The Modern Louisiana Maneuvers

FOREWORD

We live in an era of dynamic change—and dramatic technical advance. One of the most important responsibilities of military professionals is to anticipate, and accommodate, change as it occurs. The price of being caught unprepared is too often paid in blood. The subject of this monograph is a conscious design to accelerate the pace at which the Army translated new insights into active capabilities, the modern Louisiana Maneuvers—LAM.

The modern Louisiana Maneuvers were neither maneuvers per se, nor were they held in Louisiana. The original Louisiana Maneuvers were pre–World War II General Headquarters exercises initiated by General George C. Marshall to prepare the Army for World War II. They featured the field-testing of new doctrinal and organizational concepts, and of new equipment and schemes for its employment. They provided practical, hands-on experience in leading troops in the field with the most modern of configurations. They force-fed change to an institution that otherwise was only beginning to shake off its prewar somnolence.

General Gordon R. Sullivan, who became Chief of Staff in June 1991, realized that he too was tasked to change the Army radically. Sullivan understood that with the Cold War's end, declining defense budgets, and a shrinking force, he would preside over wrenching changes throughout the Army. In order to conduct those transformations effectively and to simultaneously maintain readiness and sustain modernization, he would need revised means; he was certain that the Army's Cold War processes of incremental change would prove too cumbersome for the dynamic times that lay ahead. The modern Louisiana Maneuvers provided the revised means Sullivan sought, and he chose their evocative name deliberately. Sullivan envisioned gathering the Army's senior leaders as a corporate Board of Directors to exercise collective wisdom in steering innovation. The LAM process relied upon the Army's then burgeoning simulations capability to inexpensively test new doctrinal and organizational ideas—and the effects of new operational concepts and equipment—without involving extraordinary masses of soldiers and equipment or extensive real estate. Exercises actually "in the dirt" testing new equipment and procedures were carefully designed to get the most possible information from the least possible expense and resourcing. The successes of LAM, and the maturation of digital information technologies, led to robust spiral development and the Force XXI Campaign that is producing today's digitized force.

LAM has been important to the Army of the 1990s in producing innovation and in changing the way in which the Army changes. This study is based upon a thorough examination of documents and upon extensive discussions with principal actors. It offers a relevant account of an important initiative and of a complex period in the Army's history. As you will find, much of our approach march into the twenty-first century is directly rooted in the results of the modern Louisiana Maneuvers.

Washington, D.C.
21 June 1999

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THE AUTHOR

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PREFACE

The preparation of this history of the U.S. Army's modern Louisiana Maneuvers (LAM) grew out of a requirement that GEN Gordon R. Sullivan, the Chief of Staff of the Army, placed upon the Army Center of Military History (CMH). The requirement appeared as part of his 22 May 1992 Letter of Instruction on LAM to BG Tommy R. Franks, the first Director of the new Louisiana Maneuvers Task Force. In that letter, GEN Sullivan directed the Chief of Military History to "document the proceedings and decisions of the LAM." The study which follows is the result.

As the Louisiana Maneuvers got under way, I was assigned the task in mid-1992 of covering LAM events and gathering information for an eventual CMH history of the process. It quickly became apparent that documenting LAM's proceedings, collecting, sharing, and storing information, and preparing and supporting preparation of an eventual history would require close and continuous cooperation between CMH and the TRADOC Command Historian's Office. To ensure that this occurred, the then–Chief of Military History, BG Harold W. Nelson, negotiated a Memorandum of Understanding with the TRADOC Command Historian, Dr. Henry O. Malone (signed 10 and 13 August 1992, respectively), which laid out the roles that CMH and the TRADOC Command Historian's Office would play. This document and the relationships that I was able to establish with various members of what is now the TRADOC History Office proved invaluable to the process of learning about LAM and collecting appropriate data on its proceedings. Dr. Anne W. Chapman of that office contributed mightily during LAM's first three years and proved particularly helpful as I labored to produce this volume. Dr. James T. Stensvaag, Dr. Malone's successor, also provided important assistance at key points.

As the LAM Task Force began winding up its operations during the first half of 1996, the Chief of Military History at that time, BG John W. Mountcastle, decided that writing the history of LAM should be begun and brought as quickly as possible to a conclusion. This work is the product of that decision, though realizing it proved rather more arduous than the decisionmakers first envisioned. General Mountcastle took a personal interest in the project and both guided much of its progress and facilitated its completion. Others at CMH provided both support and assistance as I produced the study. Dr. David W. Hogan, Jr., worked closely with me as I prepared the initial draft and helped to ensure that I clarified for the lay reader a number of passages that were mired in "bureaucratese." Dr. Terrence J. Gough read and commented helpfully upon the second draft and has provided useful

suggestions and comments throughout the production process. Ms. Catherine Heerin and her editorial team edited the manuscript and helped to smoothe a number of passages. Ms. Teresa Jameson succeeded in transforming the very rough collection of graphics I hoped to use into illustrations that are both useful and legible.

The efforts of the former members of the LAM Task Force have proven both extremely helpful and absolutely crucial to bringing the study to its current state. In addition to those whom I interviewed either individually or in a group setting or who provided answers to specific questions, I must recognize Mr. Charles M. Valliant, the Task Force's Deputy Director. Chuck ensured, first of all, that the Task Force's records were gathered from its directorates' various locations and transferred to me in all their volume. He also was instrumental in bringing about the "hotwash" group interview that took place in May 1996 and provided extensive, thoughtful comments and correctives as I worked through the various drafts, seeking to get the story right. I have tried, where I could, to recognize at least some of the contributions to this history of the many other members of the Task Force who made LAM work. Any attempt at a list of Task Force alumni who helped me risks omitting someone. I hope that all those who did assist me will accept my thanks.

GEN (Ret.) Gordon Sullivan and the many others who spoke with me and who took the time to provide comments and suggestions deserve recognition. GEN Sullivan, of course, was the author of these Louisiana Maneuvers and without his vision and perseverance not much of what resulted from them would have happened. In addition, he ensured that I received access to him and to portions of his papers that are still closely held and encouraged others of his colleagues to share their thoughts and experiences with me. I have listed those who permitted me to interview them in the last appendix and have sought to recognize throughout the text and notes their insights and contributions both to LAM and to this effort.

