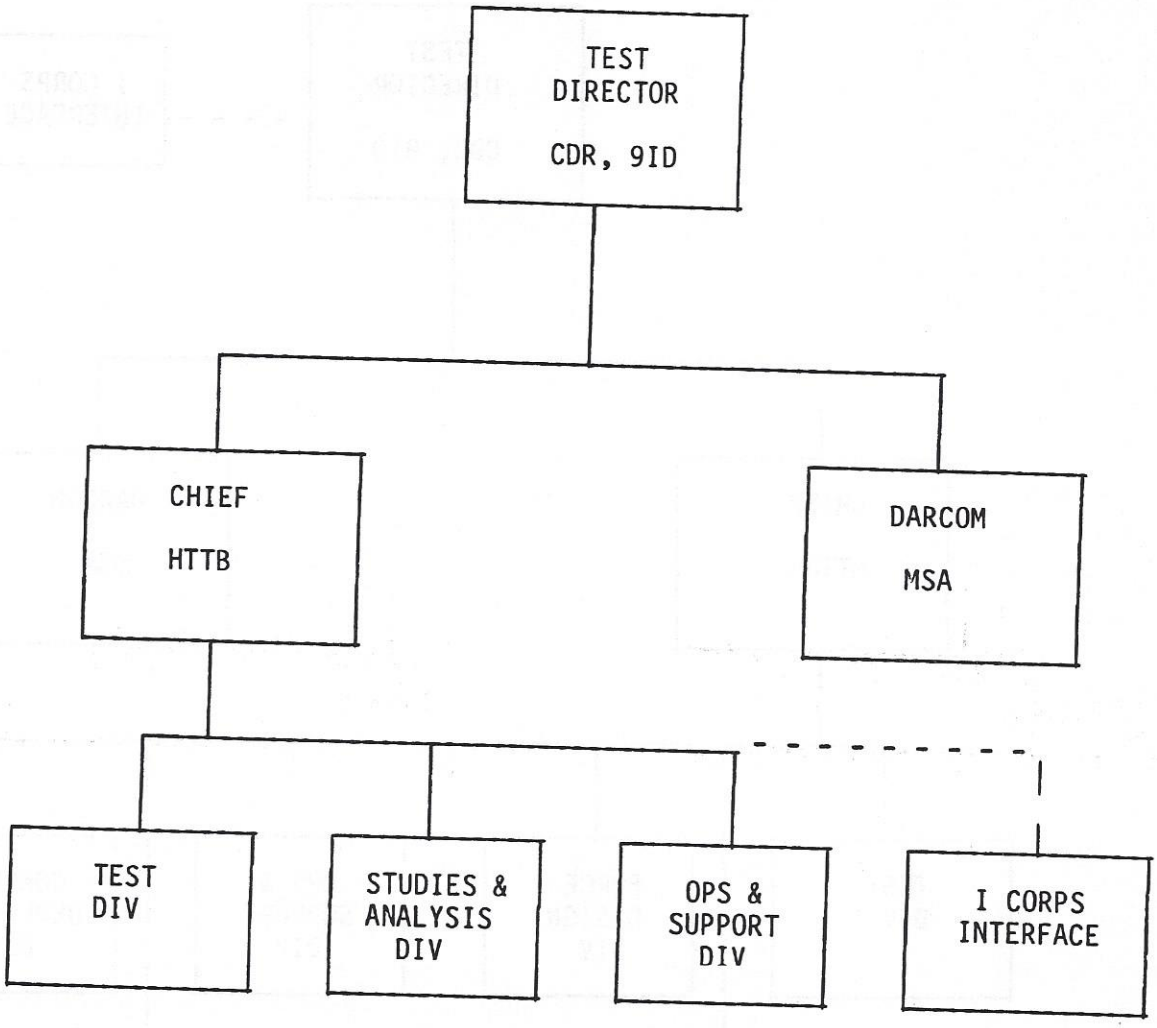
HTTB Organization: 55-Space TDA, winter 1980-1981

CHART 3



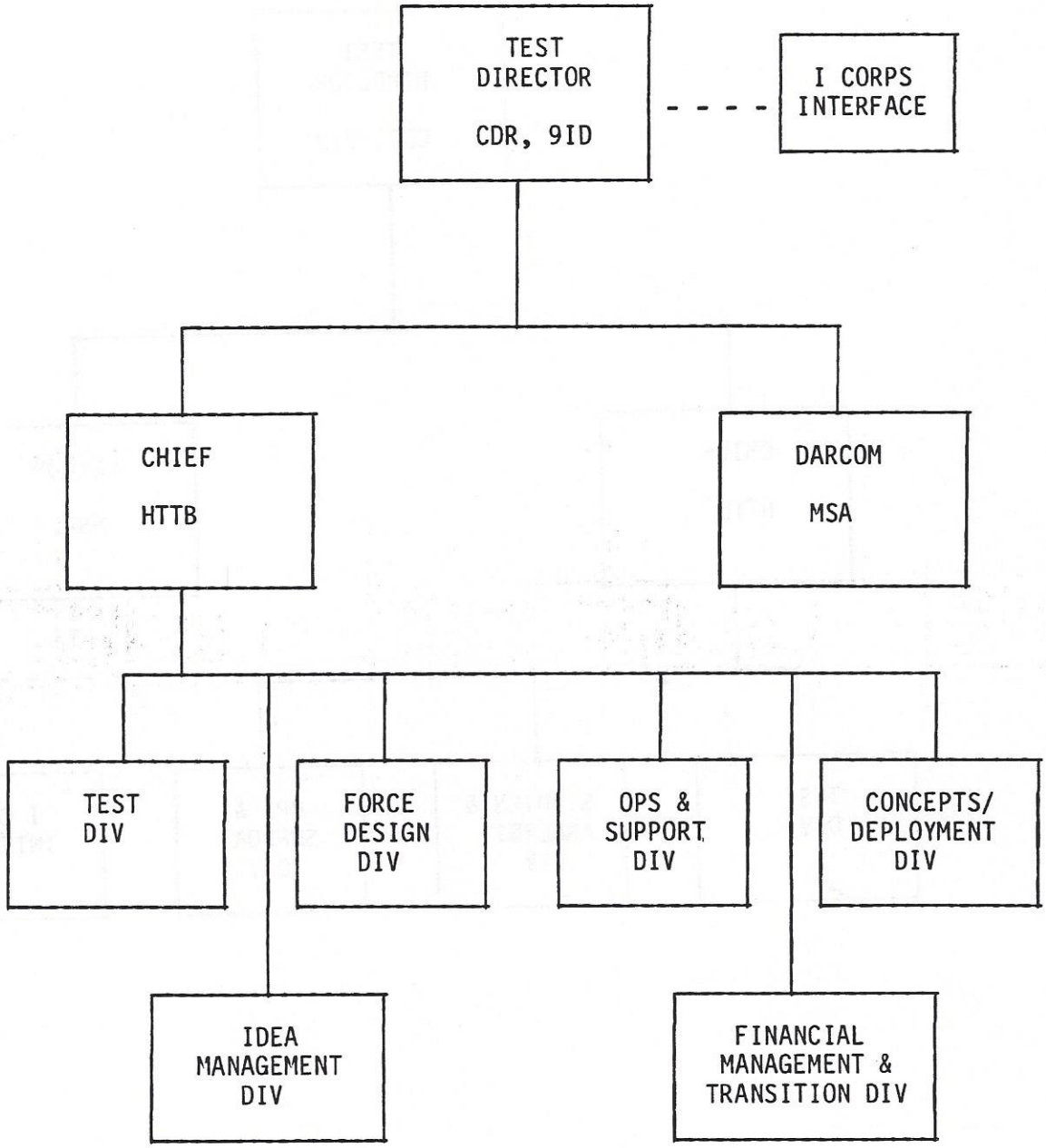
HTTB Organization: 80-space TDA, spring 1981. While the Scientific Advisor and Concepts Group are charted separately, they functioned as one.

CHART 4



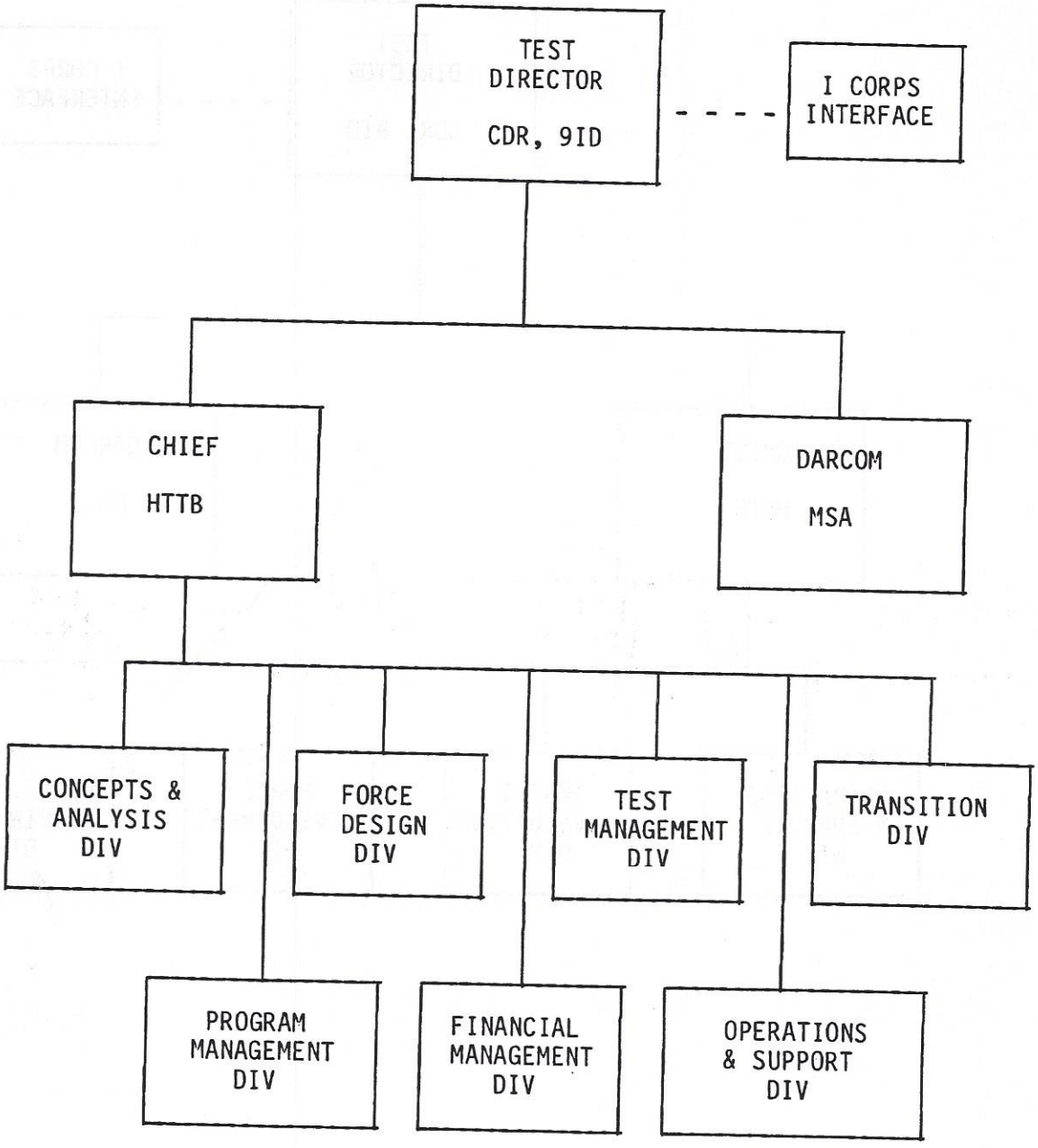
HTTB Organization: Fall-winter 1981-1982. As depicted in the revised MOU, winter 1982.

CHART 5



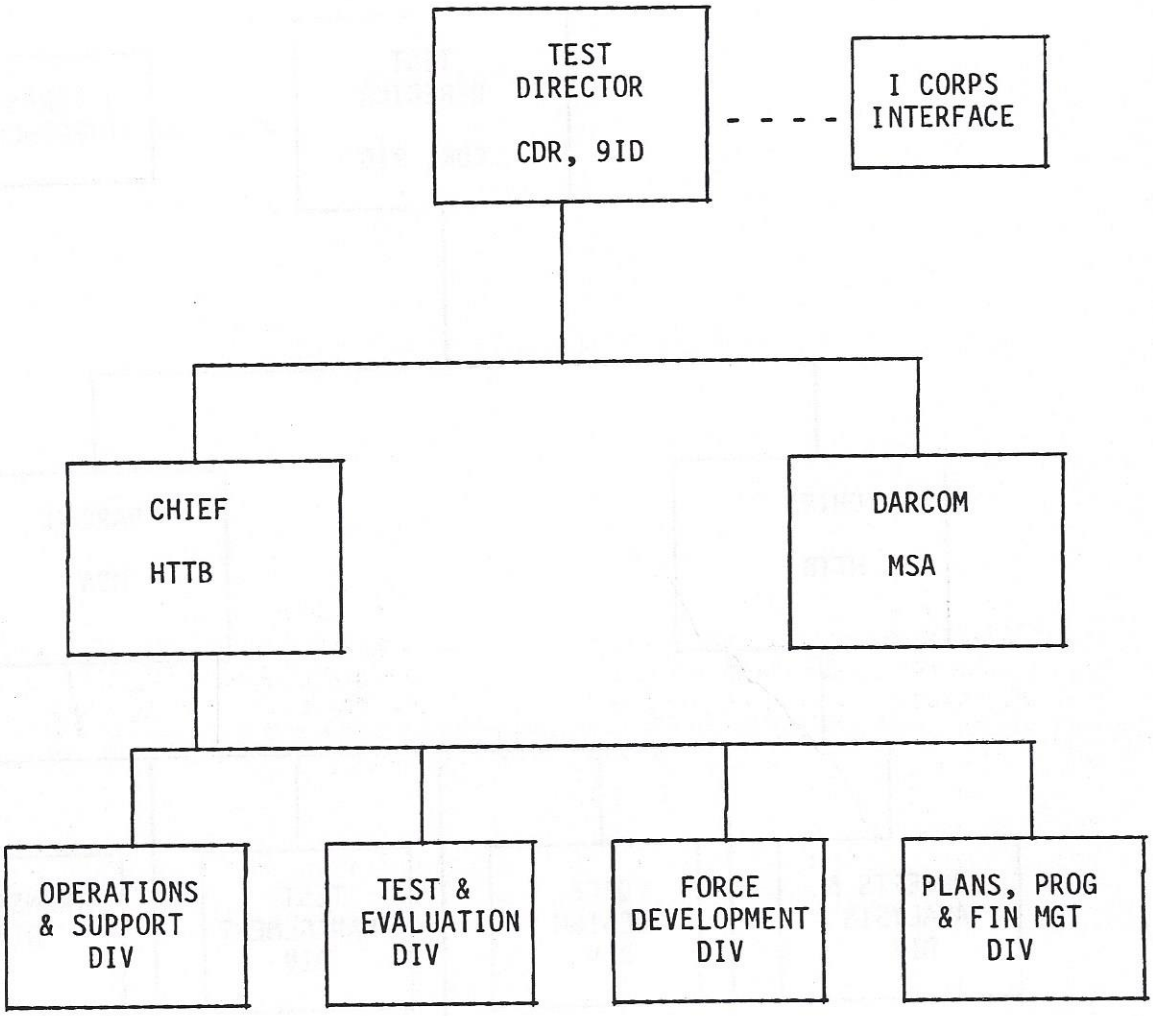
HTTB Organization: Spring 1982

CHART 6



HTTB Organization: Spring 1983

CHART 7



HTTB Organization: Provisional Army Development and Employment Agency, Summer 1983.

BOOK TWO

THE HIGH TECHNOLOGY LIGHT DIVISION

CHAPTER 13

EARLY EFFORTS, TO AUGUST 1981

> If I had had my druthers, I would have druther focused on developing a very light division, but the pressures at that time were such that they forced you to be able to respond to those challenges from OSD [Office of the Secretary of Defense], or we would have had another armored division. I wanted to stop the pressures in that direction, and see that we had the mix of forces that I thought we needed; heavy, light, and moderately light. We had to insure that we brought high technology into the light division, so that they had the capability of doing the things that they were going to have to do in the future.
>
> One issue was, where would it fight? That was back and forth, back and forth. We finally decided it had to be able to do the European thing...
>
> General E. C. Meyer
> Chief of Staff
> U.S. Army[1]

The period of time addressed by General Meyer in the above quotation was fall 1979 - early 1980. Work had begun at CAC on ID 86, and the desire to infuse new technology, or at least different technology, was an issue addressed by the CAC planners. The 40mm grenade machine gun, for example, was on a list of prospective equipment for ID 86 circulated on 8 January 1980. It is little wonder that as HTTB began to take shape at Fort Lewis in the summer and fall, the CAC planners and General Richardson viewed it and the 9th Division as the vehicle through which to test ID 86.

As a matter of fact, there is no evidence that anyone was considering having HTTB and the 9th test ID 86 per se, but only bits and

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[1]Meyer Interview, 13 Jun 84.

pieces of it. Of course, it must be understood that ID 86 itself was still in the process of evolution.

Evaluation and fielding of the Air Cavalry Attack Brigade (ACAB, later called the Cavalry Brigade (Air Attack) or CBAA, was among the first tasks identified for the Test Bed. On 10 June 1980, DA directed TRADOC to develop a proposal for the fielding of the ACAB in the 9th. In August, the 9th submitted its own list of test candidates, and in September formed internal committees to develop "...candidate organizational arrangements and operational concepts...."[2]

Formal work began in the 9th on the fielding of the ACAB in early September, believed to be the first "test" begun in HTTB. This began even before General Meyer approved TRADOC's ID 86 design for planning and testing on 18 September. On 15 October, TRADOC hosted a two-star MACOM review of candidate tests. The resulting list of eleven candidates, which included equipment and management concepts and several ID 86 organizations, was approved for FY 81-82 at a DA-MACOM meeting on 21 October.[3]

CAC hosted a follow-on meeting on 13 November at which it proposed ten additional tests for the FY 83-87 HTTB program, all of which were ID 86 concepts or units.

The people at Fort Lewis, and indeed throughout the Army, still had not grasped the magnitude of General Meyer's intent for the HTTB-9th Division effort. This was revealed at the 20 November IPR for him, held almost in isolation at Fort Lewis. The 9th was concerned that the tests being programmed might require the involvement of more than one battalion of troops. General Meyer assured them that was permissible.

In the meantime, circumstances had changed General Meyer's concern about combat in Europe, as expressed in this chapter's opening quotation. Now "...as time went on, and administrations changed, it

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[2](1) Ltr, CAC to dist, 8 Jun 80, sub: New Equipment for ID 86. (2) Msg, HQDA to Cdr DARCOM, TRADOC and FORSCOM, 101630z Jun 80, sub: Air Cavalry Attack Brigade for the 9th Inf Div (S: 29 Aug 80). (3) Msg, Cdr 9th Inf Div to Cdr FORSCOM, 281500z Aug 80, sub: High Technology Test Bed - Nominations of Candidates for Early Evaluation. (4) Ltr, Cdr 9th Inf Div to dist, 3 Sep 80, sub: High Technology Test Bed.

[3](1) Msg, Cdr 9th Inf Div to Cdr FORSCOM, 151800z Sep 80, sub: Test Bed Periodic Update NR 1. (2) Msg, Dep Cdr TRADOC to dist, 021600z Oct 80, sub: Results of ID86/Contingency Corps 86 CSA Briefing, 18 Sep 80. (3) Conf Rpt, TRADOC DCSOPS, 22 Oct 80, sub: Four-Star MACOM HTTB FY 81-82 Candidate Test Approval Conference.

...became far more clear that I didn't have to focus on the Central European scenario. There were some things that you had to do for Central Europe that would maximize some of the things that you wanted in light divisions. However, we were really focusing on Southwest Asia at that time. It was an ideal Test Bed. Everybody's mind was suddenly opened to a lot of different things...."

It was also during this time that General Stone was becoming less and less enamored with ID 86. This discontent was expressed in the formation of Task Force Stone and Concepts Group, as described in Chapter 9, Concepts and Concepts Group.

The first step toward fielding and testing the ACAB was taken on 18 December 1980 when the 9th provisionally organized an ACAB headquarters with internal assets. The FY 81-82 program called for four formal tests to begin in May 1981, four more in September, and formal activation of the ACAB units in February 1982. During the winter and spring of 1980-81, there is no evidence that anyone other than General Meyer had any inkling that the 9th was to develop a totally new division. At a mid-January briefing on HTTB held for General Richardson, he repeatedly commented that ID 86 was what HTTB was to test. Only when it was found that ID 86 units would not meet the needs, would those units be altered.[4]

By early February 1981, CAC had completed work on two scenarios set in the Middle East, one in mountains and one in the desert. This gave the 9th something to wargame their test units against in that region, as versus Central Europe.

During a 20 February visit to the Pentagon, General Stone inquired of two members of the DA staff what they felt were General Meyer's priorities among threat scenarios. Both responded that they felt General Meyer's top priority was the Middle East. The terms "Southwest Asia" and "Middle East" were used interchangeably. From that, General Stone directed that the HTTB effort be targeted against the Middle East first, NATO second. By the time of the 16 April IPR for General Meyer, the focus had almost totally shifted to the Middle East.

On 5 February, General Meyer approved the ACAB for fielding, along with a unit formation schedule that commenced immediately. The units

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[4](1) Ltr, 9th Inf Div G-6, 17 Nov 80, sub: Trip Report - CAC Meeting at Fort Leavenworth on 13 Nov 80. (2) DF, G-6 HTTB to CG 9th Inf Div, 21 Nov 80, sub: CSA Comments. (3) Meyer Interview, 13 Jun 84. (4) Msg, Cdr 9th Inf Div to Cdr FORSCOM, 061730z Jan 81, sub: Test Bed Periodic Update NR 5. (5) List of Comments, undated/unaddressed, sub: LTG Richardson Comments/HTTB Discussion.

would be formed, trained during the summer and fall, and be evaluated during the spring of 1982.[5]

On 6 March, General Richardson chaired a meeting at DA intended to clarify the direction in which HTTB and the 9th should be proceeding. At that meeting, it became apparent that there were still disagreements as to what HTTB should be doing. DA and the 9th felt they were to develop an improved division. TRADOC, supported by FORSCOM, felt HTTB should evaluate and revise ID 86.

As best as can be determined, it was at this meeting that the term "High Technology Light Division" (HTLD) was first formally used.

As a result of the 6 March meeting, General Stone put the final touches on his mission statement and got General Richardson's concurrence. It was worded in such a way that it did not address the ID 86 issue: "Incrementally transition the 9ID into a combat ready, technologically advanced prototype light infantry division capable of rapid strategic deployability and characterized by tactical mobility and firepower adequate to execute contingency missions and still have utility on the European battlefield." As briefed at the 16 April IPR, this statement had the words sustainability and survivability added to the list of division characteristics. It was approved by General Meyer. Also at that IPR, General Meyer made it plain that the Test Director, General Stone, was the primary actor in his mind, and that all others had supporting roles. If any part of ID 86 "does not make sense," the Test Director was not obliged to test it or use it as a start point. Another key point was that Meyer agreed with Stone's proposal that what he was doing was incrementally converting the 9th into a new force. When the 9th formed or transitioned a unit to a new configuration, it was not just for the duration of the test. When the test was over, and the organization finalized, it would remain, and like units would also be converted.[6]

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[5](1) DF, HTTB to CofS 9th Inf Div, 19 Feb 81, sub: Bi-Weekly Report of Significant Actions - 6 February 1981 through 19 February 1981. (2) Memo, Cdr 9th Inf Div to Record, 2 Mar 81, sub: CG's Discussions with MG Roddy, MG Mahaffey, MG Akers, and BG Brown. (3) Memo, HTTB Avn Sys Mgr to CG 9th Inf Div, 12 Feb 81, sub: Concept Approval for ACAB Test/Evaluation, w/4 Incl.

[6](1) Read-Ahead Packet, High Technology Test Bed - General Officers Workshop, 6 Mar 81. (2) Msg, Cdr 9th Inf Div to dist, 161900z Mar 81, no sub. (3) Briefing, CSA IPR, 16 Apr 81. (4) Msg, HQDA to dist, 221800z Apr 81, sub: High Tech Test Bed IPR - 16 Apr 81.

This IPR, and the decisions resulting from it, represented a quantum leap in the thinking of the people at Fort Lewis. Less than five months before, they had been concerned about disrupting more than one battalion of the 9th while testing. The decisions made at this IPR certainly caused all the supporting actors to rethink their roles.

The thinking had not yet reached the point where HTTB was prepared to ignore ID 86. After all, it was still the only thing available from which to start. No one was quite ready to sit down with a blank sheet of paper and start designing a totally new division, but that was just over the horizon. Again, refer to Chapter 9.

The Testing Process

During April and May, a series of messages between CAC and various addressees had resulted in clarifying the mechanics of how testing would be conducted. The process was, once a concept/equipment/organization was identified for testing:

- CAC assigned one of its centers or schools proponency and designated a responsible test activity. Some examples:

HTTB Test	Proponent Center/School	Responsible Test Activity
Anti-Armor Co	Infantry School	HTTB
DS Artillery	Field Arty School	Field Arty Board
ACAB	Armor School	TCATA

- The proponent center or school would coordinate their test activities through the HTTB Deputy Test Director, who would provide an interface with the 9th and administrative assistance at Fort Lewis. In cases where the responsible test activity was not HTTB, the Test Bed would provide an officer Project Manager as interface for the test.

- The proponent center or school would prepare a draft Independent Evaluation Plan and submit it to CAC for approval. The proponent would also prepare a Test Support Package.

- The responsible test activity would prepare the Outline Test Plan and the Test Design Plan. These would be submitted through the Test Director to the TRADOC Deputy Chief of Staff for Test and Evaluation, who would

approve them, and coordinate them with the proponent center or school, the 9th, and with CAC. Finally, the agency would prepare the Detailed Test Plan.

- The responsible test activity would then conduct the test. If there was a need to form a test cell, its membership would be developed during preparation of the Outline Test Plan. The responsible test activity would provide a nucleus of experienced test personnel.

- The test activity would prepare the test report.

Where time permitted, Outline Test Plans would be submitted through the normal Army Test Schedule and Review Committee cycle. When time would not permit, the plan would be submitted out-of-cycle. At any rate, the committee would recommend approval or disapproval to DCSOPS, who was the final approving authority.

As of the end of May 1981, CAC was working on a detailed test management plan that would support the above procedure. As a practical matter, the procedure was already under way. The Air Defense Battalion, CEWI Battalion, Cellular Command Post, Infantry Division Communications, Infantry Maneuver concept, and ACAB test documents were in various stages of preparation and approval. Three tests, the Anti-Armor Company, the Infantry Battalion Mortar concept and the Brigade Engineer concept, had been approved, and testing had already begun.

A final step in the test management process was taken by the Combat Developments Experimentation Command (CDEC), which had been delegated responsibility for approving HTTB Test Design Plans. In June, CDEC sent a message outlining the way in which the organization designated as a responsible test activity should function:

- The test activity, through the Outline Test Plan, would designate a Test Directorate, typically composed of test activity members and an HTTB representative.

- The Test Directorate would prepare the final Outline Test Plan, the Test Design Plan, the Detailed Test Plan, the Test Report, and all other required documentation. All documentation was for a 9th Division HTTB test, and as such must have the concurrence of the Test Director.

- The HTTB representative within the Test Directorate would be the interface between that body and the 9th, and all coordination between the Test Directorate and the 9th would flow through HTTB.

- Testing would be conducted at Fort Lewis or Yakima Firing Center.

- The Test Directorate would reduce data obtained during the test into interim and final reports, as required, for the Test Director. All data belonged to the Test Director.

- Test Design Plans, upon approval, could be expanded to become the Detailed Test Plan.[7]

As mentioned earlier, some testing had taken place prior to the evolution of the test procedure. A one-week field tactical exercise (FTX) called Celtic Echo was held at Yakima Firing Center 3-7 May 1981, followed by a one-week extension of elements of the exercise into a formal test week. It was tailored as closely as possible to the CAC Middle East III scenario. Several local 9th Division/HTTB initiatives were explored: electronic warfare and intelligence; airspace management; division cellular command post functions; and field decontamination of personnel and equipment made "dirty" by nuclear, chemical, or biological contamination.

Three formal evaluations of ID 86 organizations and operational concepts were begun: The Brigade Engineer Company, the Anti-Armor Company, and the Mortar Platoon. It was anticipated that further adjustments and testing would be required in all cases. For example, it was discovered that the anti-armor company with sixteen TOW missiles was too light; twenty-four was better.

One of the local initiatives, that of a dispersed division command post, was to become a subject of much interest under a variety of names such as dispersed, modular, or cellular. The concept was to continue to evolve for years.

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[7](1) Msg, Cdr CAC to dist, 141645z Apr 81, sub: Mission Tasking for HTTB Testing. (2) Msg, Cdr CDEC to Cdr CAC, 231030z Apr 81, sub: Management Procedures for HTTB Tests. (3) Msg, Cdr CAC to dist, 112051z May 81, sub: Management Procedures for HTTB Tests. (4) Msg, Cdr CDEC to HQDA, 221400z May 81, sub: HTTB Test Planning Status and Procedures. (5) Msg, Cdr CDEC to dist, 240900z Jun 81, sub: High Technology Test Bed (HTTB) Test Planning Procedures.

Refining the Testing Process

This first experience in field testing was, naturally enough, a learning experience for the Test Bed. It resulted in a number of refinements in procedures to be used in future testing.[8]

During the summer of 1981, the Test Bed became aware of another step in General Meyer's thinking. An insertion in the Chief of Staff's Weekly Summary, dated 17 June, stated: "our objective is to expedite the incremented fielding of equipment and organizations to produce the prototype division in 1985...I am personally committed to that goal." One of the 9th's ADCs forwarded a copy to HTTB with a handwritten note stating, "...there are some very key words here."

The Test Bed had been refining its test program since early spring, compressing it as much as possible. As briefed to General Meyer at the April IPR, and conceptually approved by him, the program called for most testing to be completed by the spring of 1983, when a major Joint Readiness Exercise would take place. This exercise would test at least a reinforced brigade, hopefully most of the division. From that test, whatever final adjustments that were required would be made, and the balance of the division would begin transition. It was accepted that some equipment would still be lacking, with some of the redesigned units still equipped with old or surrogate equipment. If all this could be done by spring 1983, why could not the division be transitioned and complete by 1 October 1985?

The end of FY 85 became a focal point for HTTB and the 9th. By the next IPR on 30 July, the emphasis had shifted to that target date. As General Stone briefed General Meyer at that IPR, the program was extended from the spring 1983 exercise to the fielding of a prototype division in FY 85. This, however, would not be the objective division. General Meyer agreed that there should be a continuous infusion of technology and that the final, objective division would probably not come into being until the late 1980s or early 1990s.

One problem: transition to what?

Found in the Test Bed's files for this time period is an undated pamphlet entitled Strawman Organizations - Quick Kill Battalions. It outlines four organizations ranging in strength from 555 to 374 men. It also mentions the possibility of a dune buggy becoming the Quick Kill Vehicle. It shows an arrowhead symbol for the units. The battalion,

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[8](1) Msg, Cdr 9th Inf Div to Cdr CAC, 181530z Mar 81, sub: 9ID FTX Objectives/HTTB Evaluations. (2) Memo, Exercise Dir to Cdr 9th Inf Div, n.d., sub: Executive Summary FTX Celtic Echo/HTTB Observations. (3) Memo, Chief HTTB Ops and Testing Div to Test Dir, 22 Jun 81, sub: Progress Report Recommendations.

the dune buggy, and the arrowhead all were to become part of the HTLD. Colonel Prisk's Concepts Group was hard at work.[9]

The 30 July IPR was among General Stone's and Colonel Van Meter's final acts at Fort Lewis. Colonel Prisk took over as interim Chief of HTTB on 10 August, and General Elton took command of the 9th Infantry Division on 11 August.

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[9](1) Note, CSA, no dist, 17 Jun 81, no sub, w/Atch. (2) Briefing, CSA IPR, 16 Apr 81. (3) Briefing, CSA IPR, 30 Jul 81. (4) Memo, Mr. Jolley to Record, n.d., sub: Periodic Update by MG Stone to CSA on 30 Jul 81. (5) Pam, n.d., sub: Strawman Organizations - Quick Kill Battalions.

CHAPTER 14

THE CONCEPTUAL PERIOD - FALL 1981

> He [General Meyer] made it very clear to me that he wanted a concept and that we were to press onward from that....
>
> ...We charted out a concept, using the doctrine of the AirLand Battle, in which we were going to accomplish our mission. We then got it approved and pressed on to determine how we were going to fight the division. That had not been done before.
>
> MG Robert M. Elton
> Commander
> 9th Infantry Division[1]

During the period August through October 1981, the three primary directors of HTTB were of one mind. General Elton was working under the guidance stated above. Colonel Prisk, as interim Chief of HTTB, had been concepts-oriented from the outset. Colonel Cerjan, as the incoming HTTB Chief, stated "...the division did not have a concept, nor did it have a structure with which they intended to fight that concept. On the first of September, General Elton and I agreed that was our first order of business. We needed a concept by the first of January and a structure shortly after that."

Colonel Cerjan did not physically join the Test Bed until late in October, however, and Colonel Prisk had his hands full reorganizing the Test Bed and integrating Concepts Group into the structure. In the meantime, HTTB business was ongoing.

Preparation of the various types of documentation supporting the ACAB tests, scheduled for the early spring of 1982, was a major project. The proposed Test Program through January 1982 reflected three field tactical exercises (FTX) and one command post exercise (CPX):

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[1]Elton Interview, 29 Nov 82.

- 21-25 September, Brigade FTX, Fort Lewis.
  - Infantry Battalion Mortars, Europe.
  - Anti-Armor Company, 16 TOWs, Europe.
  - Brigade Engineer Company, complete Phase I.
- 2-6 November, Battalion FTX, Yakima.
  - Infantry Battalion Mortars, Middle East.
  - Anti-Armor Company, 24 TOWs, Middle East.
  - Infantry Maneuver Concept, company level, Middle East.
- 7-11 December, 9th Division CPX, Fort Lewis.
  - Cellular Command and Control Support System (Modular Command Post) baseline evaluation.
- 18-24 January, Brigade FTX, Fort Lewis.
  - Infantry Battalion Mortars, Europe, final evaluation.
  - Anti-Armor Company, 24 TOWs, Europe, final evaluation.
  - Infantry Maneuver Concept, company level, Europe.
  - Brigade Engineer Company, final evaluation.
  - Air Defense Artillery Battalion, ID 86, first evaluation.

These would be followed by no less than six CBAA FTXs.

One relatively minor ongoing irritant that was beginning to develop was the problem of visitors. By now they were averaging three general officers, or equivalent, per week. An effort was made to control this,

especially during test periods. There was also the constantly ongoing, and not so minor, problem of expediting the acquisition of money, materiel, and personnel so that they would all come together at the proper moment for testing to go forward.[2]

FORSCOM was continually concerned about resources for the 9th. In a message to DA, the MACOMs, and the 9th on 9 October, FORSCOM objected to what it perceived to be a tendency to establish TOEs and transition units to those TOEs before the units had been tested. The message also reminded everyone that as far as FORSCOM was concerned, it was not up to them to resource the 9th. That was primarily DA's problem.

The 9th's carefully worded response did not address the problem of TOEs, but pointed out that FORSCOM had to "... provide documentation/ authority in a timely manner for 9th ID to requisition personnel and equipment not on hand but required for testing...." CAC directed the TRADOC proponent agencies to identify minimum acceptable levels of equipment and personnel fills to satisfy test issues, and to note where "in lieu of" equipment could be used. On Christmas Eve 1981, DA issued detailed instructions to all concerned on how the 9th's equipment requests were to be handled.[3]

The fall of 1981 was also a period when many outside, and a few inside, groups or boards were formed to address various issues dealing with HTTB and the HTLD. The Army Science Board summer study had addressed certain aspects of high technology. The Defense Science Board had sent a group to Fort Lewis in early November; the 9th had formed an internal HTTB Logistics Board; CAC formed a Human Dimensions Testing Task Force to help HTTB "enhance individual soldier performance;" TRADOC formed a Training Support Work Group and an HTLD Study Advisory Group.

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[2](1) Cerjan Interview, 17 Feb 83. (2) DF, Chief HTTB to CofS 9th Inf Div, 7 Aug 81, sub: HTTB Fall-Spring Tests 1981-1982, w/Incl. (3) Msg, Cdr FORSCOM to dist, 301751z Sep 81, sub: Visitors During High Technology Test Bed (HTTB) Test Periods. (4) Msg, Cdr FORSCOM to Cdr TRADOC, 071346z Oct 81, sub: 9ID HTTB Outline Test Plans.

[3](1) Msg, Cdr FORSCOM to dist, 092305z Oct 81, sub: Resourcing HTTB Tests & Near Term Enhancements. (2) Msg, Cdr 9th Inf Div to dist, 200747z Nov 81, sub: Resourcing HTTB Tests and Near Term Enhancements. (3) Msg, Cdr CAC to dist, 031430z Nov 81, sub: Resourcing HTTB Tests and Near-Term Enhancements. (4) Msg, HQDA to dist, 241537z Dec 81, sub: Equipment Required for 9ID HTTB Organizational and Operational Testing (FY82).

DA proposed the establishment of a two-star level HTLD Coordination Group.[4]

Designing a Force Structure

One effort that had begun with the 16 April IPR had grown throughout the summer and by fall 1981, was a major effort; transition to a prototype division. General Meyer had given guidance at that IPR that tested units would not revert to their old organization, but retain the new. When the design was refined, like units would transition to the new design. He directed all participants to explore how the 9th could be transitioned to a high technology light structure. This was reaffirmed at the 30 July IPR, with the target date of the close of Fiscal 1985 added.

Some preliminary work had been done by the Test Bed and a tentative transition plan had been assembled by the end of July. It reflected the transition of units beginning in 1982 and continuing through 1986. The plan was sent to the 9th for staffing. Meanwhile, the same sort of action was taking place in TRADOC.[5]

Within the Test Bed, the effort had grown to the point that Colonel Prisk felt that it deserved the attention of a full-time action officer. He appointed Major Sterling R. Richardson to the task. Richardson described his first efforts:

> We still were looking at the ID 86 structure as the ultimate goal for the 9th Division. We were in the business of moving from an "H"

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[4](1) Itinerary, Defense Science Board, 22 Oct 81. (2) Memo, ADC-O 9th Inf Div to dist, 23 Jul 81, sub: HTTB Logistics Board. (3) Msg, Cdr CAC to dist, 051246z Oct 81, sub: HTTB Human Dimensions Testing Program. (4) Msg, Cdr TRADOC to dist, 081330z Oct 81, sub: 9ID HTTB Training Support. (5) Msg, Cdr TRADOC to dist, 071500z Oct 81, sub: Formation of Study Advisory Group for High Technology Light Division (HTLD) Study. (6) Draft Ltr, DA DCSOPS to dist, n.d., sub: High Technology Light Division (HTLD) Coordination Group.

[5](1) Memo, DA DCSOPS to Record, 16 Jun 81, sub: 9ID High Technology Test Bed (HTTB) In-Process Review. (2) Memo, Mr. Jolley to Record, n.d., sub: Periodic Update by MG Stone to CSA on 30 July 1981. (3) DF, HTTB to CofS 9th Inf Div, 29 Jul 81, sub: High Technology Light Division Transition Plan (Tentative). (4) Msg, Cdr TRADOC to HQDA, 072135z Aug 81, sub: 9ID HTTB MACOM Decision Briefings, 30-31 July 1981.

> series infantry division to ID 86. My first transition scheme was to look at each unit and to look at when key pieces of equipment would be fielded and to look at how quickly we could evolve from an "H" series infantry division to a prototype ID 86. We wanted all that done by 85, which was the initial goal announced by the Chief of Staff of the Army....
>
> We started going to DARCOM, DA, and FORSCOM and saying "We are trying to restructure ourselves. We need this type of equipment and we want it in these years. Here it is fellows; make it happen." Well, if you have ever dealt with DARCOM, that does not work. But that was our initial cut. We built the transition schedule, and we built a plan for it, and Colonel Prisk and I went around and briefed it to all who would listen (and some who didn't). We were given some patronizing pats on the head, particularly by the DA staff personages, and told "Okay, that's really nice, go to it." It was obvious that no one really thought that this effort was going to last that long.

The ID 86 question was basically one of expediency. Budget windows would be closing in the winter, and something had to be put forward in order to get funding for future years. Most, but not all, participants accepted the fact by now that the HTLD and ID 86 would be two different organizations. In a 24 August message to TRADOC, DA proposed the use of analytical studies to help optimize a High Technology Light Division as compared to the current infantry division and heavy division 86. On that message the TRADOC Commander attached a note: "How can we do this if we don't know what a High Tech Div looks like?" On the attached Action Memo, someone responded, "Hi Tech Div looks like ID 86!"

CAC was working on the mechanics of the matter. After several alterations, the following procedure was agreed upon:

- The 9th would develop the transition plan and forward it to the MACOMs for comment, and then on to DA for approval.
- The plan would be integrated with the Army plan for transitioning heavy divisions.
- Equipment availability and successful testing would be part of the plan's timing.

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- The plan would be integrated with the Army plan for transitioning heavy divisions.
- Equipment availability and successful testing would be part of the plan's timing.

The time schedule was: 1 September, the 9th would forward the plan to the MACOMs; 1 October, the MACOMs forward the plan, with comments, to DA; 1 November, DA sends guidance to the field for preparing input to the Program Objective Memorandum (POM); December 1981, the plan is used to develop Fiscal 84-88 POM input.[6]

A parallel effort had been initiated by the 24 August message from DA to TRADOC mentioned above. This message directed TRADOC to develop an HTLD Analytical Studies Plan by 1 October, and prompted TRADOC to form its Study Advisory Group. The completed study was to be at DA by 1 February 1982, again to support the POM process. The Study Plan was ready ahead of schedule, on 16 September. It named CAC as the study agency and stated that the base case HTLD would be a four motorized battalion/four infantry battalion/two mobile protected gun battalion mix of ID 86 organizations. It would be examined in both the Middle East and Europe, and compared to the "C" series infantry division in the Middle East, and the Heavy Division 86 in Europe.

The 9th and HTTB were working on the transition plan as directed by CAC. An initial work group meeting was hosted by the 9th in mid-September, and a follow-on was held at DARCOM 30 September - 2 October. By mid-October, the plan was in TRADOC's hands.[7]

Another Chief of Staff IPR was held at Fort Lewis on 13 November. While General Meyer was not briefed on transition matters, he did make some comments that would impact on these efforts. He expressed concern that HTTB and the 9th were preoccupied with equipment and existing organizations, and challenged all concerned to be more innovative.

That the transition plan was not acceptable to all was amply evident in a fifteen-page message from FORSCOM on 24 November, listing their recommended changes and concerns. A further coordination meeting was

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[6](1) Interview, author with LTC Sterling R. Richardson, 4 May 84. (Hereinafter, Richardson Interview, 4 May 84.) (2) Msg, HQDA to Cdr TRADOC, 241259z Aug 81, sub: Analytical Studies to Support High Technology Light Division Transition, w/Atch. (3) Msg, Cdr CAC to dist, 131511z Aug 81, sub: 9ID Transition Plan. (4) Msg, Cdr CAC to dist, 191544z Aug 81, sub: 9ID Transition Plan.

[7](1) Msg, HQDA to Cdr TRADOC, 241259z Aug 81, sub: Analytical Studies to Support High Technology Light Division. (2) Ltr, Cdr TRADOC to dist, 16 Sep 81, sub: Combat Developments Study Directive: Analytical Studies to Support High Technology Light Division (HTLD) Transition. (3) Msg, Cdr DARCOM to dist, 231500z Sep 81, sub: 9ID Transition Plan.

held at CAC, 8-10 December. As the year ended, transition was still very much an open question.[8]

The fact that a formal transition plan had not yet been approved was probably not of major concern to two key individuals. Generals Stone and Elton had both voiced concern that, should a transition plan be approved, it might rob them of the ability to act or react to test results or other initiatives.[9]

Throughout it all, the concept question was being worked, and rudimentary work had begun on a totally new division design. Around the end of June 1981, the 9th Division Command Group and Concepts Group began to realize that modifications to ID 86 might not work. General Elton directed Colonel Prisk to start work on a new division design with three objectives in mind: Make the division more tactically mobile, more deployable, and with increased firepower.

Selecting Equipment

Colonel Prisk and Concepts Group turned their attention to getting light. They explored methods to eliminate equipment that required C-5 airlift capability. The month of July was spent deeply involved in equipment. That orientation was quickly changed by General Meyer's comments following the 30 July IPR, in which he directed HTTB place a higher priority on force structuring, tactical, and deployment concepts. General Elton reemphasized to Colonel Prisk that he wanted a new division design. Prisk sat down with his people in Concepts Group and sketched out a very rough diagram of what they thought such a division should look like, using some of the seminal concepts as discussed in Chapter 9.