My point in laying out the preceding acknowledgments is that, although I wrote the monograph and am solely responsible for its contents and faults, I could not have gotten it to this point without a great deal of earnest cooperation, good advice, and extra effort on the part of a great many others. The years from 1991 through 1996 were a very rich and complex period in the Army's history, and this study addresses only cursorily a small part of what happened during those years. LAM and the Force XXI Army await a fuller treatment.

JAMES L. YARRISON

THE MODERN LOUISIANA MANEUVERS CHANGING THE WAY WE CHANGE

Executive Summary

GEN Gordon R. Sullivan took office as Chief of Staff of the United States Army on 21 June 1991. The Army of which he became Chief had just completed playing a central role in the allied victory over Iraq in Operation DESERT STORM and had been the primary instrument of America's success in freeing Panama from its dictator, Manuel Noriega, during Operation JUST CAUSE in late 1989. This Army, too, had been a mainstay of U.S. victory in the Cold War and had successfully rebuilt itself after the Vietnam War, under the leadership of visionary thinkers like Creighton W. Abrams, William E. DePuy, Edward C. Meyer, Donn A. Starry, and Carl E. Vuono.

GEN Sullivan was himself a wide-ranging thinker who followed in the tradition of these officers. He saw clearly, as did a number other Army leaders, that the 1991 Army must quickly become a very different force from the one that had won the Cold War and DESERT STORM. He was particularly concerned about the processes to effect change that the Army had developed over the course of the Cold War. However successful these processes had proven to be in that context, Sullivan believed that they were too inflexible and deliberately slow to enable the Army both to make the changes it needed then and to react quickly and agilely to future requirements for change. He frequently cited the fifteen years the Army had required to develop and field the M1 tank as an example of the institutionalized slowness that concerned him. Sullivan found himself confronted with a number of conditions that greatly taxed the Army: the end of the Cold War; large, congressionally mandated reductions in Army funding; concomitantly large reductions in the size of the force; and a series of contingency deployments. He thus concluded that in addition to reshaping the Army, he would need to change the way the Army changed itself and to do so in ways that permitted him to lead positively rather than merely react to circumstances. This monograph seeks to document how the Army thought about change during this very turbulent period in its history and to capture for those who follow some of the ways in which Sullivan reached his decision to mount the modern Louisiana Maneuvers and how they worked.

Over the course of his first several months in office, Sullivan labored to rewrite the Army's basic operational doctrine and to develop a process that would produce a new force structure. The new force structure would have to be more appropriate to the CONUS-based, force-projection Army he and his advisers saw emerging—more modular, more lethal, more easily deployed. He sensed from the beginning that he must be able to lead the Army through the wrenching changes that many foresaw over the next

several years and to maintain the Army's effectiveness as a fighting force. To accomplish that, he would need a vehicle that permitted him to exercise positive leadership.

The Concepts-Based Requirements System (CBRS), which the Army had developed during the Cold War, was oriented on dollars and the Program Objective Memorandum (POM) process. CBRS governed nearly all Army change processes and had done so successfully throughout that conflict. Tied as it was into the Defense Department's Planning, Programming, and Budgeting System and into the congressional funding process, CBRS and the mechanisms that supported it would likely continue to govern most Army modernization for the foreseeable future. Sullivan determined, however, that CBRS would not suffice as a leadership vehicle for the new era.

As he engaged in this process of "discovery learning," seeking such a vehicle, Sullivan sought advice and good ideas from a vast array of colleagues, former subordinates, and consultants. To name all of those with whom he discussed these and related matters is not possible. He certainly did consult GENs Dennis J. Reimer, Frederick M. Franks, J .H. Binford Peay III, Jimmy D. Ross, Leon E. Salomon, John H. Tilelli, GEN (Ret.) Carl E. Vuono, MGs Lon E. Maggart and William A. Stofft, and BG Harold W. Nelson.

Based on his discussions, his sense of Army history, and particularly his reading of Christopher Gabel's *The U.S. Army GHQ Maneuvers of 1941* (published in fall 1991), Sullivan decided that to change the way the Army changed he needed to engage in a "Louisiana Maneuvers" (LAM) of his own. He said that he took the name from GEN George C. Marshall's pre–World War II General Headquarters exercises in Louisiana, Texas, and the Carolinas because, "I was compelled by the power of Marshall's ideas and by his intent to conduct experiments that would be the basis for designing new units and battlefield processes. . . . Borrowing Marshall's title was a signal that business as usual was not good enough, that I was fostering innovation and growth in extraordinary ways . . . I made it part of my office to signal that I—not merely my staff—was going to be personally involved."

During the last months of 1991 and the beginning of 1992, the Chief of Staff worked with his colleagues and advisers to develop a concept for iterative experimentation that would make extensive use of computer-based simulations to test proposed doctrine, procedures, organizations, and equipment. He relied in this work upon his staff and upon his senior commanders, notably GEN Franks, the U.S. Army Training and Doctrine Command (TRADOC) Commander, within whose command much of the original analysis of the concept's viability took place. Sullivan's objective was to evolve a process that would enable the Army to arrive at solutions that had been proven in simulation before changing policies or doctrine, buying equipment, or reorganizing forces. The result of this effort, and of the interplay of creative tensions among the Army's senior leaders that contributed to the evolution of LAM, was a strategically agile process that involved those leaders as a corporate Board of Directors in guiding the Army into the 21st century. The personal extension of the Chief of Staff's Office organized to make LAM work was the LAM Task Force, headquartered at Fort Monroe, Virginia.

The LAM process, which functioned from mid-1992 to mid-1994, was a cyclic exercise with several definite steps. The Task Force first solicited issues and good ideas from the Army's major commands. It next presented the issues to a General Officer Working Group (GOWG), composed of GO representatives of the commands submitting the issues, that discussed and approved or disapproved the various issues and prioritized them before forwarding them to the Board of Directors (BoD). The BoD then considered the issues forwarded from the GOWG, considered other issues proposed by BoD members, and approved selected issues for experimentation and investigation during that year's LAM cycle. The BoD also pri-

oritized the allocation of LAM seed monies and assigned proponency for the issues, fixing a single command with responsibility for developing the issue investigation plans and for coordinating with the LAM Task Force and other interested agencies.

The culmination of these investigative experiments each year was to be a General Headquarters exercise (GHQx), which would involve Headquarters, Department of the Army (HQDA), and the MACOM headquarters. Although planned initially to begin in Fiscal Year (FY) 1994, the first, warm-up GHQx actually took place in FY 1993, melding the HQDA portion of the exercise with experimentation in two theater CINCs' exercises. GHQx's of increasing sophistication were conducted in each of the succeeding two years, producing significant, instructive insights on all phases of the conflict cycle for the headquarters involved.

Sullivan's use of the LAM process and his reliance upon its results for important decisions caused discomfort for a number of his colleagues. Many of these officers placed great trust in the CBRS, given its past successes, and Sullivan's use of a different process, not initially tied to the POM, generated considerable debate among them. The Chief knew that these discussions were intended to produce the best possible result for the Army in a time of constrained resources and that this result could be achieved only by a full airing of opposing views and attainment of a consensus. He never saw the various disagreements as resulting from disloyalty; rather, he believed they produced a healthy, creative tension that was vital to achieving the best result. He encouraged this tension and the discussions and saw both as positive and productive for himself and the institution.

The first two years of LAM, mid-1992 to mid-1994, saw the LAM process developed and emplaced. Using the process, Sullivan and the rest of the Army's senior leaders were able to focus the institution's attention on a number of high-priority programs that would help to ensure the U.S. Army's preeminence into the 21st century. Involvement in the LAM process helped bring to fruition a number of Army programs, some of which had begun before LAM had opened for business but received critical additional impetus from that involvement. Inclusion in LAM accelerated various logistics-enhancement programs, such as Total Asset Visibility, that were designed to remedy problems identified during Desert Storm. The TRADOC-AMC effort to "own the night" led to several productive results, including the decision to integrate horizontally across the force the development of Second Generation Forward-Looking InfraRed and other night-fighting technologies. Contemporaneous with this effort was one centered upon digitizing the battlefield, using automated, interactive exchanges of positional and other information to provide a common, relevant picture of the battlefield. The development and emplacement of these digital linkages would enable the forces so equipped to operate more responsively, to anticipate their own and their opponents' next moves, to gain better protection through greater dispersion, and to avoid fratricide through better combat identification. Still another effort, worked through the Army Space and Strategic Defense Command, was the quick but deliberate testing and packaging of several commercially available, off-the-shelf, space-based communications technologies for the use of contingency forces. The first package went to Army forces deployed in Somalia. All these initiatives, as well as a number of other, equally vital efforts, benefited from their investigation as issues in the LAM process, from their continuing visibility with the senior leadership through the deliberations of the BoD, and from the positive guidance these senior leaders provided at each session. Over this period, as well, the views of the senior leadership evolved so that many of the initial issues were seen to be important aspects of broader, more inclusive, more basic issues. One example of this evolution was the quick inclusion of "owning the night" under the topic of "continuous op-

erations" as one of its important subsidiary aspects. All of these efforts were aided immeasurably by GEN Franks' development and chartering of TRADOC's six Battle Labs, which organized and conducted equipment- and organization-specific experiments that contributed, in most cases, to the resolution of LAM issues.

LAM's first two years of full operation coincided with BG Tommy R. Franks' stewardship of the Task Force as its Director. During that period, the Task Force itself was located primarily at Fort Monroe, Virginia, with a directorate at Fort Leavenworth, Kansas, closely tied to the National Simulations Center there. Indeed, the Task Force created its own simulation center at Fort Monroe to demonstrate the emerging potential of simulations for the work of the maneuvers. The Task Force also maintained a liaison office in the Pentagon.

By the beginning of 1994, Sullivan had begun to prepare the Army and the LAM Task Force to open the Force XXI Campaign to redesign the Army for the 21st century. The Task Force drafted the plan, envisioning a campaign that would proceed along three axes. The main thrust, called Joint Venture, incorporated the efforts of all the Army's commands and agencies under TRADOC leadership to redesign the operating force. Key to the Joint Venture effort was the designation of the 2d Armored Division as the Army's Experimental Force with control and coordination mechanisms designed to avoid the hazards that befell the earlier, institutionally isolated 9th Infantry Division/High Technology Test Bed. A supporting thrust was to be the Institutional/TDA axis in which the VCSA would oversee the redesign of the TDA Army so that it could better support the revamped operating force. The third axis included the activities of the newly organized Army Digitization Office. This office, under the auspices of the Chief of Staff, sought to develop and acquire the hardware and software necessary to digitize the operating force and to link that force digitally with the various supporting headquarters. In actuality, the ADO axis served to wrap the other two efforts together.

BG David Ohle, who replaced MG Franks as the Director of the LAM Task Force, also received a change of mission once the BoD decided during its 12–14 July 1994 sessions to implement the Force XXI Campaign Plan. In addition, Sullivan announced that he would relocate the LAM Task Force from Fort Monroe to the Washington, D.C., area to manage and integrate the campaign's opening phases using a revised LAM process. In the end, the Task Force headquarters and parts of two directorates moved to the Pentagon, while outlying directorates operated at Carlisle Barracks, Pennsylvania, Fort Monroe, and Fort Leavenworth.

The LAM Task Force quickly devised and implemented a procedure for deconflicting, integrating, and synchronizing the many actions that had to occur across the Army for the Force XXI Campaign to succeed. For example, the Task Force instituted a Synchronization Working Group (SWG) as a colonel-level forum designed to precede the GOWG in the revised LAM-cum-Force XXI Process. These SWG meetings became unwieldy, informational gatherings, with resolution of many issues taking place outside their venues, in part because the SWG had no authority over the allocation or expenditure of funds. Also, the staffs within HQDA and the MACOMs who ordinarily coordinated staff actions quickly assumed responsibility for coordinating the parts of the Force XXI Campaign within their purview, much as Sullivan had envisioned. The DCSOPS, who began his own more frequent, more empowered, less unwieldy Force XXI synchronization meetings only a month after the campaign opened, led the way in this normalization of campaign coordination.

As a result of reorienting the LAM process to further the Force XXI Campaign and concentrating its attention on prosecuting that campaign, the Army let the portion of the process that had worked well in its first two years fall into disuse. Issues considered

in the GOWGs and BoDs either had some tie to Force XXI or they were discarded ("archived" was the term used). With the LAM process moribund, and finding its synchronization role increasingly handled through normal staff channels, the LAM Task Force accentuated its efforts to seek out new technologies and simulations for the Army's use. The Task Force also became Sullivan's personal group of scouts and special mission agency during the last six months of his term.

One effect of the disappearance of LAM and of the staffs' taking control of the synchronization of Force XXI issues and actions was to remove most members of the BoD, the Army's corporate leadership, from their former close involvement in guiding the evolution of the force. This began to occur during the last year of GEN Sullivan's term and accelerated after GEN Dennis J. Reimer replaced him as Chief of Staff, when Reimer changed the name of those senior leadership meetings to commanders conferences.