This rough diagram was given to Major Testerman to refine, with the objective of developing a 10,000-man division that could be deployed with 1,000 C-141 sorties. Testerman entered a period of a week or ten days of intense, day and night design effort in coordination with Colonel Prisk, Colonel Blodgett, and Mr. Rorstad. The result was briefed to General Stone just a day or so prior to his departure from Fort Lewis and received his approval.

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[8](1) Memo, HTTB to Record, 16 Nov 81, sub: HTLD IPR for CSA, 13 Nov 81. (2) Memo, HTTB to Record, 17 Nov 81, sub: CSA Comments During Seminar with 3-47 Inf Key Personnel, 13 Nov 81. (3) Msg, Cdr FORSCOM to Cdr TRADOC, 242245z Nov 81, sub: 9ID/CAC Transition Plan for The High Technology Light Division (HTLD) FY 82-88. (4) Msg, Cdr CAC to dist, 131330z Nov 81, sub: High Technology Light Division IPR, 8-10 Dec 81.

[9](1) Note, Comment of MG Elton on 20 Oct 81 HTTB Update Briefing, n.d. (2) Memo, Chief HTTB to Record, 18 Nov 81, sub: CAC IPR, 16 Nov 81.

The Contingency Division, or what Colonel Prisk called the Quick Strike Division, totaled 10,387 men. It was designed to "attack deep," and was based upon the use of a Quick Kill Vehicle, later the Fast Attack Vehicle, and the Mobile Protected Gun, later the Assault Gun. Besides its Headquarters and Headquarters Company (HHC), there were six major subordinate elements: an ACAB, a Division Support Command, a Fire Support Brigade, a Combat Support Brigade, and two Maneuver Brigades.

The Maneuver Brigades each had two Quick Kill Vehicle Battalions, one Mobile Protected Gun Battalion, a Support Company, and an HHC. The Combat Support Brigade consisted of airborne, engineer, NBC, air defense, and signal battalions, an MP company, and an HHC.

Testing the Concept

This organization and concept was briefed to General Elton on 27 August. He approved of the effort, and work continued. He was briefed in October on the proposal to form a test battalion in order to explore some of the concepts put forward in the new division design. General Elton deferred the decision to form such a battalion, pending presenting the concept to the Defense Science Board and General Meyer. He also felt the "how to fight" effort needed time to mature. The idea of using dune buggies for the Fast Attack Vehicles was discussed, and he directed that an effort be made to procure some.[10]

The "how to fight" project was evolving as a separate but simultaneous effort. This was all interwoven with the new AirLand Battle doctrine and the CAC-developed Middle East III (ME III) tactical simulation. To quote General Elton:

> The major subordinate commanders and separate battalion commanders, together with the Command Group, went through two iterations of a map exercise of how to fight the division in SW Asia. We placed ourselves against three Soviet divisions in the mountains of SW Asia. We got our heads together employing combined arms tactics as they applied to the AirLand Battle. We tried to stretch our thinking, but we found out from the exercise that we did not do very well at all. We just did not have the division that could handle that job. The division we started with was ID 86.

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[10](1) Prisk Interview, 16 Sep 82. (2) Testerman Interview, 13 Oct 82. (3) Briefing, Contingency Division, 27 Aug 81. (4) Briefing, Test Battalion, 13 Oct 81.

> Then we pared the division down, but added additional capability in the form of weapons systems, lighter, faster mobility, surveillance, etc. We iterated that force again in a map exercise in another part of SW Asia, and by that time we had beaten on ourselves enough so that we had an idea what the AirLand Battle was all about, and how it was different from the Active Defense, which we had been pursuing for the last ten years. We did pretty well in that second exercise.

The "deep strike" aspect of the concept that was evolving meshed well with the new AirLand Battle doctrine.

Finding a Mission

Also during this period, work was done on evolving a mission statement for the new HTLD. A meeting was held between members of Concepts Group, now the Conceptual Analysis Division of HTTB, and CAC on 16 October where the mission and the concept were coordinated. After some discussion as to whether the HTLD should be able to initially establish a lodgement or not, the following mission statement was proposed to General Meyer at the 13 November IPR where it was approved:

> The HTLD must rapidly deploy to a contingency area, establish or expand a lodgement, and defeat enemy forces ranging from light infantry to tank and motorized forces; or be able to rapidly reinforce NATO.

Also as part of that IPR, the proposal to form a reconnaissance unit and a Quick Kill Battalion was presented and approved.[11]

Between mid-November and mid-December, another organization was developed called a Strike Battalion. This was to be a motorized infantry unit, mounted in vehicles light enough to be easily transported. Later it would be called, simply, a Motorized Infantry Battalion.

The concepts were continuing to evolve. As already stated, the deep strike concept meshed well with AirLand Battle, and the Quick Kill

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[11](1) Elton Interview, 29 Nov 82. (2) DF, HTTB to CofS 9th Inf Div, 22 Oct 81, sub: Bi-Weekly Significant Actions Report, 16-22 October 1981. (3) CSA IPR, 13 Nov 81. (4) Memo, HTTB to Record, 16 Nov 81, sub: HTLD IPR for CSA, 13 Nov 81.

Battalion would be the primary tool to carry it out. A typical mission for a Quick Kill unit was envisioned as a night insertion behind the enemy lines, twenty or twenty-five kilometers from a selected target. The unit would drive to and attack the target, then depart to some predetermined rally point. There they would be resupplied, or possibly extracted. They would normally remain behind enemy lines for two or three days, avoiding contact during the day and operating at night.

During this period, the various drafts of the concept were being staffed, worked and reworked. Colonel Blodgett, now the head of Concepts, put it this way:

> That document was staffed among the TRADOC schools. We received their comments and concurrence. Clearly, a month later when the school commandants and directors became aware they had concurred with it, they were surprised. It had been formally staffed, and had received the signature of someone in each of the schools saying, "Yes, we will buy this if you put in the following comments...." It never became elevated to the level where decision-makers said, "This is the way we are going to go" or "...not going to go."
>
> That staffing and writing effort was done in conjunction with CAC. It was adopted by verbal agreement between General Elton and General Stone and possibly DCSOPS, as a working document....[12]

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[12](1) Testerman Interview, 13 Oct 82. (2) Blodgett Interview, 10 Apr 84.

CHAPTER 15

DESIGNING THE DIVISION, WINTER 1981-82

> In December we went through a massive planning process on how to develop the structure of the division, and decided on an approach and an evaluation plan. We sent it off to the Combined Arms Center, and got them all excited because we were telling them how we were going to do business, which they felt was infringing upon their arena.
>
> Colonel Paul G. Cerjan
> Chief
> High Technology Test Bed[1]

In late November and early December 1981, Colonel Cerjan caused the formation of a Force Design Division within HTTB, consolidating four separate branches which had reported directly to him. Lieutenant Colonel Braun, who had been chief of one of the branches, headed the division. Force Design Division was subdivided as follows:

- Close Combat Branch, responsible for:
  - MP Company.
  - Scout Company.
  - Light Motorized Infantry Battalion.
  - Strike Battalion.
  - Quick Kill Battalion.
  - Mobile Protected Gun Battalion.
- Command, Control, Communications, and Intelligence Branch, responsible for:
  - Signal Battalion.

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[1]Cerjan Interview, 17 Feb 83.

- Military Intelligence Battalion.
- HHC, 9th Division.

- Combat Service Support Branch, responsible for the Division Support Command.

- Combat Support Branch, which had four subdivisions:
  - Air Defense Section.
  - Field Artillery Section.
  - Engineer Section.
  - Nuclear, Biological, and Chemical Section.

Later, the CBAA was added to the Close Combat Branch's responsibility.

Later in December, an informal meeting was held in Colonel Cerjan's quarters to discuss how to design the new HTLD. Major Wynn Richards, the Deputy Chief of Force Design Division, proposed the formation of work groups, each to meet for four or five days, and consisting of an HTTB Project Manager and representatives from TRADOC, the 9th, DARCOM, and any others that might contribute. Each work group was to be briefed by Concepts Group on the emerging concept, provided a copy of some of the early design efforts, and set the task of developing an operational concept and a unit structure. The groups would begin meeting on 4 January 1982, and conclude in early March, having designed some fifteen battalions, batteries, and companies.[2]

CAC formalized the requirement to do this design work in a message to the field on 22 December. After revision, the entire process was as follows:

- 9th Division and HTTB would identify requirements to the Unit Reference Sheet (URS) level of detail and submit them to CAC for review.

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[2](1) Historical Report, HTTB Force Design Division, 1 Oct 81 to 30 Sep 82. (2) Interview, author with LTC Wynn G. Richards, 22 May 84. (Hereinafter, Richards Interview, 22 Mar 84.) (3) Testerman Interview, 13 Oct 82. (4) Braun Interview, 30 Sep 82.

- CAC would review the URS and forward them to the proponent school for their staffing and development of Automated Unit Reference Sheets (AURS). In the case of Combat Service Support (CSS) and Division Support Command (DISCOM) units, they would all be funneled through the Logistics Center at Fort Lee.

- The proponent schools would develop and return the AURS to CAC for review, again with CSS and DISCOM units first being reviewed by the Logistics Center. In either case, the proponent school would provide the 9th an information copy of the AURS when it went forward.

- After CAC and the 9th had reviewed the AURS and resolved any differences, the AURS would be returned to the proponent school so that they could develop a Draft Plan TOE.

HTTB's Force Design Division was already at work on the force design meetings. On 23 December, it announced that the meeting on the Strike Battalion would be on 4-8 January; Quick Kill Battalion, 11-15 January; Mobile Protected Gun Battalion, 18-22 January; Motorized Battalion, 25-29 January; and the Military Intelligence Battalion, 5-8 January.[3]

As the maneuver battalions developed, the combat support and lastly, the combat service support units, could be better defined, so this was roughly the order in which they were developed. While it is difficult to reconstruct the total series of meetings that were held, the following is an outline:

DATE	ORGANIZATION
4-8 Jan 81	Strike Battalion
5-8 Jan 81	Combat Electronic Warfare Intelligence (CEWI) Battalion
11-15 Jan 81	Quick Kill Battalion

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[3](1) Msg, Cdr CAC to dist, 222057z Dec 81, sub: Documentation for HTLD/9ID Initiatives. (2) Msg, Cdr CAC to dist, 291534z Jan 82, sub: Documentation for HTLD/9ID Initiatives. (3) DF, HTTB to CofS 9th Inf Div, 7 Jan 82, sub: Biweekly Significant Actions Report, (23 December 1981 - 7 January 1982).

DATE	ORGANIZATION
18-22 Jan 81	Mobile Protected Gun Battalion
25-29 Jan 81	Motorized Battalion
26-28 Jan 81	Command and Control (HHC Brigade and HHC Division)
2-4 Feb 81	Nuclear, Biological and Chemical Company
2-5 Feb 81	Military Police Company
2-5 Feb 81	Division Scout Company
16-19 Feb 81	Fire Support Units
23-26 Feb 81	Infantry Division Communications (Signal Battalion)
22-25 Feb 81	Light Motorized Battalion (as a result of MG Elton's 5 Feb decision to combine the Strike and Motorized Battalions)
23-25 Feb 81	Engineer Battalion
22-26 Feb 81	DISCOM Forward Support Battalion
22-26 Feb 81	DISCOM Main Support Battalion
5-8 Apr 81	DISCOM AG Company, HHC DISCOM/Division Materiel Management Center, CBAA Support Battalion
5-6 Apr 81	Second CEWI Battalion Conference, Fort Huachuca, Arizona
3-7 May 81	DISCOM Follow-On Conference, Fort Lee, Virginia

In most instances, the battalions within the 9th that were to transition into new test battalions had already been identified and the battalion commander or his S-3 was a member of the work group. For example, the 3rd Battalion, 60th Infantry, had been designated as the battalion which would become the first Quick Kill Battalion. Its commander was a member of the work group that designed the battalion. In some instances, between the date of the work group and the actual transition, the unit would change. In the case of the Quick Kill Battalion, it was actually the 2nd Battalion, 1st Infantry, that transitioned first.

The stated objectives of the work groups included, but were not limited to: developing and refining organizational and operational concepts for the unit; developing or refining the unit organization, and developing alternative organizations; developing an evaluation concept; developing milestones to be followed in the transition, training, and evaluation of the unit; and developing critical decision issues that would have to be addressed.

On 5 February, General Elton was briefed on the outcome of the Strike Battalion and Motorized Infantry Battalion work groups. He decided that the two concepts should be combined into a Light Motorized Infantry Battalion. This resulted in the addition of another work group, 23-25 February, to combine the two. As a result, the 2nd Battalion, 1st Infantry, originally scheduled to become the first Strike Battalion, replaced the 3rd Battalion, 60th Infantry, as the unit scheduled to become the first Quick Kill Battalion.

At the conclusion of each work group, HTTB stated the requirements placed on the proponent school in a message. The schools used the products of the work groups to refine and develop, as a minimum, an evaluation plan, a formal draft organizational and operational plan, and Automated Unit Reference Sheets. They might also be tasked to make a literature search, prepare an Army Training and Evaluation Program, or other projects. Most of these taskings were to be back to HTTB by 1 April 1982.[4]

During the February-March time frame, HTTB and CAC were working on details of the test and evaluation process. HTTB published an HTTB Management Plan for Test and Evaluation on 15 February, and CAC published an HTLD Test and Evaluation Policy Statement on 17 March.

Also, the question had arisen as to whether the term "Quick Kill" was an appropriate title for an Army organization. The term "Fast Attack" was suggested, which ultimately became "Light Attack." The Quick Kill Battalion became the Light Attack Battalion. Also, by the time of the 3 March Alderbrook Conference, discussed below, the Mobile Protected Gun Battalion had become the Assault Gun Battalion.

Thus, by March 1982, the proposed four type maneuver battalions of the HTLD had been reduced to three, and they had assumed the names they

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[4](1) Packet, untitled and undated, containing Work Group Reports. (2) Msg, Cdr 9th Inf Div to Cdr CAC, 161800z Feb 82, sub: Consolidation of HTLD Motorized and Strike Battalion. (3) Msg, Cdr 9th Inf Div to Cdr CAC, 171900z Feb 82, sub: Requirements as Determined by the HTLD MP Company Work Group 2-5 Feb 82.

would carry as long as the division was to be known as the HTLD: The Light Attack Battalion, the Assault Gun Battalion, and the Light Motorized Battalion.[5]

The Alderbrook Conference

By the end of February, HTTB had the results of the great preponderance of the work groups. An organizational effectiveness conference was designed to involve, and get the guidance of, the senior leadership of the 9th. A three-day "lock-in" conference was held at the Alderbrook Inn, a resort on Puget Sound outside the village of Union, Washington, 3-5 March. Many efforts were brought into single focus at that conference. To quote General Elton: "...then came the Alderbrook Conference in March 1982 because we were told we had to have a division structured by April 1982. The purpose of the conference was to wrestle with what structure we should have that would fit within the 16,000-man/1,000-sortie limit...."

One of the items that was addressed at the conference was the HTLD operations concept. Colonel Blodgett opened the conference with a briefing on the concept: "...at Alderbrook there was a meeting of the minds between Colonel Boyce's How-to-Fight effort and the emerging O&O Concept. I briefed the O&O Concept with some minor changes in terms, and Colonel Boyce thought I was briefing his How-to-Fight concept...."

The Alderbrook Conference was a closed, and very select exercise. Attendees were the Division Commander, the Assistant Division Commanders, Chief of Staff, major subordinate (full colonel) level commanders, the Special Assistant to the ADC-O (Colonel Boyce), and selected HTTB members. Colonel Cerjan attended, as did Colonel Blodgett as Chief of Concepts and Colonel Braun as Chief of Force Design.

Major Richardson, now responsible for strategic air deployability within HTTB, was there with one of his captains and his computer terminal loaded with the Automated Air Load Planning System. As changes were made to unit designs by the conferees, they would be run through the computer, which would produce the number of aircraft, by type, needed to move the unit.

The 9th MI, Engineer, Signal, and Chemical Battalion commanders were invited to attend those sessions that dealt with their specific organizations only. Finally, two organizational effectiveness officers were there, as were two enlisted clerks.

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[5](1) Ltr, Cdr CAC to Cdr 9th Inf Div, 18 Mar 85, sub: HTTB Management Plan for Test and Evaluation, w/Incl. (2) Memo, HTTB Concepts to Chief HTTB, 17 Feb 82, sub: Renaming Quick Kill Battalion/Quick Kill Vehicle, etc. (3) Ltr, CofS 9th Inf Div to dist, 26 Feb 82, sub: HTLD 85 Structure Conference.

The agenda was left loosely structured. Each topic built on the one before it, starting with the maneuver battalions, moving through combat support, and ending with combat service support. Most questions had to do with the proper mix of units below battalion level.

General Elton summarized the result: "...we made the [16,000-man] personnel limit, but we did not make the [1,000] sortie limit. We got down to about 1,350. That was disappointing...."

During the remainder of March, efforts continued to "scrub" the HTLD design, reducing its sortie requirements. The intent was to have the HTLD design coordinated and ready to brief to General Meyer at the IPR scheduled for 29 April 1982.[6]

In the meantime, the force design effort had not been the sole activity of HTTB and the 9th. Work was continuing on the HTTB Test Management Plan; The Test Program continued to change and evolve, which kept funding in a turmoil; new organizations and equipment meant changed training, and new initiatives in training. The Test Bed expanded its depth of operations by accepting an Army Research Institute offer to assist in training research, and by asking CAC for analytical assistance in support of the Light Attack Battalion.[7]

Transitioning the Division

The Light Attack Battalion, being the most innovative of the concepts and units coming out of the HTLD design, was drawing a good deal of attention. The Infantry School was proponent for that battalion, and had gone into an accelerated doctrine development process to support it, at the cost of other programs. A refined draft organizational and operational concept had been developed by 9 February, subsequent to which a Doctrine Development Team of thirteen full-time staff members was set to work on a doctrine manual. Working closely with the 9th, the

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[6](1) Elton Interview, 29 Nov 82. (2) Blodgett Interview, 10 Apr 84. (3) Richardson Interview, 4 May 84. (4) Ltr, CofS 9th Inf Div to dist, 26 Feb 82, sub: HTLD 85 Structure Conference.

[7](1) DF, HTTB Test Div to dist, 27 Apr 82, sub: HTTB Test Management Plan. (2) Msg, Cdr CAC to Cdr 9th Inf Div, 231656z Mar 82, sub: Transport Pooling Test. (3) Msg, Cdr CAC to dist, 131705z Jan 82, sub: Training Development Initiatives for 9th ID. (4) Ltr, Cdr ARI to Cdr 9th Inf Div, 8 Feb 82, sub: US Army Research Institute Training Research Support High Technology Test Bed (HTTB). (5) Ltr, Chief HTTB to CAC, 10 Mar 82, sub: Request for Analytical Assistance in Development and Evaluation of the Light Attack Battalion.

school produced a comprehensive draft manual to be used in training and fighting the battalion.[8]

The 9th conducted a Computer-Assisted Map Maneuver Simulation, Caliber Lightening, on 15-18 February. This was a four-day, twenty-four-hour-per-day CPX that included a number of HTTB tests, most associated with the dispersed command post, intelligence, and command control procedures. Planning was underway for two scheduled field exercises to be held at Yakima Firing Center, Golden Bow on 20-23 April and Golden Blade on 10-15 May. Both were division exercises which would contain major HTTB tests.[9]

Work on transitioning the division continued. One concept that had been underway for some time was that of the Forward Support Battalion. Under this concept, instead of having a Division Support Command with a maintenance battalion, a supply and transportation battalion, finance units, AG units, etc., all of these functions would be combined within one battalion, and that battalion would support a single maneuver brigade. This concept had its roots in the Heavy Division 86, starting in 1978. Now it was about to become reality in the 9th, and work was underway to properly house and equip it. The Third Brigade would be the basic test unit within the 9th, so the 3rd Forward Support Battalion (Provisional) was activated at Fort Lewis on 5 April 1982.

HTTB and the 9th were developing various proposals on which units within the 9th should convert to which type of maneuver battalion. The emerging HTLD design, as it came out of the Alderbrook Conference, consisted of nine maneuver battalions, (excluding the CBAA): five Light Motorized Infantry Battalions, two Assault Gun Battalions, and two Light Attack Battalions. Which infantry battalions should become which? How should they be mixed within the three brigades?

Already organized and in training and testing were the Division Scout Company and one Brigade Engineer Company. A Forward Support Battalion was to activate provisionally on 5 April, as noted above. The CBAA units were already scheduled. As of the close of March, the Test Bed was trying to outguess the supply system and say when other units

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[8](1) Msg, Cmdt Inf Sch to Cdr CAC, 081230Z Mar 82, sub: Quick Kill Battalion (QKB) Doctrine Development. (2) Draft Manual, Apr 82, sub: High Technology Test Bed Operations Manual for Light Attack Battalion.

[9](1) Draft Ltr, CofS 9th Inf Div to dist, n.d., sub: CPX CALIBER LIGHTNING Letter of Instruction. (2) Draft Ltr, CofS 9th Inf Div to dist, n.d., Initial Planning Guidance, FTX Golden Bow - FTX Golden Blade.

could activate based on the arrival of equipment. It is interesting that at about this time, Colonel Cerjan's note paper appeared with a new letterhead. It included the stylized arrowhead that had become the emblem of the HTLD and the "Strike Deep" motto.[10]

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[10](1) Ltr, Cdr 9th Inf Div to G4 9th Inf Div, 5 Feb 82, sub: Forward Support Battalion. (2) Perm Orders 63-6, HQ I Corps and Ft Lewis, 5 Apr 82. (3) Memo, HTTB Concepts to Chief HTTB, 25 Mar 82, sub: Maneuver Battalions Designation. (4) Paper, no addressee, n.d., sub: Provisional Organization, w/Atch.

CHAPTER 16

SELLING THE DESIGN, APRIL 1982

> We went to the briefing of the Chief of Staff on 29 April 82 and laid out the division we envisioned and the rationale for the forces. We gave him our concept of operation and asked for his approval of that concept and his approval to plan, program, evaluate, and transition to the new force structure. He gave us that approval.
>
> MG Robert M. Elton
> Commander
> 9th Infantry Division[1]

As March faded into April 1982, and the people in HTTB and the 9th felt they had the operational concept and the division design about as they wanted it, plans were evolved to "sell" the package to the MACOMs. The objective was "...to bring all the key players on board prior to presenting it to the CSA on 29 April...."

A series of briefings by General Elton was scheduled. On 7 April, he would present the concept/force structure package to General Stone. He was also to present it to the TRADOC and DARCOM Commanders at an already scheduled 14 April update. An effort was to be made to have the FORSCOM Commander attend that briefing. There was also discussion of having Elton present the briefing to a meeting of affected two-stars from all the MACOMs. Finally, there was the IPR for General Meyer on 29 April. Not all went as planned.

CAC invited the TRADOC Centers and Schools to attend the 7 April briefing for General Stone. At the extensive briefing, General Elton stated that the design parameters that had been set for the HTLD were 1,000 C141B sorties, 15,000 men, and structured to have a "first in" capability and to operate as part of a corps or joint task force. The actual force structure was a 5-2-2 mix of Light Motorized Battalions, Light Attack Battalions, and Assault Gun Battalions totaling 15,977 personnel and 1,347 sorties.

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[1]Elton Interview, 29 Nov 82.

Few, if any, of the proponent Centers and Schools attended the briefing, presumably because the message announcing it gave them only one days notice. As a result, they were sent copies of General Elton's briefing slides, but they did not hear the briefing. Based on the slides, the proponents surfaced a number of concerns, such as the size of rifle squads and the number of attack helicopter companies in the attack helicopter battalion of the CBAA. These were not, however, deemed enough to cause the briefing to General Meyer to be changed.[2]

The 14 April briefing for the TRADOC and DARCOM commanders did not take place, but General Elton did get to brief General Glenn K. Otis, the TRADOC Commander, on 15 April. To quote Colonel Braun: "...we had a big conference where TRADOC presented its views, and we presented our views. General Otis was the TRADOC Commander, and he made some determinations. Most of them went in General Elton's favor, because MG Elton was tasked to do this. When General Otis' people raised objections, he said, 'Let's let them try it and see if it works....'" General Otis accepted the operational concept and concurred with the proposal to transition one each of the type maneuver battalions. Most of the rest of the discussion dealt with type and availability of equipment.

One point of philosophy was agreed upon, however. General Elton asked General Otis to review his perception of what HTTB's charter was, and what Otis' thoughts were on how HTTB should approach testing. Otis stated that he envisioned three levels of testing. First, if testing was appropriate, were there any previous test results that would preclude retesting. Second, innovative testing which could result in a qualitative judgment. Lastly, formal testing resulting in quantitative and qualitative data. For both innovative and formal testing, predetermined measures of effectiveness should be used. This response pleased General Elton, for it agreed precisely with his views.

The proposed two-star level briefing did not materialize prior to the IPR for General Meyer, but the I Corps and FORSCOM Commanders were briefed. There was a final update presented by the CAC staff to General Stone on 27 April. At that brief, a parallel project, which had involved a great deal of HTTB effort since early April, was presented to General Stone.

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[2](1) Memo, Chief HTTB FDD to Chief HTTB, 17 Mar 82, sub: Report on HTLD March Update to LTG Stone. (2) Briefing Slides, HTLD, 7 Apr 82. (3) Memo, Dep Chief HTTB FDD to Record, 3 May 82, sub: Trip Report, Fort Leavenworth, KS, 2 Apr 82, w/Incl. (4) Msg, Cdr CAC to dist, 052038z Apr 82, sub: Emerging High Technology Light Division (HTLD) Force Structure Briefing.

On 6 April, DA had tasked CAC to develop an affordability analysis of the HTLD. This had resulted in an intense effort on the part of CAC, DARCOM, and HTTB to develop priority lists for equipment, cost data, and estimated delivery dates for equipment to outfit the new division. The goal was to have something to present to General Meyer at the IPR, to rapidly incorporate any resulting guidance, and have a slate of FY 82 and 83 fund reprogramming decisions ready for Meyer by 7 May. As already pointed out, the lengthy funding cycle was a continuing headache for an organization as dynamic as the Test Bed.

Approval at DA: The 29 April 1982 IPR

Again, however, CAC's comments on the concept and organization were not strong enough to cause General Elton to change the proposed briefing to General Meyer. Major Richardson described General Elton's attitude towards the briefing thus: "...General Elton was generally a cool, relaxed character, but he was nervous on the trip to the 29 April 82 IPR, and I think he looked at it as a crucial briefing. I think it was his first chance to show the Chief that 'you gave me the mission, and I accomplished it and here's the proof....'"[3]

At the IPR, General Elton briefed the concept and organization, Colonel Cerjan briefed current Test Bed programs, and then Elton closed with a chart of recommendations. These were:

- Approve the operational concept/structure for planning, programming, evaluation and transition.
- Authorize the provisional reorganization of three current 9ID battalions into Assault Gun, Light Attack, and Light Motorized Battalions commencing 1 Jul 82.
- Authorize the provisional organization of a deception detachment in 9ID, commencing 1 Jul 82.
- Authorize the provisional reorganization of the current DISCOM into three Forward Support

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[3](1) Braun Interview, 30 Sep 82. (2) Msg, Cdr 9th Inf Div to Cdr CAC, 190330z Apr 82, sub: Emerging Concept and Structure of HTLD 85. (3) Memo, Dep Chief HTTB FDD to Record, 3 May 82, sub: Trip Report, Fort Leavenworth, KS, 27 Apr 82, w/Incl. (4) Richardson Interview, 4 May 84.

Battalions, a CBAA Support Battalion, and a Main Support Battalion, commencing 1 Sep 82.

- Authorize lease of surrogate equipment for the three maneuver battalions and DISCOM.

- Authorize the integration of New Thrust resources into the HTLD Program.

At that point, General Meyer turned to Colonel Cerjan and asked "...do we have the money to support the surrogate leasing...?" Cerjan responded "Yes," whereupon Meyer approved the whole package.

Colonel Cerjan later viewed that approval as crucial. "...that sent one tremendous shudder of signals throughout the United States Army, particularly at DA staff level. It is at that time they started to realize that the Chief was serious about this. For the first time, I might add--for the first time. Up until that point, I got the feeling that people thought they would wait the Chief out...."

Finally, the briefing was completed when Major General Louis C. Menetrey, the DA DCSOPS Director of Requirements, briefed the results of HTTB/CAC's efforts on resourcing and reprogramming funds for the new division. This portion of the briefing resulted in the following recommendations being approved:

- The design for planning and reprogramming in support of the provisional organizations and surrogate equipment.

- TRADOC would conduct a combat and cost effectiveness analysis of the HTLD by 3 August, for presentation at the tentatively-scheduled 6 August IPR.

- The DA Engineer was to determine the physical facilities impact of the HTLD and its impact on Major Construction, Army, funds by the 6 August IPR.

- The resourcing schedule milestones were approved.

Of particular importance was the second of these, wherein TRADOC was to take a more detailed look at the HTLD, an "analysis."

As a follow-on to this briefing, General Menetrey established an eight-person HTTB coordination division within the Requirements Directorate. Prior to this, DA had handled HTTB matters on a part-time basis.[4]

Throughout all these high-level activities, HTTB and the 9th still had their day-to-day work to do. It may be recalled from the last chapter that planning had begun in mid-December 1981 on two related FTXs to be held at Yakima Firing Center. The first of these, Golden Bow, took place 20-23 April and the second, Golden Blade, was 10-14 May. Golden Blade was a direct successor to Golden Bow, and the two to a large extent were viewed as interdependent.

The first FTX consisted of four formal test-pretest activities: CBAA testing; pilot data collection on three tests, the MI Battalion (an ID 86 organization formally organized earlier in April); the dispersed command post; and infantry division communications. There were six innovative tests: the two-company anti-armor concept, the Position Locating Reporting System, soldiers' needs, NBC, the Optical Electronic Long Range Observation Device, and the 120mm heavy mortar.

The second exercise, Golden Blade, continued the tests started in Golden Bow with two added formal tests, the infantry maneuver concept and the air defense gun/stinger battery test. There were four additional innovative tests: the HTLD MP Company, the Forward Support Battalion, a defense demonstration, and tactical employment of the Light Attack Vehicle.

These formal FTXs were followed by two other activities. The CBAA conducted a live-fire exercise on 15-16 May, and the transport pooling concept was tested on 16-17 May.

Of interest is the activity surrounding the infantry division communications test by its proponent TRADOC board, as an example of how that interface worked.

The U.S. Army Communications-Electronics Board was the proponent for this test. In preparing for the test, it had prepared a Test Design Plan, coordinated it with the Signal Center, and gotten it approved. It was then briefed to the Command, Control, Communications, and Intelligence (C^3I) Branch of the Force Design Division, HTTB.

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[4](1) Memo, Chief HTTB to Record, 30 Apr 82, sub: Chief of Staff Army Briefing, 29 Apr 82. (2) Briefing, CSA IPR, 29 Apr 82. (3) Cerjan Interview, 17 Feb 83. (4) Memo, DA DCSOPS Dir of Req to Record, sub: 9ID High Technology Test Bed (HTTB) IPR for CSA - 29 April 1982, w/Incl.

The pilot data collection test was conducted during FTX Golden Bow, and coordination was made with the 9th Division's Signal Battalion commander for the Golden Blade test. The Detailed Test Plan, listing those specific items of equipment and operational concepts that were available for test, was briefed to Colonel Cerjan and approved by him.

Coordination was also done with representatives of TCATA on the communications aspects of the dispersed command post, which would obviously impact on the signal battalion, which was a Communications-Electronics Board responsibility. Final requirements for data collection were defined, and the responsibilities for utilizing and controlling data collector personnel were delineated. Finally, the test was conducted. It almost leaves one wondering what was left for HTTB to do.[5]

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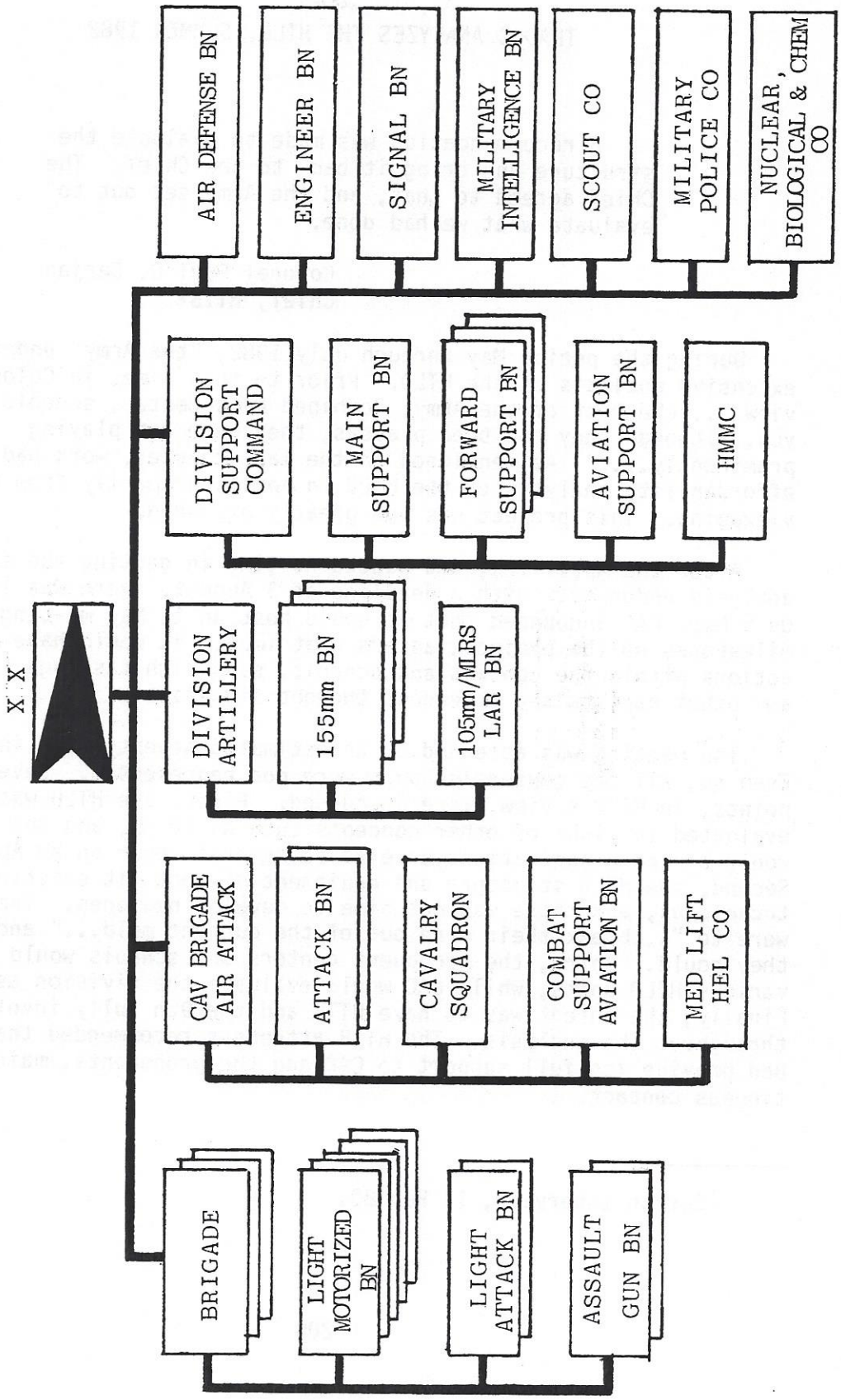
[5](1) Msg, Cdr I Corps to Cdrs DARCOM, TRADOC, and CAC, 011520z Apr 82, sub: HTTB Test (Apr/May 82). (2) Ltr, Pres USACEBD to Cdr TRADOC, 5 May 82, sub: USACEBD Monthly Significant Actions Report (April 1982). (3) Ltr, G3 9th Inf Div to Cdr I Corps, n.d., sub: Change to TOE 34-299T, w/Ind.

Chart 8

THE HIGH TECHNOLOGY LIGHT DIVISION

Summer 1982



CHAPTER 17

TRADOC ANALYZES THE HTLD, SUMMER 1982

> A recommendation was made to evaluate the structure and bring it back to the Chief. The Chief agreed to that, and the Army set out to evaluate what we had done.
>
> Colonel Paul G. Cerjan
> Chief, HTTB[1]

During the period May through July 1982, "the Army" undertook an extensive analysis of the HTLD. Prior to this time, in Colonel Cerjan's view "...the rest of the Army, Combined Arms Center, schools, what have you, although they had been players, they were not playing prominently...." As mentioned in the last chapter, work had begun on an affordability analysis of the HTLD in April, primarily from the funding viewpoint. This project was now greatly expanded.

After the April IPR, CAC wasted no time in getting the expanded analysis underway. With a deadline of 3 August, there was little time. On 5 May, CAC announced that it would host an 11 May meeting to set some milestones on the project, assess what impact it would have on ongoing actions within the centers and schools, establish taskings, and explore any other aspects the attendees thought significant.

The meeting was attended by an estimated seventy-five individuals. Even so, all the centers/schools were not represented. Several key points, in HTTB's view, were discussed. First, the HTLD was not to be evaluated in light of other concepts such as ID 86, and the baseline would be the organizations briefed to General Meyer on 29 April. Second, the HTLD structure and equipment did not fit existing models and techniques, and there was not time to develop new ones. The proponents were to "...break their mind out of the current mold..." and do the best they could. Third, the proponent centers and schools would analyze the various HTLD units, while CAC would evaluate the division as a whole. Finally, the intent was to have HTTB and the 9th fully involved throughout the analysis. The HTTB attendees recommended that the Test Bed provide its full support to CAC and the proponents, maintaining continuous contact.

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[1]Cerjan Interview, 17 Feb 83.

General Stone threw his personal weight behind the effort in a message to the school and center commanders on 13 May. He stated "...I see our charge as evaluating the HTLD structure against the approved operational and organizational concept and assisting Bob Elton in improving the HTLD as necessary...."[2]

As might be imagined, all of the above resulted in a flurry of activity. The Logistics Center issued more detailed guidance to its logistics schools; the Infantry School announced its intended procedure; CAC published a list of items of equipment that were not likely to be available to the HTLD by 1985, so those shortages could be considered; the Field Artillery School published its analysis by message on 28 May, complaining about the lift constraints and recommending alternative organizations.[3]

CAC issued a steady stream of directives and proposals. The HTLD was to be evaluated in Middle East, NATO, jungle, and urban scenarios; consideration would be given to decrements in capability caused by the use of surrogate equipment; the Logistics Center would determine and disseminate the best logistics planning factors. Additional analyses were assigned: The Logistics Center would do a Supportability Analysis, the Signal Center a Division Communications Analysis, the Soldier Support Center a Personnel Supportability Analysis, and the Aviation Center would study the impacts of the HTLD Aviation Program. The formal milestones were published:

1 June	Comments to CAC.
15 June	Analysis to CAC.
23 June	General Officer Workshop to review suggested modifications.

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[2](1) Cerjan Interview, 17 Feb 83. (2) Msg, Cdr CAC to dist, 052111z May 82, sub: TRADOC Analysis of HTLD. (3) Memo, Dep Chief HTTB FDD to Record, 12 May 82, sub: Trip Report, Fort Leavenworth, Kansas, 11 May 82. (4) Msg, Cdr CAC to dist, 131500z May 82, sub: HTLD IPR for CSA, 29 April 82.

[3](1) Msg, Cdr USALOGC to dist, 131910z May 82, sub: TRADOC Analysis of the HTLD. (2) Msg, Cmdt INFSCH to dist, 181600z May 82, sub: USAIS Analysis of HTLD. (3) Msg, Cdr CAC to dist, 241409z May 82, sub: Analysis of HTLD. (4) Msg, Cmdt FASCH to Cdr CAC, 282100z May 82, sub: Analysis of HTLD DIVARTY Organization.

23 June - 22 July	Analyze suggested modifications.
22 July	General Officer Workshop to approve recommended modifications.
6 August	CSA IPR.

Selling the O&O Plan

General Stone was adamant on one point; he wanted to ensure that the Organizational and Operational Concept was understood by all. HTTB sent its various Program Managers to the centers and schools to brief the concepts of their particular units. The goal was to ensure that issues would focus on design deficiencies rather than differences of opinion on how the units were to be used.

The Logistics Center was deeply involved in the development of Combat Service Support for the HTLD. They brought together the Quartermaster, Ordnance, Missile Maintenance, Health Service and Transportation Schools and Centers, along with CAC and the Test Bed in a three-day working meeting beginning on 25 May. Two key points emerged from this meeting: The equipment requirements for the HTLD would have to be positively identified before adequate support units could be designed, and subjective manpower ceilings on the HTLD Division Support Command would equate to ceilings on combat and combat support units if a balanced force was to result. In other words, if you have X number of trucks, it takes Y number of mechanics to maintain them. If the number of mechanics is limited, then the number of trucks must be also. This was to be a continuing theme.[4]

Among the many lesser meetings between the 9th, CAC, and the various centers and schools, two major ones were scheduled. The first, on 25 June, was a two-star level General Officer Workshop hosted by CAC. It resulted in the second, an Action Officer Workshop, being held on 22 July.

The 25 June meeting agenda allowed each of the key centers and schools, and CAC itself, to present the results of their analysis. The result was an extensive list of taskings. It was clear that the design of the HTLD was far from settled. Some very basic questions were still

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[4](1) Msg, Cdr CAC to dist, 181818z May 82, sub: Analysis of HTLD. (2) Msg, Cdr CAC to dist, 272315z May 82, sub: HTLD Analysis. (3) Msg, Cdr LOGCEN to dist, 131910z May 82, sub: TRADOC Analysis of the HTLD. (4) Msg, Cdr LOGCEN to dist, 111515z Jun 83, sub: TRADOC Analysis of the HTLD - Supportability.

being asked: Should the Aviation Maintenance Battalion be in the CBAA or in DISCOM? Where should the medium lift helicopter support be, in the division or at corps? Could the HTLD's combat service support structure support its requirements?

One major concern that had arisen was the question of "foxhole" strength. As proposed, the HTLD had weak infantry dismounted strength. This led to the question of how many squads should be in the Light Motorized Infantry Battalion platoons, and whether those squads should consist of seven, nine, or even ten men. Would the larger squads fit on their carrier? More carriers would require more support structure. Some questions could be resolved by testing. Others, like the location of the helicopter battalion, required a decision rather than testing, at least initially.

One obvious trend was for the organizations to grow. In a message to the centers and schools on 2 July, General Elton asked for their assistance in many ways, but he universally asked them to propose alternative structures reduced in strength by ten percent and by twenty percent. He also asked that the alternative reduced structures be subjected to a risk assessment.

Elton viewed the 22 July workshop as an opportunity for the Test Bed to rebut those proposals they felt unwise. However, by the time the workshop took place, most issues had been resolved or at least were being worked. To quote Colonel Cerjan: "...we went out and tracked all the mini-evaluations they were doing and beat them back one by one so that when we went to the August Chief of Staff IPR, there were very, very, few issues of contention to be brought to the Chief. In most cases, the agencies agreed the issues, one, were not there, or or two, they could not show that we could do it a better way, or three, could be resolved as test issues...."[5]

The normal level of activity continued in the other areas of the Test Bed. QRPs were being developed. The normal high flow of visitors continued. The long-delayed Volume II of the How-to-Fight series was published, and preliminary work on the European and Korean volumes began. Also, serious work began on a joint AUSA/HTTB/HTLD seminar to be held in the fall as a part of the effort to interface with industry.

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[5](1) Msg, Cdr CAC to dist, 271600z May 82, sub: Analysis of HTLD. (2) Msg, Cdr CAC to dist, 022135z Jun 82, sub: 25 Jun 82 TRADOC HTLD IPR Results. (3) Msg, Cdr 9th Inf Div to dist, 022315z Jul 82, sub: HTLD Issues. (4) Memo, CofS 9th Inf Div to Record, 1 Jul 82, sub: Guidance Session with General Elton on Sunday, 27 June 1982. (5) Cerjan Interview, 17 Feb 83.

Work continued on the FY 83 program. Final test documents were developed on the tests completed in the April-May FTXs (company mortars, Anti-Armor Company, MI Battalion, and units of the CBAA). Some of these topics are covered in detail in other chapters of this volume.

After the 29 April IPR, some shifts in emphasis and organization took place within HTTB. To quote newly promoted Lieutenant Colonel Richardson: "...transition really began to cook because we had the structure on the street. Strategic deployability had become routine.... [so] I shifted hats again.... We had to start right away or we would never make 85...." He reverted back to Chief of Transition.

Action was rapid after the 29 April IPR. On 6 May, a request went to CAC for surrogate vehicles to support Light Attack Battalion and Motorized Infantry Battalion evaluations.