Another effect, despite Reimer's initial use of the LAM Task Force as a special mission agency, was to point up to the new Chief of Staff that the continued existence of the Task Force without a Louisiana Maneuvers process to guide was apparently redundant. He therefore announced in March 1996 that the Louisiana Maneuvers had been institutionalized within the Army and that the LAM Task Force, its mission complete, would disband on 1 July 1996.

The Louisiana Maneuvers clearly served the Army well. LAM changed the way the Army looked at change, if only briefly, and its legacy is clear and diverse. Many initiatives, like Total Asset Visibility, Battlefield Digitization, Owning the Night, and the GHQx's, received great impetus from their handling under LAM and kept the Army foremost among land combat forces. LAM-induced closer cooperation between the Army and industry also accelerated the acquisition process and made it more efficient and cost effective.

Although drawing final conclusions about the long-term effects of LAM on the Army is premature, it is possible to suggest several indicators. The first would be to ascertain over the next several years the actual institutionalization of the change processes that LAM included. In view of the Army's current high operational tempo and its accompanying lack of funds, this is difficult to assess as yet. Have Army change processes indeed been permanently modified to include elements of the LAM process? More important, did the Louisiana Maneuvers foster an enduring propensity for and receptivity to change within the Army so that the institution will continue to seek better, innovative solutions? Or will the Army reach a point at which it is intellectually satisfied with a future status quo? Although many signs are encouraging, only time and a longer historical perspective will tell.

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INTRODUCTION

On 9 March 1992, GEN Gordon R. Sullivan, Chief of Staff of the U.S. Army, announced his intention to alter radically the way the Army approached change. In his message to the Army's senior leaders, Sullivan described a new concept, which he named "the Louisiana Maneuvers" after the historic exercises that the U.S. Army used to test new organizations and doctrine on the eve of World War II. These new maneuvers, however, were not another series of large-unit field exercises as their predecessors had been; in fact, they were not, strictly speaking, maneuvers at all. The Louisiana Maneuvers were the expression of GEN Sullivan's vision of a systematic way to assess and improve the Army's ability to carry out its mission. The Chief of Staff envisioned the new Louisiana Maneuvers as using a variety of means, including rapid feedback from experimentation and exercises and an increasingly sophisticated and extensive use of computer-based simulations, to shape the post–Cold War Army.[1] From that point until mid-1995, the modern Louisiana Maneuvers spearheaded institutional change within the Army.

This monograph is primarily an institutional history of the modern Louisiana Maneuvers, describing their purpose, organization, functions, and activities. The history of the maneuvers offers useful insights into the Army's approach and reaction to change. A full assessment of the maneuvers' long-term effects on the Army must await implementation of the primary initiatives that resulted from the Louisiana Maneuvers process, and since one of Sullivan's purposes was to change the way the Army changes, such an assessment must also address the institution's long-term propensity for change. This study, though, can draw several tentative conclusions about the importance of Sullivan's vision for the future Army and about the Louisiana Maneuvers' initial effect on shaping the Army of the 21st century.[2]

The original Louisiana Maneuvers took their name from several high-level, increasingly complex, experiment-based field exercises that the Army conducted, principally in Louisiana, during 1940 and 1941. The term is most closely associated with the General Headquarters exercises that Army Chief of Staff GEN George C. Marshall and MG Lesley J. McNair, GHQ Chief of Staff, mounted in 1941 in Louisiana and then in the Carolinas. These maneuvers culminated a series of corps- and field army–level exercises that the Army had inaugurated in 1938 to train troops and units, test newly developed doctrinal and organizational concepts, identify equipment requirements, and evaluate the future senior leaders of the wartime Army. By 14 September 1941, 472,000 troops were concentrated for these maneuvers.[3]

GENs Marshall and McNair intended to shake the Army out of its prewar, peacetime mentality, accelerate preparations for war, and focus the Army on the daunting challenges of the impending global conflict. The overall effect of the fast-paced maneuvers was electrifying—both for the soldiers involved and for the Army, which sensed it was much better prepared for war as a result of the extensive field exercises.[4] The importance of the Louisiana Maneuvers for the Army's success in World War II and the significant degree to which they influenced structural change throughout the service left a lasting impression on the institution's culture and lore. Indeed, the very name, "Louisiana Maneuvers," connotes bold experimentation and a willingness to take risks.[5]

As GEN Sullivan began his term as Chief of Staff, he believed that America's post–Cold War Army stood in need of changes as great as those the Louisiana Maneuvers had wrought. An avid student of history, Sullivan had thought at length about Marshall and the actions he had taken to prepare the Army for World War II. Sullivan knew the significance of the Louisiana Maneuvers in galvanizing the pre–World War II Army, and believed that the post–Cold War Army would have to make similarly wrenching innovations, though for different reasons.[6] Sullivan also had reflected upon the statements of GENs J. Lawton Collins and Matthew B. Ridgway on the country's dangerous proclivity for cutting Army size and readiness below safe levels in the aftermath of World War II and Korea. To simply "go along" with such measures "to get along" was a formula for disaster.[7]

While serving as Deputy Commandant of the U.S. Army Command and General Staff College at Fort Leavenworth, Kansas, from 1987 to 1988, Sullivan had been concerned with the issue of effecting change. Among his concerns in that assignment was the need to ensure that the Army's modeling and simulations capabilities kept pace with those of the rest of the Department of Defense and that the Army built its own self-sustaining pool of experts in the field.[8] He had first begun working with simulation-based training while serving as Assistant Commandant of the U.S. Army Armor School under MG Frederic J. Brown from late 1983 to mid-1985.