It may be recalled that one of the results of the unit design work groups held in January and February was to be a Unit Reference Sheet. According to the documentation procedures developed by CAC, this Unit Reference Sheet was then to go to the proponent centers and schools, who would use it to develop Automated Unit Reference Sheets (AURS). The AURS were then used to develop TOEs and also were loaded into the Army's data base. In order for the Army to procure personnel and equipment, the AURS had to be in the data base. In order for a unit to requisition personnel and equipment, it had to have a TOE of some type. Therein lay a problem. ID 86 was in the Army data base.

In March, CAC had urged its proponents to hurry the development of the new AURS in order to get them into the data base prior to the cutoff date of 31 May. If unable to meet that deadline, the next cutoff was in October, and that would have to be met. In the meantime, the Army process would be procuring personnel and equipment for ID 86 units instead of HTLD units. CAC urged the centers and schools to hurry even at the expense of less-than-perfect AURS.

To add to the problem, after the April IPR, the proponents began to advocate all sorts of "fixes" to the units as a result of their analyses, as described above. Thus, a Management of Change process that normally took several years was being compressed in to several months, at the same time the unit structures were still in flux.[6]

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[6](1) Richardson Interview, 4 May 84. (2) Msg, Cdr 9th Inf Div to Cdr CAC, 211530z Apr 82, sub: Surrogate Vehicles for Light Motorized Bn and Light Attack Bn Operational Evaluations. (3) Msg, Cdr CAC to dist, 172213z Mar 82, sub: Documentation for HTLD Initiatives.

HTLD and 9ID(MTZ)

Internally, the 9th formed four unit transition committees, one each for the Light Attack, Forward Support, Assault Gun and Motorized Battalions. Each committee had a reprsentative from the primary staff sections, the concerned major subordinate command, HTTB, and was chaired by the division's Force Modernization Office. Work began on facilities planning for each battalion. Standardized engineer formulas were used to determine such things as a Light Attack Battalion's need for so many square feet of administrative, barracks, dining facility, classroom, motor pool, and even parking space.

The results of the HTLD affordability analysis, which had begun in early April, were presented to General Meyer on 24 May. He approved a great majority of the proposed FY 82-FY 83 reprogramming actions, and the FY 84-88 programs.[7]

At the April IPR, General Meyer had approved the provisional transition of three of the 9th's existing infantry battalions into three type HTLD battalions on 1 July, and the DISCOM transition into support battalion configuration on 1 September. The 9th intended to do this in the following manner:

- 1st Brigade's 2nd Battalion, 1st Infantry, would transition into a Light Attack Battalion, consisting of:
  - Battalion Headquarters.
  - Headquarters and Headquarters Company.
  - Three Light Attack Companies.
  - Combat Support Company.
- 2nd Brigade's 2nd Battalion, 60th Infantry (Mechanized), would transition into an Assault Gun Battalion consisting of:
  - Battalion Headquarters.
  - Headquarters and Headquarters Company.

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[7](1) DF, Cdr 9th Inf Div to dist, 21 May 82, sub: HTLD Unit Transition Committee(s). (2) Facilities Planning Worksheet, Lt Attack Bn, 25 May 82. (3) Briefing, HTLD Funding, 24 May 82. (4) Memo, HTTB XO to Record, 27 May 82, sub: CAC Conference Call, 27 May 1982.

- Three Assault Gun Companies.

- 3rd Brigade's 3rd Battalion, 47th Infantry, would transition into a Light Motorized Battalion, consisting of:
  - Battalion Headquarters.
  - Headquarters and Headquarters Company.
  - Three Motorized Companies.
  - Anti-Armor Company.
- 3rd Brigade would also transition its Brigade Headquarters.
- The 9th Division Support Command would transition as follows:
  - DISCOM Headquarters.
  - Headquarters and Materiel Management Company.
  - Main Support Battalion.
  - CBAA Support Battalion.
  - Three Forward Support Battalions.
  - AG and Chemical Companies would be retained.
  - Finance Company would be temporarily retained.

Each of the three Brigade Commanders was responsible for training his transitional units to the point that they could pass the Army Training and Evaluation Program tests by March of 1983, at which time they would come under the operational control of the 3rd Brigade. This High Technology Light Brigade (HTLB), along with a brigade support "slice" of DISCOM, artillery, aviation, etc., would be the test vehicle for the HTLD. This would allow the balance of the 9th to function as an opposing force, controllers, escorts, and test data collectors. Highlights of the test schedule were to be an HTLB Readiness Exercise/ FTX at Yakima Firing Center in the spring of 1983, and a major FTX at

the National Training Center, Fort Irwin, California, in the fall of 1983. The latter was to validate the concepts and organization of the HTLB, to be its "graduation exercise." Other units of the division were to be converted as their organizational and operational concepts were validated and equipment became available.

In reality, much had been done ahead of schedule. For example, DISCOM had formed the 3rd Forward Support Battalion, in support of the to-be-formed 3rd Brigade, on 2 April.

At the end of June, a great deal of effort was devoted to transition. General Elton was briefed by his Brigade and DISCOM commanders on their progress and problems.[8]

This was followed by a meeting of the 9th Division Command Group, Colonel Cerjan, and the division's Organizational Effectiveness officers. The result was the formation of two new committees. A Steering Committee consisting of the Commander, ADCs, Chief of Staff, and Chief HTTB would develop a master transition strategy and guide the Core Committee. The Core Committee consisted of the ADCs, Chief of Staff, Chief HTTB, major subordinate commanders, separate battalion commanders, principal staff, and the ACofS Force Modernization, henceforth to be called the ACofS, Transition. This committee was to oversee the implementation of the transition strategy.

The new ACofS Transition was to establish a transition "war room." This war room was to serve as an information clearing house, operations center, and interface point between HTTB and the 9th.

By 9 July, when the Core Committee first met, a draft transition regulation had been written. A flow chart had also been drafted which traced the chain of responsibility for each of the steps required to accomplish transition.

The committee, now called the Transition Review Committee, met again on 20 July. Final review of the 9th Division Regulation 71-1, Transition, took place. Two new committee members, an I Corps representative and the Chief of the DARCOM MSA, were recognized. A number of issues were addressed such as cross-leveling equipment and personnel in the division as units transitioned, expanded, or contracted space and

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[8](1) Paper, no address, n.d., sub: The HTLD Concept and Breakdown of Units is as Follows. (Facsimile Transmittal Header Sheet attached, dated 8 Jun 82.) (2) Memo, CofS 9th Inf Div to Record, 29 Jun 82, sub: Transition Assumptions, Plans, and Issues for the Immediate Future.

facility requirements, etc. Problems surrounding the need to requisition personnel and equipment were addressed.[9]

This latter was a major headache. The 9th was asking for a number of things that did not exist in the Army system. What was the line item number and the stock number of a surrogate Fast Attack Vehicle, for example? What was the MOS for a FAV driver? Of a Mark 19 gunner?

HTTB was attempting to solve this problem, without much success. On 9 July, they asked CAC to authorize the 9th to requisition personnel and equipment off of AURS once they had been approved by TRADOC. In this way, the AURS would serve as an interim authorization document pending development and approval of TOEs.

Lieutenant Colonel Richardson, as Chief of HTTB's Transition Division, made a coordination visit to FORSCOM and DA in late July. After a thorough discussion of the AURS versus TOE problem at both levels, he became convinced that AURS would not meet the need. The AURS was developed into a Draft Plan TOE by TRADOC, then into a TOE at DA level. This, in turn, was balanced against Army-wide requirements, producing a Modified Table of Organization and Equipment, or MTOE. This MTOE, then, was the unit's authorization document for requisitioning. Richardson recognized a valid reason behind each of the steps in the URS-AURS-Draft Plan TOE-TOE-MTOE process, and conceded the need for HTLD units to go through it. "...I believe, however, that movement through these steps can be expedited and that this should be our goal. We may create more confusion in the community and problems for ourselves if we try to skip any hurdles...."

As of 30 July, transition had begun on eight battalions of the 9th: Assault Gun, Light Attack, Light Motorized, Target Acquisition, Main Support, Aviation Support, and two Forward Support Battalions. The Third Forward Support Battalion had already transitioned.[10]

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[9](1) Memo, CofS 9th Inf Div to Record, 29 Jun 82, sub: High Techology Light Division Transition. (2) DF, Chief HTTB to dist, 13 Jul 82, sub: HTLD Transition Management. (3) Memo, Sec TRC to dist, 23 Jul 82, sub: Minutes of Transition Review Committee Meeting, 20 July 1982.

[10](1) Msg, Cdr 9th Inf Div to Cdr CAC, 092330z Jul 82, sub: Resourcing the High Tech Light Div (HTLD). (2) Memo, Chief HTTB Transition Div to Chief HTTB, 27 Jul 82, sub: Coordination Visit to FORSCOM and DA. (3) Ltr, Cdr 9th Inf Div to Cdr FORSCOM, 30 Jul 83, sub: 9th Infantry Division Transition to HTLD.

CHAPTER 18

LOADING THE TOEs, FALL 1982

> When we went back to the Chief of Staff in August, CAC presented their evaluation and HTTB presented appropriate rebuttals. The Chief approved the whole thing again and said "I want to know how we can transition in 30 days." All of a sudden the Army could not believe what he had said, because now he was saying put it on the ground, and put it in TOE fashion.
>
> Colonel Paul G. Cerjan
> Chief, HTTB[1]

The High Technology Light Division, as presented to General Meyer on 5 August 1982, had grown to 17,742 men and 1,356 C-141 sorties. Several methods of acquiring future reductions were put forward. Starting dates of the 9th's transition to provisional organizations were shown as follows:

- Light Attack Battalion, 9 Aug 82.
- Light Motorized Infantry Battalion, 16 Aug 82.
- Assault Gun Battalion, 20 Jul 82.
- DISCOM:
  - Third Forward Support Battalion, 2 Apr 82.
  - Main Support Battalion, 27 Aug 82.
  - First and Second Support Battalions, 27 Aug 82.
  - CBAA Support Battalion, 27 Aug 82.

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[1]Cerjan Interview, 17 Feb 83.

- DISCOM Headquarters/Material Management Center, 1 Apr 82.
- Division Scout Company, 19 Feb 82.
- Deception Detachment, 1 Sep 82.

The big goal in the future was the testing of a brigade "slice," 3d Brigade with a slice of the Division support units, at the National Training Center (NTC) in October 1983.

One area that was a disappointment to General Meyer was the result of the transportation pooling test. The concept of centralizing transportation in a transportation company for each brigade had been tested during the May exercises at Yakima, and found not to be effective. Two years later when the author asked General Meyer how the 9th Division differed from what he had envisioned, he responded:

> I had hoped the Division would be lighter.... I guess the area that I was not able to overcome was the problem of every guy having some form of mobility of his own.... That was the biggest debate I had with TRADOC and with the Commander in 9th Division, the issue of how much organic transportation the unit needed, as opposed to pooling or as opposed to other sources. I guess that is the principal area that I was disappointed in....[2]

General Elton closed the IPR with two areas that would impact on the 1985 fielding date: funding and the AURS/MTOE process. General Meyer gave a number of bits of guidance during and after the briefing, such as look at converting a Reserve Component division to an HTLD, keep trying to make it lighter, how much anti-armor is enough, etc. His directive to DCSOPS, however, to provide within thirty days a method of solving the AURS force structure, was viewed as crucial by the Test Bed. This was a large shift from the previous provisional reorganization. A meeting was set for 16 August at DA to discuss the issue.

The formal announcement of the August meeting went out the day after the IPR. It stated as a fact that the AURS would be finalized and entered into the TOE Master File by 30 September. The meeting on the sixteenth was to determine how to speed up the AURS-TOE-MTOE process to

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[2](1) CSA IPR, 5 Aug 82. (2) Meyer Interview, 13 Jun 84.

meet that deadline. On 9 August General Elton told the members of his Transition Review Committee that it was the 9th's job, along with proponent centers and schools, to make sure that what was fed to the system was "something smart." CAC proposed freezing the AURS where they stood, but the 9th recommended that not be done until after the 16 August meeting.[3]

Colonel Richardson recalled the meeting:

> ...we went to DA in August of 1982 for a big work group convened by DCSOPS to load the TOEs. In the beginning we were going to load just those units that had to be provisionally reorganized to go to a big testing exercise at the National Training Center (NTC) in 1983. We were looking at loading 3d Brigade and their supporting slice. That was the initial cut, get those in the system to build MTOEs for those "NTC bound" units and they would be aligned and organized the way they were supposed to be and would be reported that way. It just made the whole bookkeeping process easier. The thought was that sometime after NTC that there would be others....

As a result of the 16 August meeting, it was agreed that by 16 March 1983, five units would be reorganized in the HTLD configuration. They were: 3-47th Infantry, Light Motorized Battalion; 2-1st Infantry, Light Attack Battalion; 2-60th Infantry, Assault Gun Battalion; 3-5th Cavalry Squadron; and 3d Brigade HHC. Two "new" units, although already in existence provisionally, would be activated: the 3d Forward Support Battalion and the 9th Infantry Division Scout Company. The steps in the procedure would be:

- 9th Division would "freeze" the AURS as of 19 August, and forward them to TRADOC.
- TRADOC would develop T-TOEs [Test TOEs] from the AURS, and have them to FORSCOM by 1 September, with information copies to DA and DARCOM.

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[3](1) Memo, Ch DA HTTD to Record, 9 Aug 82, sub: HTLD IPR for CSA, 5 August 1982. (2) Msg, HQDA to dist, 062005z Aug 82, sub: Resourcing of the High Tech Light Division (HTLD). (3) Ltr, Chairman TRC to dist, 12 Aug 82, sub: Minutes of Transition Review Committee Meeting, 9 August 1982. (4) Memo, Ch HTTB to Record, 19 Aug 82, sub: CAC Conference Call, 12 August 1982.

- FORSCOM would host a conference beginning 7 September at which the T-TOE would be converted to MTOE. All affected commands would attend, and minor changes would be considered at that time.

- FORSCOM would finalize the MTOEs by 17 September, load them in the data base, and pass copies of the computer tapes containing the final MTOEs to DA and the 9th.

- Throughout the process, DARCOM would assist in developing the status of new equipment and identifying satisfactory surrogates.

- Finally, the 9th was to develop a transition plan for FY 1984 and the out years.

As time progressed, Colonel Richardson's mission expanded: "...Once we got the process started and found out that we could do that in short order, we decided to tackle more--for example the entire DISCOM.... Anything that would probably be going, or had a subelement going with the 3d Brigade to NTC had to be loaded. That was about 15 different TOEs...." General Elton began to discuss the addition of more MTOEs in a message on 1 September, and during a routine CAC conference call on the second. These discussions centered around conversion of the entire DISCOM and the air cavalry troops of the CBAA.[4]

What emerged from the FORSCOM conference held 7-12 September were fourteen MTOEs, nine of which were actually new HTLD units, and five of which were DISCOM units which had been cannabilized to form the three forward support battalions. In addition, six new HTLD units were identified for conversion in October 1983. These were three DISCOM units: a Main Support Battalion, a CBAA Support Battalion and a Headquarters and Material Management Center Company. Among the Division troops the MI Battalion, the Target Acquisition Battalion, and the Engineer Battalion would be activated.

To recapitulate: On 16 August, seven units were identified for conversion by 16 March 1983. By 12 September, that had grown to nine.

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[4](1) Msg, HQDA to dist, 201901z Aug 82, sub: Required Actions to Begin the Transition of 9ID Units to HTLD Configuration. (2) Richardson Interview, 4 May 84. (3) Msg, Cdr 9th Inf Div to DA and Cdr FORSCOM, 011945z Sep 82, sub: Actions Required to Transition 9ID Units to HTLD Configuration. (4) Memo, Ch HTTB to Record, 7 Sep 82, sub: CAC Conference Call, 2 September 1982.

Six additional had been identified for transition in October 1983, for a total of fifteen, all of which were reflected on the transition schedule Colonel Richardson submitted on 12 September.

Testing a Brigade Slice

As September moved along, the 9th began to focus on a brigade slice exercise to be held in May 1983. This would be a prelude to the October NTC exercise, and the first opportunity to test the new maneuver battalions. It would allow the HTLD units to be altered and refined prior to the October exercise. General Elton wrote the CAC Commander requesting assistance in the preparation of doctrinal literature such as How-to-Fight manuals and Army Training and Evaluation Programs for the new units.

By 30 September the nine HTLD units identified in the 7 September conference had been loaded into the Army's data base, and the schedule established for the processing of the six additional units:

- 30 Sep 82 - AURS frozen.
- 15 Nov 82 - HTTB, proponent schools and HQ, TRADOC finalize T-TOEs.
- 15 Nov-15 Dec 82 - DARCOM evaluates T-TOEs for supportability.
- 7-15 Jan 83 - TRADOC/9th Division final review of T-TOEs.
- 28 Jan 83 - T-TOEs to FORSCOM.
- 1-15 Feb 83 - FORSCOM loads and models MTOEs.
- 22-25 Feb 83 - HTLD MTOE workshop at FORSCOM.
- 15 Mar 83 - FORSCOM documents MTOEs.
- 1 Apr 83 - MTOEs effective for transition.
- 15 Oct 83 - Formal MTOE effective date.

Throughout the period, there continued the constant push and pull of force design. The 9th wanted to reduce the CBAA Support Battalion; the Logistics Center replied that in order to do so, the CBAA itself would have to be reduced. Meetings were held on the Chemical Company's function and on fire support for the brigade slice. The Field Artillery

School was tasked to explore using undersized artillery crews in peacetime organizations which would be augmented by Reserve Component personnel in combat.[5]

By 5 October, the 9th had the nine new HTLD MTOEs in hand.

Exploring the HTLD Mix: Active and Reserve

Speculation was ongoing as to how many divisions should be converted to HTLDs, what mix of reserve and active they should be, and where they should be posted. FORSCOM responded to a DA inquiry on the subject in October. The recommendation was that testing in the 9th be completed; another active division be converted; and sometime in the future, a reserve division be converted. In other words, FORSCOM counciled a cautious, deliberate pace, hinged on successful tests within the 9th. It also pointed out that only the largest Army installations had the space to allow an HTLD to adequately train, considering its maneuver concept.

General Elton sent a letter to the 9th's key subordinate commanders in which he encouraged their free interchange of information in search of new ideas. He pointed out to them that their new MTOEs could be changed during the Army's semiannual Management of Change (MOC) windows, which were January through March and July through September each year. He encouraged them to refine the new organizations, and take advantage of the MOC windows to make changes.[6]

In the meantime, serious work had begun on loading the AURS for the six additional units, now called Phase II TOEs. A timetable for TRADOC's proponent centers and schools was established on 6 October 1982, directing them to complete action on the T-TOEs by 28 January 1983. From them, it will be recalled, FORSCOM would develop the MTOEs by 15 March.

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[5](1) Memo, FORSCOM FDS to Record, 12 Sep 83, sub: HTLD MTOE Working Group, 7-12 Sep 82. (2) Ltr, Cdr 9th Inf Div to Cdr CAC, 24 Sep 82, no sub. (3) Memo, HTTB Transition to CofS 9th Inf Div, 5 Oct 82, sub: Transition Activities, Oct 82-Apr 83. (4) Msg, Cdr Log Cen to Cdr CAC, 141030z Oct 83, sub: Revision of AURS for CBAA Support Battalion HTLD. (5) DF, HTTB to CofS 9th Inf Div, 6 Oct 82, sub: HTLD Brigade Fire Support Interface Requirements Conference. (6) Ltr, CofS 9th Inf Div to dist, 2 Nov 82, sub: 9th Infantry Division/HTLD NBC Issue Resolution Conference After Action Report. (7) Msg, Cdr CAC to Comdt FA Sch, 041445z Oct 82, sub: Arty Crew Size.

[6](1) DF, HTTB to CofS 9th Inf Div, 5 Oct 82, sub: Letters of Appreciation. (2) Msg, Cdr FORSCOM to HQDA, 181940z Oct 82, sub: Conversion of Divisions/Sep Bdes to HTLD Designs. (3) Ltrs, CG 9th Inf Div to Selected Cdrs, 2 Nov 82, no sub.

Less than one month later, TRADOC sent out similar guidance concerning the Phase III T-TOEs. These were for the Division Artillery Headquarters, the balance of the CBAA, the NBC and MP Companies, and the Air Defense Artillery and Signal Battalions. These T-TOEs would go to FORSCOM by 1 July 1983, which meant that the proponents would be less pressured for time in their development.[7]

Reducing the Size

Another major activity in the force design arena was the effort to reduce the size of the HTLD. Ways were considered to reduce the requirement for mess personnel by consolidating food service activities at various levels, for example.

On 19 November a package of strength reduction proposals was sent to CAC, the TRADOC schools, and the 9th's subordinate commanders for comment. The intensity of the effort was made clear to the DISCOM Commander when he was chided in writing by one of the ADCs for not tackling the problem in the Forward Support Battalions, and given a suspense date to do so.

The Soldier Support Center objected strongly to the 9th's reduction plans. The Center felt it unjustly attrited personnel service support units and functions, such as religious, legal, postal, personnel and band functions. Likewise, the Logistics Center complained that their combat service support units had already been cut to dangerous levels.[8]

While Test Bed and the 9th grappled with the size problem, it was faced with another just as difficult. It had begun to address what to do with the Division's artillery (DIVARTY), but without much success. The problem was complicated by already ongoing force modernization activity in the DIVARTY, the largest of which was the infusion of the M198 155mm towed howitzer. This, combined with the anticipation that it would be several years before the DIVARTY received the new Multiple Launch Rocket System, and the requirement to keep those nuclear-capable

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[7](1) Msg, Cdr TRADOC to dist, 062020z Oct 82, sub: Phase II T-TOE Development for the High Technology Light Division (HTLD). (2) Msg, Cdr TRADOC to dist, 051415z Nov 82, sub: Phase III T-TOE for The High Technology Light Division (HTLD).

[8](1) Msg, Cdr Log Cen to Cmdt QM Sch, 102000z Nov 82, sub: Revised Mess Structure HTLD. (2) DF, HTTB to CofS 9th Inf Div, 3 Dec 82, sub: Bi-Weekly Significant Action Report (16-30 Nov 82). (3) Ltr, ADC 9th Inf Div to Cdr DISCOM, 26 Nov 82, sub: Review of FSB MTOE's. (4) Msg, Cdr SSC to Cdr 9th Inf Div, 302330z Nov 82, sub: HTLD Strength Reductions. (5) Msg, Cdr Log Cen to Cdr 9th Inf Div, 101500z Dec 82, sub: HTLD Strength Reductions.

units within DIVARTY at a high state of readiness, presented a difficult set of conditions. HTTB proposals did not get far with the affected members of the 9th. In an effort to reach some conclusions, a conference was called in mid-December and results were being worked at year's end.

The nine Phase I MTOEs, received by the 9th in early October, had contained some errors and there were some desired changes identified by HTTB, the Division staff, and the 9th Division proponent units. October and November meetings were held in which these changes were coordinated with the MACOMs and the package was staffed in the Division during early December. DA hosted a workshop on 14-15 December at which these changes were approved. They would be submitted during the January-March MOC window, and become effective on 31 March 1983.[9]

In addition to the paperwork, there was also the physical act of transition. Some earlier provisional reorganization had taken place. Now some of those units had MTOEs, flawed though they might be.

The 9th Division published an internal regulation, 71-1, Transition, on 6 August 1982. It outlined the responsibilities of the Transition Steering Committee (Policy), the Transition Review Committee (Planning), and the Assistant Chief of Staff, Transition (Management). The regulation formalized the transition war room, detailed the responsibilities of each of the major participants, from the Division Commander down to major subordinate and separate battalion commanders. It very briefly outlined the transition process, although that section essentially tasked the unit commanders with developing individual transition plans.

A third meeting of the Transition Review Committee was held on 9 August. The committee reviewed the results of the 5 August IPR, discussed the status of the efforts to load the AURS, and received updates on transition status from the AG, G3 and G4. Details of policy on transfer and cross-leveling of personnel and equipment were discussed, as was training during the transition period. Further meetings tended to follow the same pattern.

One decision that had been under discussion for some time was finalized in late August: Command arrangements for the High Technology Light

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[9](1) DF, HTTB to CofS 9th Inf Div, 3 Dec 82, sub: Evaluation of MTOE Development for HTLD FA Battalion, w/Atch. (2) Msg, Cdr 9th Inf Div to dist, 260600z Oct 82, sub: Fire Support Structure for the HTLD. (3) DF, Ch HTTB to CofS 9th Inf Div, 22 Dec 82, sub: HTLD Phase I T-MTOE Recommended Changes.

Brigade (HTLB). In each of the 9th's three infantry brigades, one battalion was transitioning into a type HTLD battalion. These would be pooled together under the 3d Brigade headquarters to form the HTLB. This brigade, with its slice of support units, would be the test vehicle for the HTLD during the May 1983 exercise, and ultimately the October 1983 evaluation. As the process stood in August 1982, each of the three brigades was responsible for the transition of one battalion, and its training after transition. In April 1983, the battalions would come under command of the 3d Brigade, and remain there through October.

There was ongoing discussion as to whether this was the best procedure. Some believed this did not give the 3d Brigade adequate control of the units, and advocated assigning them directly to the Brigade, and physically moving the units. The decision was made to continue the original plan, because: No HTLD brigade was ultimately scheduled to contain one each of the three type battalions, meaning that if the moves were made now, they would have to be undone later; the process of transitioning and training was one of learning for all three brigades, and would be beneficial when the entire Division transitioned; and the current method ensured that each brigade had a stake in the success of the process and the HTLD as a whole.[10]

In addition to the various meetings concerning the AURS-MTOE process discussed above, there were numerous others dealing with transition. Combat service support and logistics workshops were held throughout the fall and winter, some at general officer level. Also, in mid-September a coordination meeting was held between HTTB and the proponent schools concerning the need for the development of required doctrine and training literature. This, too, became an ongoing process. Much the same was taking place relative to personnel, because, in its effort to be transitioned and trained in time for the May exercises, the 9th began submitting out-of-cycle manpower requests.[11]

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[10](1) Reg, 9th Inf Div, 6 Aug 82, sub: Transition. (2) Memo, Sec TRC to dist, 12 Aug 82, sub: Minutes of Transition Review Committee Meeting, 9 August 1982. (3) DF, HTTB to G3 9th Inf Div, 25 Aug 82, sub: 9ID Command & Control During Transition to HTLD Configuration, w/Incl.

[11](1) Msg, Cdr Log Cen to dist, 072200z Sep 82, sub: HTLD CSS Action Officer Workshop, 15-16 Sep 82. (2) Ltr, Cdr 9th Inf Div to dist, 23 Sep 82, sub: Logistics Seminar. (3) Memo, Ch Close Cbt Br to Ch HTTB, 2 Sep 82, sub: Summary of Proceedings: HTLD Doctrine and Training Literature Development Conference, 14-15 Sep 82. (4) Msg, Cdr FORSCOM to DA, 161820z Sep 82, sub: Out-of-Cycle Requests for Manpower to Support Conversion of 9ID to a High Technology Light Division (HTLD).

Colonel Richardson submitted a detailed transition schedule through FORSCOM to DA in mid-September. It was delayed at FORSCOM while they queried the 9th on several points, and was finally endorsed on to DA on 6 January 1983. The point of contention was that DA's program and budget guidance for FYs 84-86 did not reflect adequate manpower spaces for the 9th. FORSCOM identified the problem, recommended that DA approve the schedule, and that DA provide FORSCOM the added spaces required by it.

The author interviewed General Elton in late November 1982. He described the status of transition thus:

> There are nine organizations transitioning. Not all are battalions. A couple are company sized.
>
> Very shortly we will have a great many, and by the end of 83 every battalion in this division will be in transition with the exception of four or five. They will be similar to those that are already transitioning, but for which we have no equipment. Every one of them will be changing or transitioning in one way or another.
>
> For example, we are transitioning one light motorized infantry battalion right now, the 3-47th Infantry. There are four more waiting in the wings, but until we have finished with the full evaluation of that battalion, which should not be until the first part of the next fiscal year (fall 83), there is really no need to go ahead and transition those. Their equipment is not here. I would just have to give them surrogate equipment, and I do not think the Army should do that. Leave them like they are or transition them without surrogate equipment, and let them operate in the walking mode until we get their equipment.
>
> We are also supposed to have two Assault Gun Battalions and two Light Attack Battalions. We do not have equipment for the second of each of those, so they are not transitioning either. Also we have been told that in the out-years we are going to be losing a few units. That gives

you an indication that the whole structure is still bubbling.[12]

The nine organizations mentioned were: 3d Brigade Headquarters and Headquarters Company, the Scout Company, three Forward Support Battalions, the Cavalry Squadron, and the Light Motorized, Light Attack, and Assault Gun Battalions. Fifteen units were scheduled to transition in FY 84, ten in FY 85 and the three artillery battalions in the Division Artillery during FY 86, because of the late arrival of some of their equipment.

The routine, ongoing efforts continued. When would field manuals and Army Training and Evaluations Programs be needed? What would the installation need to do to properly house the units during and after transition? What details of the battalion realignment within brigades needed to be worked out? What actions needed to be taken on personnel to ensure the proper grades and MOSs would be available when needed? Work continued on efforts to reduce the size of the Division. Fort Lewis drafted an Environmental Impact Assessment on the HTLD.[13]

Other miscellaneous actions were also underway. The question of how a corps would interface with the HTLD was under consideration. The usual stream of high-ranking visitors continued, as did the requests for speakers. Work began in preparation for an Association of the US Army symposium on the HTLD, to be held in January. An American Defense Preparedness Association panel meeting on the HTLD was hosted in December.[14]

Planning the Tests

Testing and work on the Test Program continued throughout the fall of 1982. Of the twenty-seven tests conducted in FY 82, as of 18 August 1982, twenty-three were complete, and the reports were in various stages

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[12](1) DF, Ch HTTB to CofS 9th Inf Div, 17 Jan 83, sub: 9ID Transition Schedule, w/Encl. (2) Elton Interview, 29 Nov 82.

[13](1) Briefing Slides, HTTB, 28 Jul 82. (2) Ltr, Ch HTTB to Dir FDD CAC, 20 Dec 82, no sub. (3) DF, Ft Lewis DIO to I Corps HTTB Coord Ofc, 13 Dec 82, sub: Conversion of 9th ID to HTLD Configuration. (4) DF, Ch HTTB to Ch FDD & CAD, 27 Sep 82, sub: Strength Reduction for HTLD. (5) DF, I Corps HTTB Coord Ofc to dist, 29 Dec 82, sub: Proposed Environmental Assessment on the Conversion of the 9ID to a High Technology Light Division.

[14](1) DF, I Corps HTTB Coord Ofc to dist, 8 Nov 82, sub: Corps Interface with a High Technology Light Division (HTLD). (2) Note, Ch HTTB to CG 9th Inf Div, 17 Dec 82, no sub, w/Atch. (3) Note, CG 9th Inf Div to HTTB, 26 Jan 83, no sub, w/Atch.

of completion. The remaining four tests were incomplete, and they extended into FY 83. Work on the FY 83 Test Program was well along, and the FY 85-89 program had been started. A coordination meeting on the various Test Programs was held at Fort Lewis on 4-7 October.

One problem that had been of concern to the 9th was the test communities insistence that test units be filled to 100 percent strength during testing. This meant that the 9th would have to strip some units to fill others during test periods. By late September, HTTB had been able to dissuade most of the test proponents from that position, and they were willing to accept the fact that the test units would have only their "fair share" of the 9th's manpower. This was reconfirmed at the 4 October meeting.[15]

Another result of that meeting was a list of extensive changes desired in the FY 83 program. It is indicative of the rapid pace of events within HTTB/HTLD that a test program approved by the Test Director on 10 September would need extensive revision less than one month later.

Of all this activity in the realm of testing in the fall of 1982, none began to equal that surrounding the plans for the various CPXs and FTXs leading to and including the HTLB evaluation exercise in October 1983.

The 9th formally notified CAC of its intent to evaluate the HTLB on 20 August 1982. It requested CAC's assistance in that evaluation during the May 1983 exercise at Yakima Firing Center. CAC responded with enthusiasm, but noted that conferences held in the meantime had slipped the evaluation to the August-September time frame. The 9th would still conduct the May exercise. CAC proposed a colonel-level working conference to work out details. The conference was held at Fort Lewis on 21 October. Many topics surfaced, and some follow-on actions were required of all parties. Chief among them were issues dealing with instrumentation: could it be done, what was the best way, would the MILES-Air-Ground Engagement System be on hand in time to be used? Later it became obvious that the Combat Developments Experimentation Command (CDEC) at Fort Hunter-Liggett did not have the capability to instrument a brigade-level test. The decision was made to use MILES for the evaluation exercise, and limit CDEC tests to platoon and company size high-resolution testing. Even this extensive use of MILES was in question

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[15](1) Msg, Cdr CAC to dist, 161448z Aug 82, sub: Issues for HTLD FY 83 Testing. (2) DF, Ch TMD to Ch HTTB, 18 Aug 82, sub: FY 82 Test Program - 18 Aug 82 Status. (3) Msg, Cdr CAC to dist, 181608z Oct 82, sub: HTTB FY 83 Test IPR Results. (4) Info Paper, HTTB TMD, 18 Sep 82, sub: Requirement for 100% Manning of 9ID Test Units.

for Fort Lewis did not have enough systems on hand to support such exercises. Certain weapons, such as the Mark 19 Grenade Machine Gun, would have to have MILES systems modified for them. HTTB asked for CAC assistance in determining the supportability of such a project.[16]

The 9th also notified FORSCOM of its intent to evaluate the HTLB. After consideration of the National Training Center (NTC) as a site, the Division had decided that it would rather go to Fort Bliss, because of a perceived reluctance of the NTC to host them, and the fact that Fort Bliss had more maneuver area. The 9th asked FORSCOM's support for the exercise in the form of their concurrence on Fort Bliss as the site and the 3d Armored Cavalry Regiment (ACR) as the opposing force (OPFOR). The FORSCOM Commander concurred with the caveat that the 3d ACR might not be available during the proposed exercise dates. FORSCOM did, however, state its intention to provide a suitable OPFOR.

Work on the Division evaluation plan was a major effort in the Test Bed during the fall. A lieutenant colonel from the Concepts and Analysis Division was devoted to the project full time and the equivalent of one full-time person was provided by the BDM Corporation for the last quarter of 1982.

On 18 November, CAC sent a message to the field which tasked the various proponent centers and schools for documentation and personnel in support of the evaluation plan. The message outlined the tentative composition of an evaluation team, and alerted them of the probability of an early December meeting to work out details.

The meeting was held at Fort Leavenworth on 18 December. From it, further details of taskings were developed, and topics that required general officer-level resolution were surfaced. Examples of this latter were: Would the strategic deployment phase of the exercise be evaluated? What degree of control would the TRADOC Evaluation Team

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[16](1) DF, Ch TMD to Ch HTTB, 21 Oct 82, sub: Decision Paper for FY 83 Test Program Changes. (2) Msg, Cdr CAC to Cdr 9th Inf Div, 151950z Sep 82, sub: HTLB Evaluation. (3) Memo, HTTB TMD to Record, n.d., sub: CAC HTLB Evaluation Conference. (4) Memo, ADC(B) 9th Inf Div to Record, 19 Nov 82, sub: CDEC Instrumentation Capabilities. (5) Msg, Cdr CDEC to ADC 9th Inf Div, 151000z Dec 82, sub: HTTB Testing. (6) DF, HTTB to CofS 9th Inf Div, 2 Dec 82, sub: Request for CAC Assistance in Obtaining Instrumentation for the HTLD Evaluation.

(headed by the Infantry School) have over scenario development and conduct of the exercise? The Infantry School Commandant called for another meeting at Fort Benning, 10-13 January 1983.[17]

In the meantime, the HTTB had developed its own draft evaluation plan. It was mailed to CAC and the centers and schools for staffing on 23 December. The Test Bed had also drafted a 9th Division circular which delineated specific Division, Test Bed, and CAC functions in the evaluation process. The circular was designed for internal HTTB and Division elements only and was released for coordination on 5 January 1983.

The May 1983 exercise was the first step in the HTLB evaluation. It was largely an internal, division-level exercise, called Laser Mace. Details of its execution were announced to all concerned by message on 4 November 1982. The HTLB, 3d Brigade, would play out a force-on-force scenario at Yakima Firing Center (YFC) against the 1st Brigade. Eight distinct HTLD tests would be conducted:

TEST TITLE	TEST PROPONENT	TEST ACTIVITY	TEST UNIT
MP Co	MP School	CDEC	9th MP Co
Light Motorized Bn	Inf School	Inf Board	3-47th Inf
Light Attack Bn	Inf School	Inf Board	2-1st Inf
Assault Gun Bn	Inf School	Inf Board	2-60th Inf
NBC Co	Cml School	CDEC	9th Cml Co
Personnel System	Soldier Spt Cen	TCATA	9th AG/G1
Light Air Cav Tp	Armor Cen	Avn Board	3-5th Cav
MI Fwd Spt Co	Intel School	Intel Board	109th MI Bn

There would be six phases to the exercise.

Phase I was movement to the area via a strategic deployment. The brigade would fly out of McChord Air Force Base on C-141s to Moses Lake,

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[17](1) Ltr, Cdr 9th Inf Div to Cdr FORSCOM, 18 Oct 82, sub: 9th High Technology Light Division (HTLD) Brigade Evaluation - Oct 83, w/Atch. (2) DF, Ch HTTB to BDM, 2 Nov 82, sub: Request for BDM Support--HTLD Evaluation Plan, w/Atch. (3) Msg, Cdr CAC to dist, 182302z Nov 82, sub: High-Technology Light Brigade (HTLB) Evaluation. (4) Msg, Cdr CAC to dist, 151710z Dec 82, sub: High-Technology Light Brigade (HTLB) Evaluation. (5) Msg, Cmdt Inf Sch to dist, 281535z Dec 82, sub: USAIS HTLB EP Action Officer Workshop (AOWS).

Washington, about fifty miles northeast of YFC. From there they would make a tactical lodgement on YFC via C-130s.

Phase II was a movement to link-up with friendly Ranger/Special Forces elements to gain information on the OPFOR and to prepare for an attack. This would be over rugged mountainous terrain, and would take one day.

Phase III would be a deliberate attack to seize and secure an enemy-held airfield.

Phase IV would see the arrival of fresh OPFOR forces, causing the 3d HTLB to fight a delaying withdrawal.

Phase V would be the defense of an extended front, followed by Phase VI, a night counterattack. This final attack would combine ground attacks with C-130 and helicopter assaults.[18]

All of this was ongoing as 1982 ended, along with many other projects. HTTB was preparing documentation to support its transition to ADEA, preparing to host the AUSA symposium, and preparing for a Chief of Staff IPR to be held in early January.

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[18](1) DF, HTTB to CofS 9th Inf Div, 5 Jan 83, sub: Bi-Weekly Significant Action Report (16-31 Dec 82). (2) DF, Ch HTTB to CofS 9th Inf Div, 5 Jan 83, sub: HTLB Evaluation. (3) Msg, Cdr 9th Inf Div to dist, 041800z Nov 82, sub: 9th HTLD Exercise Laser Mace (9-15 May 83).

CHAPTER 19

PREPARING FOR EVALUATION: EXERCISE LASER MACE, SPRING 1983

> At that time we had decided that we were not going to the NTC, but that Laser Mace, the big exercise in the spring of 1983, would be the graduation exercise of the brigade, and therefore, one could deduce, of the division. If the brigade was good, then the division was three times as good....
>
> LTC Sterling R. Richardson
> Transition Officer, HTTB[1]

The first week of January 1983 was a busier than normal time for the HTTB. General Meyer visited Ft Lewis for the last time as Chief of Staff on 6-7 January. It was already known at Ft Lewis that General Meyer would retire in the summer and that it was unlikely that he would be back.

During his two-day visit, General Meyer was briefed on myriad topics and shown some equipment. As usual, he had comments on most of it. He was satisfied with the Third Brigade briefings and the tactics proposed. He approved the work that had been done on Exercise Laser Mace, and stated that he would clarify what the role of the 9th would be after the period of the HTLD evaluation. His closing remark was "I am encouraged by everything I see here. You have struck deep. Now, we have got a bit deeper to strike."[2]

Also on 7 January, General Elton sent out a 24-page message to FORSCOM which further detailed the Laser Mace Exercise in terms of funding, troops involved, and aircraft sorties by type, etc. It briefly addressed the follow-on exercise, Orbit Eagle, to be held at Fort Bliss in the November-December timeframe. Orbit Eagle would be the Division's evaluation exercise, in which they would play force-on-force against the 3rd Armored Cavalry Regiment (ACR).

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[1]Richardson Interview, 4 May 84.

[2](1) Ibid. (2) Memo, Ch HTTB to record, 31 Jan 83, sub: CSA visit to 9th ID/HTTB, 6-7 Jan 83.

One key paragraph of the message dealt with funding for the exercises, and stated flatly that "The assistance of both TRADOC and FORSCOM in providing funding for HTLD FTXs is essential." In addition to the two exercises already mentioned, the message proposed a follow-on exercise to Laser Mace, to be held at Yakima Firing Center in August. The FY83 funding estimates were shown thus:

	TRADOC	FORSCOM
Laser Mace	$4.3 million	$2.8 million
August FTX	3.4 million	2.2 million
Total	$7.7 million	$5.0 million

The cost estimates for Orbit Eagle, which fell in FY84, were $15 million for transportation and $5 million for the 9th's portion of the exercise. That did not include flying hours or TRADOC-funded test costs. Since the transportation funds for Orbit Eagle were so massive, the 9th requested additional guidance on funding for that exercise.

Attached to HTTB's copy of the message was a note from the 9th Division G3, in which he stated "Big fight going on over funding for exercises. It may have heavy impact on the August/September 3rd Bde's exercise."[3]

All the routine "distractors" were going on as usual. There was a discussion of whether the Division or HTTB should take the lead in working out what Corps-level support the HTLD would require, and the decision was made that the Test Bed would take the lead. The final report of the Defense Science Board assessment of the HTTB finally arrived, nine months after the study was concluded. There is no indication that it was given much attention in HTTB, but some of its points were to foretell future difficulties for the Test Bed (see Volume II of this history).

One of the largest projects was the three-day AUSA Industry Interface Symposium. More than 370 representatives of 83 industries spent 25-27 January in classified work sessions, being briefed and investigating ways in which industries and the Army could interface. One participant's impression was that it was productive, but the effort

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[3]Msg, Cdr 9th Inf Div to Cdr FORSCOM, 071820z Jan 82 [sic], sub: 9th Inf Div Transition to High Technology Light Division FTX LASER MACE (May 83 YFC, WA) and FTX ORBIT EAGLE (Nov 83, Ft Bliss, TX), w/Atch.

expended by the division and the installation was such that it should only rarely be repeated, if at all.[4]

HTLD's transition and strength reduction effort was briefed to General Meyer during the 7 January IPR. The strength totals were still constantly being fought in an effort to reduce them. The manpower figure stood at 17,735 going into the Alderbrook Conference in March 1982; as a result of that conference it was reduced to 15,977; it then ballooned back up to 17,827 and 1,360 aircraft sorties during the summer of 1982. The fall 1982 reduction study, approved in December, identified 166 possible organizational changes ranging from individual cuts to the elimination of entire units. Of the 166 proposals, General Elton directed the implementation of 104, resulting in a design end strength of 16,733 and 1,317 sorties. That was the figure briefed to General Meyer.

In an effort to get back down to the 16,000 figure, a second Alderbrook Conference was scheduled for 24-25 March 1983. During "Alderbrook II," General Elton approved the implementation of ten additional design changes bringing the design to 16,142 soldiers.

It was also at Alderbrook II that General Elton surfaced the possibility of using a Joint Readiness Exercise (JRX) called Border Star, scheduled for 1985, as an additional evaluation exercise for the 9th.[5]

As a matter of fact, there was a growing realization that the HTLD would not be ready for formal evaluation by the November/December target date for Exercise Orbit Eagle. The General Officer Orbit Eagle Evaluation Review Committee had recommended a 12-18 month delay.

There was also a growing realization among the brigade commanders and the transition officers that the sheer number of actions required to realign the battalions within the brigades demanded that they be started immediately, in early March, if everything was to be done in time for the Laser Mace exercise in May. It was agreed that realignment should be complete by the previously established 4 April date, not start on that date. The month of April should be spent in company-level ARTEPS in preparation for Laser Mace. It should be remembered that a number of

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[4](1) DF, Cdr 9th Inf Div to Dist, n.d., sub: Corps Support Requirements for HTLD, w/Atch. (2) Report, Defense Science Board Task Force on Application of High Technology for Ground Operations, Feb 83. (3) Memo, Ch I Corps HTTB Coord Ofc to CG, 28 Jan 83, sub: AUSA Symposium: First Impressions After Action Report.