What he saw at Leavenworth so impressed him with the potential of the microprocessor as a facilitator of Army training that he even suggested in his end-of-tour interview: "I think that the Army could do a 'Louisiana maneuver' in the early 90s, using the microprocessor, and have XXIII Corps, the Leavenworth School House Corps, play one corps and III Corps, out of Fort Hood, play the other. I think that's doable."[9] He was also aware of the work of Dr. Christopher R. Gabel, a staff college instructor at Leavenworth, who was in the process of revising his dissertation on the Louisiana Maneuvers for publication.[10]

During his next assignment as Commander of the 1st Infantry Division at Fort Riley, Kansas, Sullivan contemplated establishing a special training relationship with the Combined Arms Center at Leavenworth. This relationship would have used the increasingly sophisticated capabilities of the modeling and simulations community at the Combined Arms Center to enhance the training and readiness of his own unit through a combination of live, virtual, and constructive simulation exercises. These exercises would have taken place under the rubric "Louisiana Maneuvers," a term that was only the latest expression of Sullivan's habit of using historical terms and catch phrases.[11] Overtaken by other priorities and by Sullivan's short tenure at Riley, this idea never reached fruition, but the seed planted at Leavenworth continued to grow.[12]

As Vice Chief of Staff from 1990 to 1991 and then as Chief of Staff, Sullivan again showed his proclivity for using historical references in staking out his objectives. He frequently used the shorthand phrase "No more Task Force Smiths" to warn against replicating the experience of the pre–Korean War Army. Speaking to a wide variety of audiences, Sullivan reminded them of the dan-

gers of being unprepared. He recounted the Army's requirements to reduce its manning following World War II, a period in which most units were at only two-thirds strength. Provided with worn, obsolescent World War II equipment, and short of funds and ammunition for meaningful combat training, the Army of 1945–1950 was neither trained nor ready. When North Korea attacked South Korea in the summer of 1950, the poorly equipped and undermanned troops of the 21st Infantry were organized as Task Force Smith, which was rushed to Korea without preparatory unit training and lacking a great deal of its essential equipment. It was defeated in detail. "No more Task Force Smiths" came to signify Sullivan's commitment to all soldiers and to his other audiences that he would brook no such "hollow Army" on his watch.

Reading Gabel's newly published book on the GHQ maneuvers of 1941 in the fall of 1991 crystallized Sullivan's thinking on how to avoid a hollow Army. He later explained that in choosing "Louisiana Maneuvers" as the name of his ultimate innovation,

> I was compelled by the power of Marshall's idea and by his intent to conduct *experiments* that would be the basis for designing new units and battlefield by the power of Marshall's idea and by his intent to conduct processes. . . .*Borrowing Marshall's title was a signal that business as usual was not good enough, that I was fostering innovation and growth in extraordinary ways*, but that the outcome would not be completely foreign or threatening to the Army. *I made it part of my office to signal that I—not merely my staff—was going to be personally involved.*[13]

Sullivan ultimately created the Louisiana Maneuvers Task Force as his instrument to manage and integrate the several aspects of the modern Louisiana Maneuvers. He organized the Task Force as part of his office, appointed himself as the Director of the Louisiana Maneuvers (LAM), appointed the TRADOC commander, GEN Frederick M. Franks, as the Deputy Director of the maneuvers, and established the new Task Force initially at Fort Monroe, Virginia. The Task Force developed what became known as the "LAM process" and created mechanisms for coordinating the flow of information, generating and resolving issues, integrating issue-related experimentation into various exercises, and forcing decisions from the Army's senior leadership. When the Force XXI modernization campaign began in mid-July 1994, the Task Force reorganized to manage the effort and coordinate Army-wide experimentation and innovation.

Thus, in the spring of 1992, Sullivan mobilized the forces of the Army's history to support his effort fundamentally to change his service. This study discusses the background of his decision to conduct the modern Louisiana Maneuvers and describes his decisionmaking process, the development of the LAM process, and the formation of the LAM Task Force. It then traces the history of the maneuvers through the decision to mount the Force XXI Campaign and the relocation and reorganization of the Task Force. The final portion of the study addresses the Force XXI Campaign and the role of the Louisiana Maneuvers and the LAM Task Force until the disbandment of the Task Force on 1 July 1996. It ends by drawing several tentative conclusions about the maneuvers, the activities of the Task Force, and the progress of the Force XXI Campaign to that point. Rather than a definitive account, it is a first step toward understanding the evolution and the results of these Louisiana Maneuvers.

Notes

[1]Msg, from HQDA, DACS-ZA, 091415Z March 1992, subject: Louisiana Maneuvers 1994, Personal For GEN Galvin, CINCEUR; GEN Saint, CINCUSAREUR; GEN RisCassi, Cdr USAEIGHT; GEN Burba, Cdr FORSCOM; GEN Stiner, CINCSOC; GEN Joulwan, CINCSO; GEN Franks, Cdr TRADOC; GEN Ross, Cdr AMC; LTG Corns, Cdr USARPAC; GEN Reimer, VCSA; LTG Owens, DCSINT; LTG Peay, DCSOPS; LTG Salomon, DCSLOG; LTG Hilmes, DISC4; MG Carney, DCSPER; from GEN Sullivan, CSA; para. 1. Document is at Appendix D. See also Sullivan's remarks to the Training and Doctrine Command DESERT STORM Conference, Ft. Monroe, Virginia, 2 March 1992. Both documents are in Gordon R. Sullivan, *The Collected Works of the Thirty-second Chief of Staff, United States Army: Gordon R. Sullivan, General, United States Army, Chief of Staff, June 1991-June 1995*, ed. Jerry R. Bolzak (Washington, D.C.: U.S. Army Center of Military History, 1996) (hereafter cited as Sullivan, *Collected Works*), pp. 103-105 and 44-45, respectively.

[2]Sullivan later observed, "For better or for worse, we were not unaware of the challenges we faced and we tried to balance today with tomorrow. It is important our successors know we knew we were faced with a number of challenges and we tried hard to control our own destiny. I think it is important for them to know we were not simply along for the ride." Letter, GEN (Ret.) Gordon R. Sullivan to BG John W. Mountcastle, Chief of Military History, 1 July 1998. Historian's files.

[3]Particularly useful for the several precursor exercises in 1938-1940 is Jean R. Moenk, *A History of Large-Scale Army Maneuvers in the United States, 1935-1964* (Fort Monroe, VA: Historical Branch, Office of the Deputy Chief of Staff for Military Operations and Reserve Forces, 1969), pp. 23-70. See also Christopher R. Gabel, *The U.S. Army GHQ Maneuvers of 1941* (Washington, D.C.: U.S. Army Center of Military History, 1991), pp. 23-24, 59 (hereafter referred to as Gabel, *GHQ Maneuvers*); Richard M. Ketcham, "Warming Up On the Sidelines for World War II," *Smithsonian*, 21:6 (September 1991), 93-94.

[4]Gabel, *GHQ Maneuvers*, pp. 191-194.

[5]Gabel, *GHQ Maneuvers*, pp. 5-6.

[6]See Msg, from HQDA, DACS-ZA, 091415Z March 1992, subject: Louisiana Maneuvers 1994, para. 3, at Appendix D.

[7]See Sullivan's reflections on 7 April 1991, shortly after being notified of his selection to be Chief of Staff. The reflections contain quotes from both Collins and Ridgway. In the Gordon R. Sullivan Papers, Personal Papers, Sketch Books, December 1989-February 1995, Box 1 of 5, Sketchbook #5, April 1991. The Gordon R. Sullivan Papers are hereafter cited as Sullivan Papers. The Sullivan Papers are archived at the U.S. Army Military History Institute, Carlisle Barracks, Pennsylvania.

[8]Interview, GEN (Ret.) Gordon R. Sullivan with Yarrison, 29 April 1997, pp. 36-37. Transcripts of this and of all interviews cited hereafter are in the historian's files.

[9]Interview, Maj. Gen. Sullivan, Deputy Commandant, Command and General Staff College, with Dr. Daniel Hughes, CAC Historian, 21 June 1988, pp. 8-9, in CAC and Ft. Leavenworth Archives, CGSC 1988, HQ 008. Sullivan's thoughts along these lines had been further stimulated by a 25 May 1988 informal memo, subject: Command and Control, by COL Lon E. Maggart, who would be his chief of staff in the 1st ID. Maggart argued for using computer-generated graphics to help senior commanders integrate operational information during command post briefings. This memo is in the Sullivan Papers, Personal Papers, Sketch Books, December 1989-February 1995, Box 1 of 5, Sketchbook #1, 1st Infantry Division, September 1988-August 1989.

[10]Interview, BG (Ret.) Harold W. Nelson with Yarrison, 18 September 1996, pp. 3, 13-14. Gabel's book was finally published in the fall of 1991.

[11]Excerpt from Interview, Dr. Richard A. Hunt with COL (Ret.) Michael V. Harper, 6 July 1995, p. 21, appended as addendum to Interview, Harper with Yarrison, 2 October 1996. The use of "Louisiana Maneuvers" as a sobriquet for the exercises apparently first was suggested at Fort Riley during a Saturday morning meeting there in early 1989. See Interview, COL (Ret.) Richard A. Cowell with Yarrison, 2 Jul 96, pp. 2-3.

[12]Interview, Cowell with Yarrison, 2 Jun 96, p. 3. See also Sullivan describing his use of historic symbols and his use of Louisiana Maneuvers as a metaphor in this particular case in Gordon R. Sullivan and Michael V. Harper, *Hope Is Not a Method: What Business Leaders Can Learn From America's Army* (New York: Times Books/Random House, 1996), pp. 12-13, 59-60, 169-170 (hereafter cited as Sullivan and Harper, *Hope Is Not a Method)*. Sullivan had made a habit during his career of using historical terms and catch phrases, tying programs of substantive innovation with references to their historical underpinnings and precursors. He found that such historical analogues resonated with his intended military audiences. See also Interview, MG Lon E. Maggart with Yarrison, 27 Sep 96, as it discusses Sullivan's Ready First Country, Spearhead Country, and Republican Flats programs (pp. 9-10, 56-57). While commanding the 1st

Infantry Division (Mechanized) (1st ID) at Fort Riley, Kansas, he had instituted the Republican Flats program, named after the Republican River bank on which the fort is located. The program linked his vision for enhancing the 1st ID's readiness, training, and quality of life to its historic ties to Fort Riley. Republican Flats pamphlet in Sullivan Papers, Pre-CSA Papers, Box 6 of 11, Fort Riley, file 5, folder 7.

[13] Sullivan and Harper, *Hope Is Not a Method*, p. 169, emphasis added.

Chapter 1

THE GENESIS OF THE LOUISIANA MANEUVERS AND THE ORGANIZATION OF THE LAM TASK FORCE

Gordon R. Sullivan's tenure as Chief of Staff of the Army began on 21 June 1991, two years after the fall of the Berlin Wall and the end of the Cold War. The threat to Western security that had preoccupied two generations of Americans seemed to have all but disappeared. Sullivan realized that the Army, considered by many the best in the world, needed to change substantially to cope effectively with the new, post–Cold War strategic and budgetary realities.[1] He immediately set himself to the task, seeking ways to effect the necessary changes—to "break the mold" of past Cold War thinking and of previous cycles of postwar unreadiness, but without "breaking the bank."[2]

GEN Gordon R. Sullivan

Sullivan's Challenge

The new Chief took command of a successful Army. In December 1989, Operation JUST CAUSE had quickly deposed Panamanian dictator Manuel Noriega and reinstituted democracy in that Central American nation. From August 1990 to March 1991, American forces in DESERT SHIELD and DESERT STORM had spearheaded the coalition that ultimately liberated Kuwait from its Iraqi conquerors. The U.S. Army had played leading roles in both victories.

Sullivan and the senior leaders of his generation had forged this force in the lean years following the Vietnam War. They took their cue from a chain of innovative thinkers and leaders that included prominently GENs Creighton W. Abrams (CSA 1972–1974), William E. DePuy, Donn A. Starry, and Carl E. Vuono (CSA 1987–1991). Sullivan and his peers formed the All-Volunteer Army, elevated personnel standards, developed more flexible, modern doctrine, and brought about a sea change in training philosophies and methods for both individuals and units. The creation of the sev-

eral Combat Training Centers was one of their most significant achievements.

Over time, these leaders and the changes they wrought literally revolutionized the post-Vietnam Army. The transition was also marked by the introduction of modern tanks, helicopters, and fighting vehicles and by ever more sophisticated, simulation-based training exercises against Soviet-style opponents. By 1990 the United States had produced the most capable Army of its day.[3] As a troop leader and staff officer, Sullivan had learned from his predecessors and had made his own contributions to these achievements.[4]

The atmosphere surrounding the Army in mid-1991, however, was not completely favorable. Congress and much of the American public reacted to the end of the Cold War by calling for a revised military strategy and reductions in the cost and size of the U.S. defense establishment. Reductions in the overall defense budget and in the Army's share of those budgets had begun in 1987, and incremental cuts in Army manning and force structure had taken effect shortly thereafter. While Chief of Staff from 1987 to 1991, GEN Vuono had initiated the ANTAEUS, ROBUST, and VANGUARD studies to assess the implications of various kinds of reductions in Army organizations.[5] Vuono intended through these studies to anticipate the coming reductions, so as to develop plans that would enable the Army to execute the cuts smoothly and with the least impact on readiness. He wanted to have in place at any stage of a reduction the most lethal and effective Army possible. To define such an Army, Vuono had devised and publicized what he termed his six "imperatives"—doctrine, organizations, training, modernization, leader development, and quality soldiers—the balance of which would produce the ready force needed.[6]