[5](1) Memo, Ch HTTB to record, 8 Apr 83, sub: HTLD Force Structure Conference. (2) Annual Historical Review, ADEA, 1 Oct 82-30 Sep 83.

support units also had to be reconfigured and functioning, for the exercise, even though support services per se would not be tested until the September exercise, now named Caber Toss. The date for brigade realignment was moved from 4 April to 14 March.[6]

Throughout this period the 9th and HTTB were involved in a number of various transition proposals. This turmoil was driven by a number of variables such as readiness, the need to prepare to join the Rapid Deployment Joint Task Force, the status of the Phase II and Phase III TOEs and perhaps above all, the availability of people and equipment. Various transition workshops were hosted by FORSCOM, DA, and in a variety of forums at Ft Lewis to deal with these issues. As it was, there was not time to implement the Alderbrook II changes in the effected units in time for Exercise Laser Mace, which took place at Yakima Firing Center 7-14 May.[7]

On the heels of Laser Mace came the final IPR for General Meyer, held at Ft Leavenworth on 16 May. The newly-transitioned DIVARTY was briefed, which consisted of a headquarters and headquarters battery, a target acquisition battalion, three direct support 155mm battalions, each with three 6-gun batteries, and one general support 105mm/rocket battalion. This latter consisted of two batteries of 105mm with six guns each, and one battery of nine multiple launch rocket systems.

At the IPR, the goal of 16,000 men and 1,000 sorties was affirmed, but General Elton stated that the sortie goal would need to be raised, in the short term, to 1,200 if serious decrement to combat capability was to be avoided. General Meyer indicated that would be acceptable. ADEA formalized the comment on 19 May in a message to DA requesting the 1986 goal to be 1,250 sorties and the 1,000 sorties remain a goal for 1990. Throughout the briefing the target for the HTLD was 1986, not 1985. Presumably this was driven by equipment delivery times.

One major question was whether a CH-47 Medium Lift Helicopter Company would be in the Division or whether it should be a part of Corps

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[6](1) Memo, ACofS Transition to record, 3 Mar 83, sub: Quad Six (formerly Triple Six) Meeting #3 Brigade Realignment. (2) DF, CofS 9th Inf Div to Dist, 17 Mar 83, sub: Brigade Alignment.

[7](1) Memo, ACofS Transition to CG 9th Inf Div, (draft) n.d., sub: High Technology Light Division (HTLD) FY84/85. (2) Msg, Cdr FORSCOM to Dist, 191915z Jan 83, sub: HTLD Phase II Transition Workshop, 22-25 Feb 83. (3) Msg, HQDA to Dist, 061444z Apr 83, sub: High Technology Light Division (HTLD) Transition: Policy, Procedures, and Equipment. (4) DF, ACofS Transition to CofS 9th Inf Div, 8 Apr 83, sub: Transitional Planning Task Force Conference.

support to the Division. That was being evaluated in the Division and obviously would have a major impact. The whole question of how much support should be in the Divison and how much in Corps was still unsettled, and of concern to General Meyer.[8]

Managing Transition

One technique that had been developed to manage transition was to get the commanders of the units effected to input transition issues, from their perspective, on a monthly basis. These were gathered into a lengthy package of 30 pages or so each month, called "GREEN TAB Transition Issues," and circulated throughout the division staff. Another technique was the establishment of a Transition Working Group in November 1982. The composition of this group changed from meeting to meeting depending on who would be effected by the topic under discussion. This group met once or twice each week on average, but occasionally as frequently as twice a day.

Both of the above groups had two things in common: They were organized through the Office of the Assistant Chief of Staff, Transition, and the topics they dealt with were almost exclusively about, or driven by equipment. Obviously the number of people in the unit, when it transitioned, and what its organization would be, was dependent on when the equipment arrived, the quantities received, and what constituted a crew for the item. Receipt of the equipment also drove training on that equipment.[9]

Internally, the 9th had begun consolidating equipment requirements in August 1982, and had begun internal transfers at that time. In most instances they had to strip equipment out of non-transitioning units to bring the transitioning units to an acceptable level of fill, but in some cases they identified surpluses. As part of this effort the various test proponents were asked to identify minimum essential equipment levels for their tested units. In turn, DA asked the 9th for their minimum essential equipment requirements in preparation for Laser Mace. On 6 May, DA issued its instructions for filling equipment needs for the HTLD.

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[8](1) Memo, Ch High Tech & Testing Div DCSOPS to Record, 18 May 83, sub: Trip Report CSA IPR on ADEA/9ID, Ft Leavenworth, KS, 19 May 83. (2) Msg, Cdr 9th Inf Div to DA, 191400z May 83, sub: 9ID Deployability Goals.

[9](1) DF, CofS 9th Inf Div to Dist, 7 Jan 83, sub: GREEN TAB Transition Issues. (2) Memo, Recorder TWG to record, 13 Jan 83, sub: Transition Working Group (TWG) Meeting #4 Minutes.

- FORSCOM publishes the MTOE.
- FORSCOM identifies critical items, notifies 9th Division.
- 9th Division, ADEA and the MSA prepare a HTLD equipment availability report (Delta Report), less the distribution column, and sends copies to DARCOM and FORSCOM.
- DARCOM conducts an equipment availability analysis, notifies the 9th and FORSCOM. DARCOM provides the current asset posture to DA.
- 9th Division develops minimum essential quantities for the FORSCOM critical items.
- FORSCOM uses DARCOM's availability analysis and the 9th's minimum essential quantities list to prepare a recommended fill, which is sent to DA.
- DA resolves differences between the 9th and FORSCOM, coordinates changes in DAMPL order and use of war reserve stocks, and gives distribution guidance to DARCOM.

The milestones for each action were established:

- FORSCOM publishes MTOE and critical item list not later than 15 days after the close of the MOC window.
- 9th Division provides the Delta Report 15 days after receipt of MTOE and critical item list.
- DARCOM provides equipment availability analysis and current asset posture 45 days after receipt of Delta Report.
- 9th Division provides minimum essential quantity list 45 days after publication of the Delta Report.
- FORSCOM provides the recommended fill to DA within 14 days of receipt of the minumum essential quantity list.

- DA issues equipment distribution guidance to DARCOM within 21 days of receipt of the FORSCOM recommended fill list.[10]

The struggle to downsize resulted in a number of meetings in the spring of 1983 among the proponent schools and centers. Even at the currently planned strength, it was recognized that the division could not support itself adequately while in garrison in peacetime. There were shortages of cooks, legal personnel, chaplain and public affairs staff, for example. An effort was begun in May to get the Ft Lewis Garrison TDA expanded to fill in the shortages.

Guidance received on 20 December 1982 from DA stated that the manpower strength of the division would be limited to 1,095 officers, 458 warrant officers, and 14,447 enlisted men for a total of 16,000, beginning in FY 1985. The infantry battalions in the division would be organized as five Motorized, two Light Assault and two Assault Gun Battalions.

While this was no surprise to the 9th Division planners, it did mean that the Phase II and Phase III Transition TOEs needed to be fine-tuned to reflect those figures. After unsuccessfully trying to do this through the Transition Working Group and the Transition Review Committee, a special group was formed for the purpose. By mid-February the two ADCs, the Chief of Staff, and the HTTB Chief had made a line-by-line review of the TDA and made the reduction. How much of this effort survived to be included in the loading of Phase II TOEs, which was done at FORSCOM during a workshop held 22-25 February, is unknown.[11]

One outcome of that workshop was that all of the participants in the TOE design process were reminded that there was another aspect of the new TOE that had to be addressed, that of Standards of Grade Authorization. By the time of the Phase III workshop, scheduled for

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[10](1) Info Paper, AFVO-LO, 5 Jan 83, sub: Equipping the First Phase of HTLD Transition. (2) Msg, Cdr 9th Inf Div to Dist, 102400z Jan 83, sub: Equipment Fill of High Technology Light Division Units. (3) Msg, HQDA to Cdr 9th Inf Div, 081956z Feb 83, sub: 9ID Minimum Equipment Requirement for Transition and Testing. (4) Msg, HQDA to Dist, 061206z May 83, sub: Transition Equipment: Procedures, Responsibilities, and Milestones.

[11](1) Memo, CofS ADEA to CofS 9th Inf Div, 19 May 83, sub: Essential TDA Augmentations for 9ID. (2) Msg, HQDA to Dist, 202358z Dec 82, sub: HTTB/HTLD FY85-89 Program Development Guidance. (3) DF, Ch HTTB to CG 9th Inf Div, 17 Feb 83, sub: Phase II Transition Bill.

14 June, each of the proponent centers and schools was required to review their TOEs for compliance with the standards. Any exception to the standards had to be justified, and would be approved or disapproved at the workshop.[12]

Again, the question arose during this spring of whether the Division should go ahead and transition some portion of each remaining infantry battalion, even though they would not have the equipment required. The conclusion was reached that the cost in unit readiness was too great, and the units would not transition early.[13]

Another point that was being worked during this spring, and which would continue, was the need for a proper interface with, and support from, echelons above division, most notably I Corps. A letter was sent from the Division to its primary commanders and staff asking that they identify what support would be required from Corps in combat contingencies. The 9th was a key figure in the development of a new Distributed Command and Control System (DCCS), and I Corps wanted to be involved in order to make sure the interface existed to tie together the Corps and Division.[14]

The evaluation concept for the HTLD had, since October 1982, been focused on exercise Orbit Eagle, to be held at Fort Bliss, Texas, in October 1983. By the first of 1983, that time had slipped to November/December 1983, because of the availability of 3rd ACR to act as the opposing force. Preparation for Orbit Eagle had already consumed a great deal of time, and that effort was accelerating. An action officer's meeting was held at Fort Benning on 10-13 January that included the 9th, CAC, HTTB and the proponent schools. At that meeting a division of tasks was made and timetables established. It was agreed there would be a general officer workshop in February to review actions taken to that date. Costs were a major concern, the primary topic of the

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[12](1) Memo, Ch HTTB to CG 9th Inf Div, 9 Mar 83, sub: Highlights of Phase II MTOE Workshop. (2) DF, Ch FDD to CofS, ADEA, n.d., sub: Request for SGA Verification.

[13](1) Ltr, CofS 9th Inf Div to Bde Cdrs, 22 Feb 83, sub: Infantry Battalion Transition. (2) Note, CofS ADEA to Ch ADEA, 4 May 83, no sub.

[14](1) DF, Ch HTTB to CofS 9th Inf Div, 15 Apr 83, sub: Corps Report Requirements for HTLD. (2) Note, G3 I Corps to G3 9th Inf Div, 28 Apr 83, no sub, w/Atch.

23 February General Officers Workshop. A general consensus was reached to cancel Orbit Eagle, and postpone the HTTB's formal evaluation until late FY84 or the first quarter of FY85.

Notification of this decision was sent to the CAC Commander by General Elton on 28 February. General Elton pointed out that several things had changed since the first plans were made for Orbit Eagle: An extensive simulation program had been developed, and high resolution instrumented small unit tests were planned. This would allow the HTLB to answer many questions and tailor units without the cost of a major exercise. There was not time to make these changes before Orbit Eagle, and it made little sense to test the units until they were ready. Also, even with all the economies calculated, Orbit Eagle would cost over $20 million, and financial support was not available.

On 2 March, General Elton formally notified the major commanders within the 9th of his decision to cancel the exercise. He also alerted them that it looked as though the formal evaluation would be at Fort Bliss during the Joint Readiness Exercise held the first quarter of calendar year 1985. The exercise was already scheduled to be under I Corps, and the OPFOR would be the 3rd ACR. Work began immediately to get funding inserted in the FY85 budget, and to rearrange the various individual tests among the remaining exercises.

General Elton's comments on the development of many new games, models, simulations and analyses were certainly true. The HTTB/ADEA files at this time are filled with correspondence and message traffic on such topics. They deal with activity not only in garrison at Fort Lewis, but better ways to instrument and document field tests as well. The need for better, more objective tests had become obvious. Dr. Walter W. Hollis, Deputy Undersecretary of the Army for Operations Research, stated it well in a letter to the Chief of HTTB: "I would like to point out one more time that I am not particulary enthralled with opinion polls when they are representated as tests. As we discussed before, we should get from the field exercises those data that can be best be gotten from the field exercises, and for issues which require quantitative data, we should make use of more formal test procedures."[15]

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[15](1) Memo, Dep Ch HTTB to Record, 12 Jan 83, sub: HTLD Evaluation. (2) Ltr, Cdr 9th Inf Div to Cdr CAC, 28 Feb 83, sub: Postponement of HTLD Evaluation. (3) Ltr, CG 9th Inf Div to Dist, 2 Mar 83, sub: Postponement of FTX Orbit Eagle. (4) Memo, HTTB Fin Mgt to CG 9th Inf Div, 25 Feb 83, sub: Funding for Exercise Orbit Eagle. (5) Ltr, DUSA (OR) to Ch, HTTB, 21 Jan 83, no sub.

Test Resume Sheets for fiscal year 1983 were continually refined throughout this period, and the major effort was put into developing comprehensive evaluation plans for FY84. A number of meetings and workshops were held in February, March and April as a part of this effort.[16]

On 15 February the 9th Division issued its planning guidance for Laser Mace, and from that point on the major effort of both the Division and HTTB/ADEA was concentrated on the exercise. Test Resume Sheets and Test Design Plans had to be finalized and validated; cut-off dates established for changes in unit structures and equipment, to allow proper train-up time; coordination completed with Reserve, National Guard and Air Force support units; and such seemingly minor but very important tasks as how to handle the VIP visitors without allowing them to interfere with the play of the exercise.[17]

The exercise went on as scheduled on 7-14 May 1983. The six phases of the exercise, as outlined in the last chapter, were a lodgement, movement to contact, attack, delay, defend, and night counterattack/deep attack. The three infantry maneuver battalions were the Light Motorized Infantry Battalion, organized around an eight-man squad mounted in a High Mobility Multiple-Wheeled Vehicle with an MK-19 40mm machinegun; the Assault Gun Battalion, organized around 44 Light Assault Vehicles with the 25mm Bushmaster gun and an unspecified tank-killing system; and the Light Attack Battalion, organized around 70 FAVS armed with MK-19's or TOWs.

The stated objectives of the exercise were:

- Train the 3rd Brigade Combat Team in preparation for and in anticipation of a formal TRADOC evaluation to be conducted first quarter, FY85.
- Exercise the logistics procedures and reports necessary to sustain combat operations.

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[16](1) Msg, Cdr 9th Inf Div to TCATA & LOGCEN 051800z Jan 83, sub: Inprocess Review of Forward Support Battalion (FSB) (TMD 23). (2) Msg, Cdr 9th Inf Div to Cdr CACDA, 252300z Jan 83, sub: HTLD Evaluation Plan. (3) Msg, Cdr 9th Inf Div to Dist, 102200z Mar 83, sub: HTTB FY84 Resume Sheet Working Group.

[17](1) Ltr, CofS 9th Inf Div to Dist, 15 Feb 83, sub: FTX LASER MACE Planning Guidance LOI #1. (2) DF, HTTB to CofS 9th Inf Div, 6 Apr 83, sub: Bi-weekly SIG ACTS Report (16 Mar 83). (3) Note, Ch HTTB to ADC (B) 9th Inf Div, 30 Mar 83, no sub. (4) Ltr, CofS 9th Inf Div to Dist, 21 Apr 83, sub: LOI: LASER MACE Distinguished Visitor Program (8-9 May 1983).

- Identify daily consumption figures in logistics support for future exercises.
- Exercise and refine the HTLD's intelligence system to include organic collection, processing and dissemination, and interface with the Corps.
- Execute the Army Development and Employment Agency (ADEA) evaluations.

Evaluating LASER MACE

In the view of the Division, all these objectives were met. The three new battalions appeared to be viable combat organizations whose "...enormous maneuverability enhances organic firepower through the capability to mass combat power quickly." This maneuverability also had revealed that there was a need for better land navigation aids, night vision equipment, and longer range radios. The exercise had also revealed the vulnerability of utility helicopters when used in enemy territory. As a result, the Division's deep attack tactics would have to consider other options more seriously, such as Air Force strikes, attack helicopters, long-range artillery fires, electronic warfare, and tank and personnel mines delivered by artillery and air.

Not everyone was enamored with the results of the tests. The Chief of CAC's Force Development, Test and Evaluation Division, in his initial impressions, had some telling criticisms on training deficiencies and a lack of understanding at the lower levels of the operational concepts for the units. He and his team did not feel that any organization or concept was validated, but that further training and retesting was required.

Similarly the Infantry School observer, Brigadier General K. C. Leuer, felt the junior grade personnel did not sufficiently understand their missions, and that better instrumentation was essential for future evaluations. From the Division's point of view, however, "Overall, FTX Laser Mace was a tremendous success for the 9th Infantry Division. The exercise provided an excellent environment for future development of the HTLD; created near real-world combat conditions for all participants; and provided the 9th Infantry Division a training experience it will long remember."[18]

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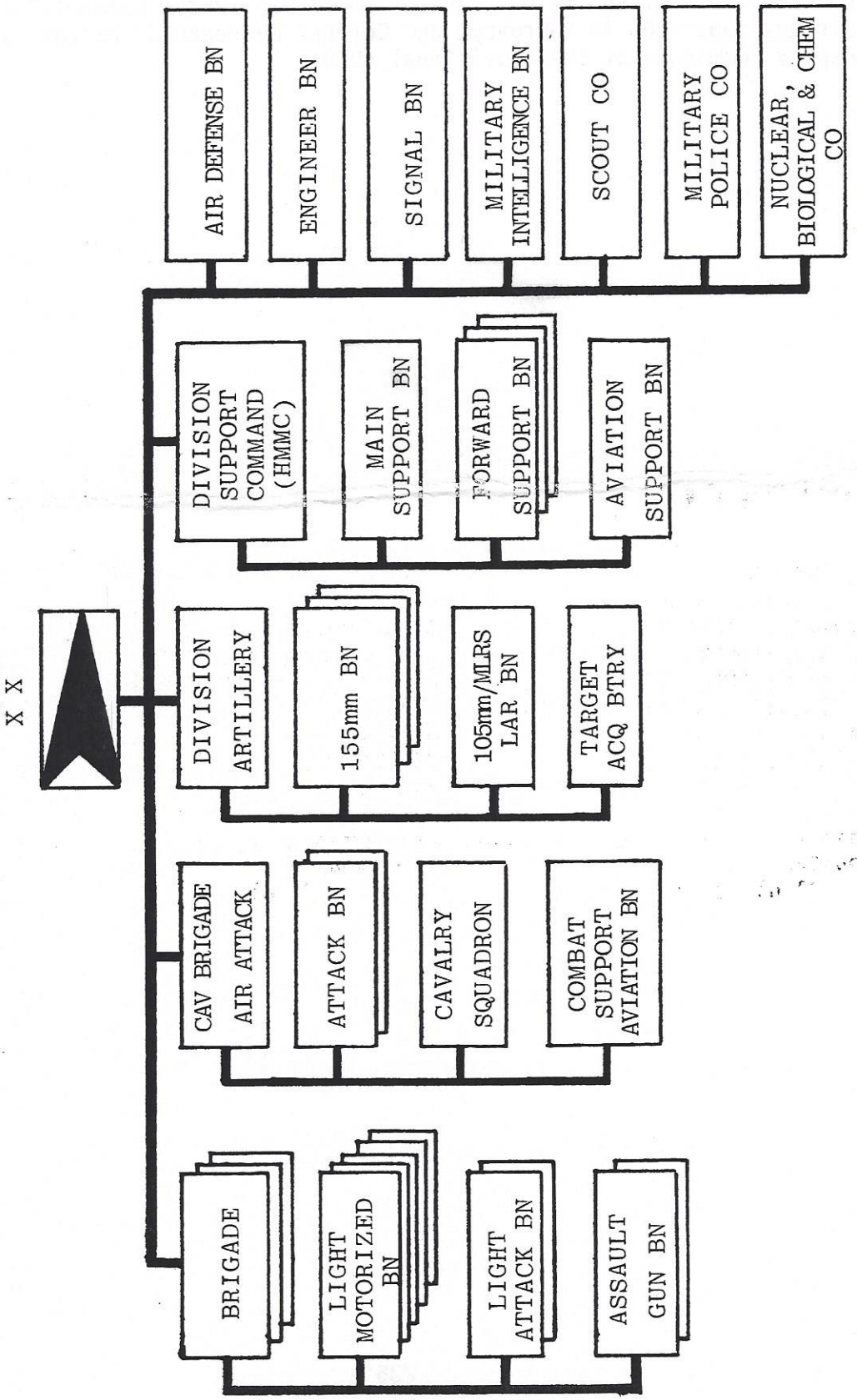
[18](1) Ltr, CofS 9th Inf Div to Dist, 12 Sep 83, sub: 9th Infantry Division After Action Report, FTX LASER MACE. (2) Memo, Ch FDTE Div CAC to Record, 20 May 83, sub: TIE Impressions of 9th ID Exercise LASER MACE, 9-13 May 83. (3) Memo, Asst Cmdt USAIS to Record, 16 May 83, sub: Observations of 3d Bde, 9th Infantry Division, 10-13 May 83.

Laser Mace and the 16 May IPR for General Meyer were the last major events of General Elton's command of the 9th. He relinquished command to Major General Robert W. RisCassi on 27 May 1983. Colonel Cerjan had already departed, in February, and Colonel Lawrence J. Dacunto was now Deputy Commander of the provisional ADEA.

Chart 9

THE HIGH TECHNOLOGY LIGHT DIVISION

Summer 1983



CHAPTER 20

PREPARING FOR EVALUATION: EXERCISE CABER TOSS, SUMMER 1983

> [General Wickham] came out here for a visit in September, and we briefed him on some initiatives that we had been undertaking since the arrival of the new commander, ADEA/9ID, General RisCassi. General RisCassi felt that some changes ought to be made to the Division's design. He was particularly interested in establishing Combined Arms Battalions. He was also interested in downsizing the Division somewhat. When the Chief visited he gave some guidance to General RisCassi that he would like to see it downsized, ultimately getting it down to about 13,000 men.
>
> COL Lawrence J. Dacunto
> Deputy Commander, ADEA[1]

The May IPR for General Meyer energized CAC to try to clean up unfinished actions resulting from that and earlier IPRs. It sent out a lengthy message addressing those taskings, examples being: how much anti-armor is enough; where should the Medium-Lift Helicopter Company be; and develop a TRADOC Test Activity at Fort Lewis to support ADEA. The message assigned proponency for each of these taskings, and charged the proponents with having them complete by the next IPR, then tentatively scheduled for 27 October. This was quickly followed by a second message charging the proponents to be prepared to brief their taskings to General Wickham at Fort Lewis on 13-14 September instead. General Wickham did visit ADEA on 14 September, but it was not counted as a formal IPR.[2]

Another important IPR followed close on the heels of the one for General Meyer. On 6 and 9 June, General Richard Cavazos visited ADEA, in his capacity as FORSCOM Commander. Among other things, he felt that

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[1]Interview, author with COL Lawrence J. Dacunto, 16 May 84. (Hereinafter: Dacunto interview, 16 May 84.)