Because of the vagaries of the Defense budgets during those years, Vuono was only partially successful in maintaining the readiest possible force. Congressional budget actions necessitated deeper, quicker reductions in manning and force structure than he had intended or believed safe. In addition, the Chairman of the Joint Chiefs of Staff from 1989 to 1993, GEN Colin L. Powell, had assessed the changed world scene and had proposed a revised military strategy and the smaller force he believed necessary to implement it in late 1989. Powell's proposal included an Army force structure of ten to twelve active divisions for his "base force," a smaller Army than the fourteen-division active force that Vuono believed was the minimum acceptable.[7] The Chairman's base force proposal, and Vuono's ultimate acquiescence in it, smoothed the way for congressional actions designed to reduce military costs sharply and quickly.[8]

Vuono's right-hand man in these actions was his long-time associate, Gordon Sullivan. Sullivan first had served with Vuono in 1979 in the 1st Infantry Division. While Sullivan was Deputy Commandant of the Command and General Staff College (1987–1988), Vuono had named him to head the Army Leadership Development Study. Sullivan then served Chief of Staff Vuono as the Deputy Chief of Staff for Operations (DCSOPS) (1989–1990) and as the Vice Chief of Staff (1990–1991). He thus had been closely involved in the Army's planning to "shape the force" and was at least peripherally involved in Vuono's exchanges with Powell over the base force.[9]

These experiences greatly influenced Sullivan's initial actions as Vuono's successor in confronting the dilemma of how to lead and maintain a potent, ready Army while adapting the force to the reduced resources and altered demands of the post–Cold War era. He knew, as did many of his advisers, that he needed to make the necessary changes in the Army while he still had the time and maneuvering room to define and choose among alternatives, rather than wait for change to be forced upon the Army and upon him. Even in the first days of his tenure, Sullivan realized that he needed a different, more flexible, more responsive process to create the new Army. As he frequently explained, the Army "needs to change the way we change."

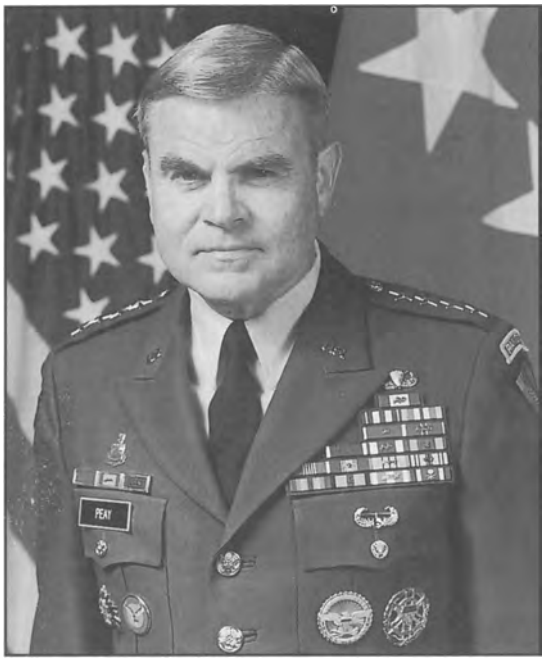
Sullivan became concerned about Army change processes because he foresaw that the reshaping, the outline of which he could only dimly envision in mid-1991, would produce a substantially different force, not just a smaller version of the Cold War Army. New political circumstances, base realignments and closures, obligations under the Strategic Arms Reduction Talks (START) and Conventional Forces in Europe (CFE) Treaties and Mutual and Balanced Force Reduction (MBFR) agreements, and smaller budgets would require the consolidation on American soil of much of what remained of the Army. To respond to crises overseas, the Army thus would have to project its forces into most crisis areas from the continental United States—a significant change from the thought, if not the strict practice, of the Cold War era. Whatever the process of change, Sullivan firmly believed that the Army must remain trained and ready to fulfill its strategic roles whenever called. A return to the "hollow Army" of the previous postwar era could not be allowed.[10]

To effect such changes in the force under these conditions, he needed a mechanism that would produce results as revolutionary for the Army as those wrought by Marshall's General Headquarters Maneuvers in Louisiana, Texas, and the Carolinas in 1941. Yet, as a former DCSOPS and Vice Chief, Sullivan understood that the Army Staff was almost totally absorbed with the service's day-to-day business and with established procedures. He realized the difficulty of finding the people, energy, and flexibility within the Army Staff to break through that absorption and redirect the Staff's momentum toward establishing "a focal point designed to bring together and nurture new ideas."[11]

Sullivan also understood that the Army Staff's preoccupation with its extensive daily responsibilities was not the only source of inertia facing him. He sensed the complacency of much of the Army after its victory in the deserts of Southwest Asia. Many of the senior commanders in that conflict had concluded that increasing the robustness and combat power of the kinds of units that had participated in that campaign constituted the primary adjustment the Army needed to make to prepare for future wars.[12] The most significant recommendations for changes in the design of the force that had fought DESERT STORM concerned reorganizing and enhancing logistics organizations and procedures. Sullivan realized the Army would have to go far beyond such changes—in different directions—and believed that it would have to begin doing so with some urgency.

Even at this early stage, he sought alternatives to the normal, "business-as-usual" force development process which he saw as being too slow and, once engaged, too inflexible and dollar-oriented. Perhaps more important, Sullivan believed he needed a device that would enable him, as the Chief, to lead the Army in a positive, forceful manner through the changes he knew would come. He later commented that this was "a process I considered too $-related. . . . I felt I needed a 'vehicle' I could use to discuss the future and create a future for an organization which had trend lines moving in a down slope. As imperfect as LAM was it gave me a platform from which to lead. I didn't think [a] money focus would give me that opportunity. *Leadership Challenge* was great—I had to invent, or at least I felt I did, a vehicle to use to exercise leadership."[13]

The change process that Sullivan found insufficiently inspirational to serve him as a leadership vehicle was the Army's Concepts-Based Requirements System (CBRS) and the force development and force integration processes that followed from CBRS. CBRS responded to the multifaceted Soviet threat, particularly in Europe, and provided the Cold War Army a safe means at the front end of the force development process for effecting mostly incremental, evolutionary change. The system considered the threat, the national military strategy, and extant capabilities under Vuono's six imperatives in determining requirements for new or revised doctrine and the organizations, materiel, training, and