[2](1) Msg, Cdr CAC to dist, 081530z Jul 83, sub: TRADOC Taskings from 9th ID HTLD/ADEA Inprocess Review (IPR) 16 May 83. (2) Msg, Cdr CAC to dist 132030z Jul 83, sub: TRADOC Taskings from 9th ID HTLD/ADEA Inprocess Review (IPR) 16 May 83.

smaller was better in terms of the HTLD size, and discussed how and if the HTLD should be proliferated. His comments evoked a lengthy message from General RisCassi later. In that message RisCassi stated his belief that the HTLD should replace ID86 as the future standard infantry division, and not be a one-of-a-kind unit. He also stated that he felt the 9th could maintain a high degree of near-term readiness throughout the transition period. In order to do so, however, and in order to have a fully equipped and trained 3rd Brigade in time for evaluation at Border Star 85, he might have to call upon Cavazos' influence to get equipment.[3]

General RisCassi entered the fray as regarded two items of equipment right away. He noted to DA that the HMMWV and the Light Armored Vehicle (LAV-25) projected delivery dates to the 9th were too late for them to be evaluated during Border Star.

The Assault Gun, for which the 9th wanted the LAV-25 as a surrogate, was and would continue to be a problem. There simply did not exist, except in experimental form, a vehicle that met the requirements. A vehicle capable of withstanding the recoil of a kinetic energy gun of sufficient caliber, say a 105mm, had to be too heavy to be acceptable. The alternatives, such as the LAV-25, did not have the firepower to kill tanks. ADEA's solution was to product improve the LAV-25 by mounting a TOW anti-tank missile on it. That would be a sufficient surrogate to test the concept until something could be developed as the objective system.

Unfortunately, however, Congress was not convinced of the Army's need for the LAV-25. It directed that the LAV-25 production go to the Marine Corps, for which it had initially been developed, while the Army re-evaluated its need for the vehicle. DA directed such an evaluation, during which it was discovered that there was disagreement on the desirability of the LAV-25. The Infantry School had adopted the position that the vehicle was not suitable, and that the M551 Sheridan vehicle, introduced in the early 1960's, would be better. As the fiscal year closed, discussion was still underway.[4]

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[3](1) Memo, CofS ADEA to record, 10 Jun 83, sub: Briefings for General Cavazos. (2) Msg, Cdr 9th Inf Div to Cdr FORSCOM, 111745z Jul 83, sub: HTLD Update.

[4](1) Msg, Cdr ADEA to DA, 271300z Jun 83, sub: Scheduling of HMMWV and LAV-25 into 9ID. (2) Senate Conference Report No. 98-213, 15 Aug 83, sub: DOD Authorization Act, 1984. (3) Msg, HQDA to Cdr TRADOC and Cdr ADEA, 192203z Aug 83, sub: LAV-25 Requirement. (4) Msg, Cdr ADEA to HQDA, 032200z Aug 83, sub: LAV-25 Requirement.

Another topic that continued without resolution was that of "foxhole strength." Even the definition of what constituted foxhole strength was subject for debate, but the question was, did the HTLD have enough, and like anti-armor capability, how much was enough? Both the foxhole strength and the anti-armor capability of the HTLD were attacked in a 15 August 1983 TRADOC analysis of the HTLD. This analysis was apparently based on outdated data, and drew immediate criticism from the 9th, ADEA, and even the Office of Undersecretary of Defense for Operations Research.[5]

Unit design and transition issues continued to evolve. In late April the DA Deputy Chief of Staff for Logistics (DCSLOG) had visited ADEA and the 9th. As a result of his visit, he felt there was a lack of emphasis being placed on three logistics areas: The need to eliminate and downsize equipment to meet the 1,000 sortie goal; the need to improve technology and thereby reduce logistics manpower; and finally, the need to provide uninterrupted support for the Division through the phase-in and phase-out of various surrogates and the receipt of objective equipment. He pledged his personal support in the accomplishment of these objectives.

The DCSLOG's concerns prompted a response from General RisCassi, in which RisCassi reassured him of the effort expended and the progress made. Ultimately, the DCSLOG's comments resulted in consideration of his concerns during Exercise Caber Toss in September, and they reported to him some of the successes of logistics innovations tested during the exercise.[6]

ADEA was preparing for the loading of the Phase III MTOEs, which was scheduled to take place during a 25-29 July workshop. The following units were to be refined and loaded:

Headquarters and Headquarters Troop, CBAA
268th Attack Helicopter Battalion
214th Attack Helicopter Battalion
9th Signal Battalion
1/67th ADA Battalion

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[5](1) DF, CofS ADEA to CG ADEA, 21 Jul 83, sub: Response to USAIS Foxhole Strength Message, w/Atch. (2) Ltr, Cdr ADEA to Dep CG CAC, 13 Sep 83, sub: High Technology Light Division Analysis. (3) Memo, ODUSA (OR) to COL Harrison DAMO, n.d., sub: TRADOC Review of the High Technology Light Division (8 Aug 83).

[6](1) Ltr, DA DCSLOG to DCSOPS, 24 Jun 83, sub: Progress in Fielding High Technology Light Division. (2) Ltr, Cdr 9th Inf Div to DCSOPS, 10 Aug 83, sub: Progress in Fielding High Technology Light Division. (3) Msg, Cdr ADEA to dist, 301520z Nov 83, sub: TMDE Modernization.

Headquarters and Headquarters Battery, DIVARTY
Target Acquisition Battery
9th NBC Company
9th MP Company

The ADEA Force Development Division began by testing the unit AURs against the Standards of Grade Authorizations, making adjustments in some and submitting justifications for deviation in others. A late summer or early fall conference was planned with the DA Office of the Deputy Chief of Staff for Personnel, at which Standards of Grade Authorizations for all other units of the HTLD would be discussed. There was also a conference held at Fort Monroe, VA, on 14-16 June to review the AURs for accuracy and completeness prior to the loading workshop.[7]

In early July consideration was given to a number of alterations that might be implemented in the combat units of the Third Brigade, the HTLB. Fine tuning of the units included such things as standardizing the battalion staff structures, alternative designs of mortar platoons, and alternative designs for Light Motorized Infantry Battalion (LMIB) platoons to improve command and control.

Other options were presented to General RisCassi during a decision briefing on 8 July. He directed the LMIB be reorganized with only three rifle squads per rifle platoon, and that the possibility of converting one company of the LMIB to a four rifle platoon organization prior to Caber Toss be investigated. He directed the 3rd Brigade not submit any formal MTOE changes, however, until after Caber Toss and Alderbrook III. Alderbrook III would be held sometime in November, after the Caber Toss test data had become available.

General RisCassi received a follow-on briefing on 27 July, which resulted in a number of changes. Each of three "type" infantry battalions would organize with standard medical, maintenance, support, communications, scout and heavy mortar platoons. In addition, the Light Attack Battalion (LAB) would have a Precision Guided Anti-Tank Missile Platoon. Many other minor shifts were directed, most of which dealt with equipment. The other major reorganization was within the LMIB, which was directed to reorganize its rifle companies. Two companies would consist of three platoons of three 8-man rifle squads and one 9-man weapons squad. The third company would have four platoons consisting of three 8-man rifle squads and one 8-man weapons squad.

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[7](1) Msg, Cdr FORSCOM to dist, 081815z Jun 83, sub: HTLD Phase III Transition Workshop, 25-29 Jul 83. (2) DF, CofS ADEA to CG ADEA, 22 Jun 83, sub: Bi-Weekly SIGACTS Report for 1-15 Jun. (3) DF, CofS ADEA to CG ADEA, n.d., sub: Bi-Weekly Significant Activities Report, 16-30 Jun.

The 3rd Brigade worked with ADEA to develop a provisional organization document reflecting all these changes. After Caber Toss this document would be refined line by line, and would be the basic working document for Alderbrook III, now scheduled for 21-23 November. The objective was to have the refinements ready to load during the January 1984 MOC window.[8]

In the meantime, the Phase III workshop was held at Fort McPherson, GA, at the end of July. The MTOEs were loaded. All but one of ADEA's requested exceptions to the Standards of Grade Authorization were approved by DA. The new MTOEs would have an effective date of 16 April 1984. At about the same time, TRADOC proposed a schedule for the Phase IV TOE development, which consisted of the Combat Support Aviation Battalion. The schedule ended with the TOEs being supplied to FORSCOM on 3 January 1984 for their conversion into MTOEs. The same message stated that the final phase, Phase V, consisting of the Division Headquarters and Headquarters Company and the Direct and General Support Field Artillery Battalions was due at FORSCOM on 1 July 1984. Later, the Direct and General Support Artillery Battalions were moved forward from Phase V to Phase IV. And still later, General RisCassi directed that the Phase IV units be loaded during the January-March MOC window. ADEA began action to accelerate the schedule to accommodate that.[9]

Also during July, the 9th had been busy preparing manpower documents, Schedules X, justifying the needed additions to the Fort Lewis Garrison TDA that were required by the downsized division. In Garrison, for example, where three hot meals a day were prepared in the Division's dining facilities, the Division did not have enough cooks. The same type of problem affected the Chapel Activities Specialists, the IG, Public Affairs, SJA, and the 9th's Command Section. In order to have the changes considered by the September out-of-cycle manpower board at DA, the documentation had to be completed by 12 August. This would

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[8](1) DF, CofS ADEA to CG ADEA, n.d., sub: Bi-Weekly Significant Actions Report (1-15 Jul 83). (2) Memo, S-3 3rd Bde to record, 1 [sic] Jul 83, sub: MTOE Proposal Brief to MG RisCassi 8 Jul 1983. (3) Memo, Cdr 3rd Bde to Dist, 3 Aug 83, sub: Reorganization Prior to FTX Caber Toss.

[9](1) Memo, ADEA Equip Trans Mgr to record, 4 Aug 83, sub: Trip Report-Phase III HTLD MTOE Workshop, 25-28 July 1983. (2) Msg, Cdr TRADOC to dist, 211814z Jul 83, sub: Proposed Schedule for Phase III HTLD T-TOE Development. (3) Msg, Cdr 9th Inf Div to Cdrs TRADOC and FORSCOM, 181830z Aug 83, sub: Schedule Change for Phase IV HTLD T-TOE Development. (4) DF, CofS ADEA to Cdr ADEA, 7 Oct 83, sub: Bi-Weekly Significant Activities Report (16-30 Sep 83).

allow for an on-site manpower survey by FORSCOM on 17-25 August, time to get the survey report written, and time to deliver the whole package to DA by the end of August, the cutoff date. The 9th had the Schedules X done by 2 August.[10]

General RisCassi had now been on the ground at Fort Lewis long enough to begin to draw some of his own conclusions regarding the direction the HTLD design should move. On 8 August he requested that TRADOC direct a closer working relationship between the Armor Center and School and ADEA, to include establishing a full-time liaison officer with ADEA. His logic was that what ADEA and the 9th were designing and producing was not a true infantry division but something akin to a cavalry division.

In the same message, RisCassi pointed out that what had actually been used in the field were not pure Assault Gun Battalions and Motorized Infantry Battalions, but actually Battalion Task Forces combining elements of these two. He commented that what might actually be needed was a Combined Arms Battalion. He was questioning the validity of the existing maneuver battalion design.

HTLD and the 10K Division

On the same day General RisCassi sent a message to the TRADOC Deputy Chief of Staff for Doctrine. In it he noted the new requirements placed on TRADOC, by General Wickham, to design a 10,000-man Light Infantry Division. In that message, RisCassi discussed several "lessons learned" by ADEA and the 9th about designing a division, but his primary concern was the role ADEA and the 9th would play in the development of the new division. He expressed concern over the confusion likely to result in the initiation of a second Light Division study while the HTLD was still in development. However, he did not feel it would be wise to re-orient the HTLD into a Light Division. This would cause the laying aside of too much effort and money already expended. His conclusion was that ADEA should be involved in the development of the 10,000-man (10K) division, but it and the HTLD should be kept separate. ADEA's files contained several draft DA memorandums and information papers which also addressed the question of whether the HTLD should become the 10K division, and how ADEA should be used. On 24 August, CAC, which had been given the task of designing the 10K division, formally asked for ADEA's assistance.

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[10](1) Msg, Cdr FORSCOM to Cdr I Corps, 011510z Jul 83, sub: Reorganization of the 9ID as a Prototype Light Division. (2) DF, Cdr 9th Inf Div to CofS ADEA, 2 Aug 83, sub: 9ID TDA Augmentation.

On 13 September, General RisCassi sent a message to FORSCOM in which he outlined what ADEA's position would be in each of three scenarios: the 10K division evaluated at Fort Lewis, and the HTLD eliminated; the 10K evaluated at Fort Lewis using a brigade of the 9th, simultaneous with development of the HTLD; and the 10K division evaluated somewhere else by TRADOC with ADEA pursuing various initiatives that would be applicable to Light Divisions in general. RisCassi closed the message with the statement that he would dicuss these options with General Wickham.[11]

General Wickham settled the question when he visited ADEA the next day. The HTLD and ADEA would continue as in the past. The 10K division would be a separate effort. Wickham also expressed interest in two topics which were to cause a major redirection of the HTLD: He voiced a desire to see the HTLD significantly reduced in size, and he was intrigued by the development of Combined Arms Battalions.

As a result of interest on the Chief of Staff's part, work began immediately on the HTLD redesign. By 24 September, an action plan and milestones had been developed which had the objective of a division of less than 14,000 men, and which utilized Combined Arms Battalions. This plan called for a work group process similar to that used to initially design the HTLD in January and February of 1982. The plan was disseminated to the major commanders and to the proponent centers and schools by message on 4 October. The first work group met the next day.[12]

It should be borne in mind that preparation for and conduct of exercise Caber Toss was going on concurrently. In addition, various tests and evaluations were ongoing throughout the summer, such as testing of the Light Air Cavalry Troop, the Division Distributed Command and Control System, and a HTLD Field Artillery study. ADEA and the 9th were involved in dozens of such studies, models, simulations, tests, and evaluations.

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[11](1) Msg, Cdr ADEA to Cdrs CAC USAIS & USAARMC, 081930z Aug 83, sub: Proponent Support to HTLD. (2) Msg, Cdr ADEA to TRADOC DCSDOC, 081700z Aug 83, sub: Small Infantry Division. (3) Msg, Cdr CAC to Cdr ADEA, 241530z Aug 83, sub: 10,000 Man Division. (4) Msg, Cdr ADEA to Cdr FORSCOM, 131600z Sep 83, sub: Force Structure and Design Initiative for an Army of Excellence.

[12](1) Msg, Cdr 9th Inf Div to dist, 161400z Sep 83, sub: CSA Visit. (2) DF, CofS ADEA to CG ADEA, 24 Sep 83, sub: Action Plan to Downsize HTLD. (3) Msg, Cdr ADEA to dist, 042350z Oct 83, sub: HTLD Restructuring.

Caber Toss would follow the same general six-phase scenario that Laser Mace had, but its emphasis was shifted from the maneuver battalions to the Combat Service Support structure, primarily the 3rd Forward Support Battalion, which was the 3rd Brigade support organization. A Master Events List had been developed over a two-month period and finalized during a command post exercise, Caber Train, in late August. This list involved actions in Class I (sustinance), Class III (petroleum, oil and lubricants), Class V (ammunition), and Class VIII (medical) resupply, and evacuation and maintenance of equipment. Personnel casualty evacuation and processing replacements was also strongly emphasized.

There were a number of other tests conducted during the exercise. Equipment, such as the Palletized Loading System, various radios and antennas, and field feeding units were tested, for example. Assessments were also made of some units other than 3rd Forward Support Battalion. The Medium Lift Helicopter Company, a dual-purpose chemical platoon, and support artillery units were assessed.

Caber Toss took place at Yakima Firing Center, 18-21 September. At its conclusion two colonels, experts in logistics who had observed the exercise at the request of the Logistics Center, were very enthusiastic about the Forward Support Battalion concept.

General RisCassi's impression was that there was adequate logistical structure to allow the Third Brigade combat team to fight its operational concepts. He felt that the DISCOM Commander had the most difficult command position in the Division during combat. Several areas needed further work, however. There needed to be better communications within logistic organizations, and they needed to be fully as mobile as the manuever units. Medical evacuation facilities had quickly been overwhelmed, as had vehicle recovery and evacuation units. Preconfigured packages of resupply ammunition needed to be refined, but the movement of ammunition had worked better than expected.

General RisCassi was pleased by the method used by the 9th to prepare for the exercise. Through a game simulation, the logistical demands were developed which were placed on the units in the field. He felt that through this technique, future exercises could combine both maneuver units and logistic units in effective, simultaneous exercises. In sum, a number of "fixes" needed to be made, but the system worked and showed good potential.[13]

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[13](1) Ltr, TRADOC DCSCD to Cdr Log Center, 27 Oct 83, sub: Evaluation of Forward Support Battalion Concept. (2) Ltr, Third Army to Cdr, Log Cen, 7 Oct 83, sub: Evaluation of the Forward Support Battalion Concept During Exercise Caber Toss. (3) Msg, Cdr ADEA to dist, 301400z Sep 83, sub: FTX Caber Toss Immediate Impressions.

As fiscal year 1983 came to a close at Fort Lewis, ADEA and the 9th still faced great challenges. On 1 October 1983, ADEA would lose its provisional status, and would be formally recognized as a field operating agency of the Department of the Army. It and the 9th had a clear-cut division redesign mission facing them, with the requirement to downsize and to develop Combined Arms Battalions.

GLOSSARY

AC	Active Component
ACAA	Army Concepts and Analysis Agency
ACAB	Air Cavalry Attack Brigade
ACR	Armored Cavalry Regiment
ADC	Assistant Division Commander
ADC-O	Assistant Division Commander (Operations)
ADC[E]	Assistant Division Commander (Evaluation)
ADC[S]	Assistant Division Commander (Support)
ADCSO	Assistant Deputy Chief of Staff for Operations
ADEA	Army Development and Employment Agency
AG	Adjutant General
AMSAA	Army Materiel System Analysis Agency
AR	Army Regulation
ARTEP	Army Training and Evaluation Program
ASB	Army Science Board
AURS	Automated Unit Reference Sheet
AUSA	Association of the U.S. Army
BCA	British, Canadian, Australian
BCE	Base-Level Commercial Equipment
BDM	The BDM Corporation
BOA	Basic Ordering Agreement
CAC	Combined Arms Center
CACDA	Combined Arms Center Development Activity
CACDAT&E	CAC Development Activity Test and Evaluation
CBAA	Cavalry Brigade (Air Attack)
CDEC	Combat Developments Experimentation Center
CEWI	Combat Electronic Warfare Intelligence
COB	Command Operating Budget
COL	Colonel
CPO	Civilian Personnel Officer
CPT	Captain
CPX	Command Post Exercise
CSA	Chief of Staff of the Army
CSS	Combat Service Support
C^3I	Command, Control, Communications, and Intelligence
DA	Department of the Army
DAMPL	Department of the Army Master Priority List
DARCOM	U.S. Army Development and Readiness Command
DCCS	Distributed Command and Control System
DCSI	Deputy Chief of Staff for Intelligence
DCSO	Deputy Chief of Staff for Operations
DCSPER	Deputy Chief of Staff for Personnel

DCSRDA	Deputy Chief of Staff for Research Development and Acquisition
DIO	Director of Industrial Operations
DISCOM	Division Support Command
DTP	Detailed Test Plan
ECM	Electronic Countermeasures
EW	Electronic Warfare
FAD	Fund Authorization Document
FAV	Fast Attack Vehicle
FOA	Field Operating Agency
FORSCOM	U.S. Army Forces Command
FSTC	Foreign Science and Technology Center
FTX	Field Training Exercise
FY	Fiscal Year
GAO	General Accounting Office
GEN	General
HEL	Human Engineering Laboratory
HHC	Headquarters and Headquarters Company
HMMWV	High-Mobility Multi-Purpose Wheeled Vehicle
HQDA	Headquarters, Department of the Army
HTLB	High Technology Light Brigade
HTLD	High Technology Light Division
HTTB	High Technology Test Bed
ID	Infantry Division
IEP	Independent Evaluation Plan
ILS	Integrated Logistics Support
IMII	Idea Management/Industry Interface
IMO	Installation Maintenance Officer/Office
IPR	In-Progress Review
JRDTF	Joint Rapid Deployment Task Force
JRX	Joint Readiness Exercise
LAB	Light Attack Battalion
LAV	Light Armored Vehicle
LMIB	Light Motorized Infantry Battalion
LNO	Liaison Officer
LOGC	U.S. Army Logistics Center
LT	Lieutenant
LTC	Lieutenant Colonel

MAC	Military Airlift Command
MACOM	Major Army Command
MAJ	Major
MAW	Military Airlift Wing
ME	Middle East
MILES	Multiple Integrated Laser Engagement Simulation
MILPERCEN	Military Personnel Center
MLRS	Multiple Launch Rocket System
MOC	Management of Change
MOS	Military Occupation Specialty
MOU	Memorandum of Understanding
MP	Military Police
MSA	Material Support Activity
MTOE	Modified Table of Organization and Equipment
NATO	North Atlantic Treaty Organization
NDI	Non-Developmental Item
NGB	National Guard Bureau
NTC	National Training Center
O&O	Organizational and Operational
OMA	Operation and Maintenance, Army
OPFOR	Opposing Forces
OSD	Office of the Secretary of Defense
OTP	Outlined Test Plan
PARR	Program Analysis and Resource Review
PDIP	Program Development Increment Package
POC	Point of Contact
POM	Program Objective Memorandum
QRP	Quick Reaction Program
RC	Reserve Component
RDA	Research and Development Associates, Incorporated
RDTE	Research Development Testing and Evaluation
(Ret)	Retired
ROTC	Reserve Officer Training Corps
RPV	Remotely Piloted Vehicle
SGA	Standards of Grade Authorizations
SPO	Special Project Officer
SWA	Southwest Asia

T-TOE	Test Table of Organization and Equipment
TACOM	Tank-Automotive Command
TCATA	TRADOC Combined Arms Test Activity
TDA	Table of Distribution and Allowances
TDY	Temporary Duty
TOE	Table of Organization and Equipment
TOW	Tube-Launched, Optically-Controlled, Wire-Guided
TRADOC	U.S. Army Training and Doctrine Command
TSP	Test Support Packages
URS	Unit Reference Sheet
USAF	United States Air Force
USAG	U.S. Army Garrison
USMC	United States Marine Corps
VCSA	Vice Chief of Staff of the Army
YFC	Yakima Firing Center

INDEX