LTG J. H. Binford Peay III

leader development to implement it. Doctrine, in this system, drove the other changes. Both CBRS and the whole force integration process were closely tied to the Army's Planning, Programming, Budgeting, and Execution System (PPBES), DOD's PPBS, and the congressional budget cycle. A primary philosophical underpinning of CBRS was that innovation would be integrated into the force in ways that would always leave it ready to fight at a moment's notice. Potential innovations thus moved usually slowly and always deliberately through an elaborate series of careful evaluative steps that necessarily consumed great amounts of time—hence the fifteen years it took to field the M1 tank, to which Sullivan frequently referred. Almost never were those involved with starting a development program still in place when the system was fielded. A refined, streamlined version of CBRS, called Enhanced CBRS, was promulgated in 1993 in an effort to make the process more flexible and responsive to the Force Projection Army's needs in the post–Cold War era.[14]

CBRS was not without significant merit. Using it, Army leaders had produced the force that was successful in the Cold War and in Operations JUST CAUSE and DESERT SHIELD/DESERT STORM. In addition, advocates of CBRS were many, vocal, and highly placed, with most believing that it and the Army's associated Cold War–based change processes were adequate, with only minor modifications, for the post–Cold War period's uncertainties.[15]

Some of these leaders' earlier experiences, like those of LTG J. H. Binford Peay III, Sullivan's DCSOPS, also contributed to their reliance on the established processes. Peay had had considerable dealings with the 9th Infantry Division/High Technology Test Bed (HTTB) and the Army Development and Employment Agency (ADEA) as both the I Corps G–3 and later as the division artillery commander in the 9th during the mid-1980s. The 9th ID/HTTB was conceived as a means of rapidly developing new concepts in the areas of battlefield mobility, lethality, and strategic deployability. As a "motorized" division, it enjoyed a priority on resources, both human and materiel. But the division was organizationally isolated, both from the rest of the Army, since it reported almost directly to the Chief of Staff, and from the established means of institutionalizing lessons learned from its experiments through the normal TRADOC combat developments process. This isolation from established processes and channels had caused many potentially useful and valuable concepts to be lost and much of the Army's investment in them apparently wasted. Peay thus was concerned that the Army protect itself and its future investments from a similar fate and believed that the best way to ensure the viability of proposed changes was to integrate them from the beginning into the established change and resourcing processes: CBRS and PPBES.[16]

Sullivan himself understood that much of the mainstream, high-cost change in the Army, at least for the present, would have to proceed within some version of the established system because of its ties to PPBES and the ways in which Congress and DOD allo-

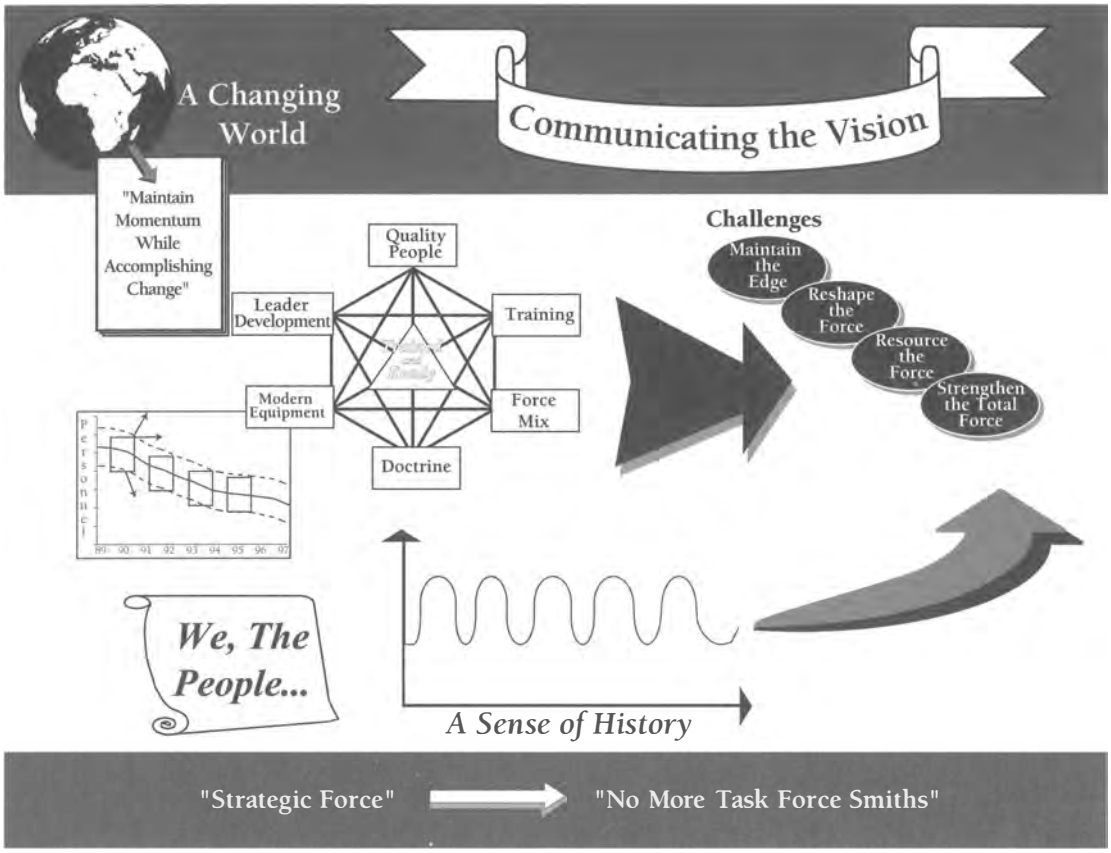


Figure 1

cated resources to the Army. The Army lacked the time, the energy, and the constituency to bring about the changes in law and practice that would have been necessary to modify those systems significantly. Sullivan further recognized that, for many programs, the extant system ultimately would produce acceptable results; he also knew, however, that the leadership vehicle he needed would have to operate ahead of that system and be able to work flexibly both within and outside that system's boundaries.[17]

Discovery Learning: Sullivan Decides How To Change the Army

In his first months as Chief, Sullivan sought to define clearly the results or goals that he believed were necessary and wanted to achieve. His initial thoughts about changing the Army were not specifically oriented on any "Louisiana Maneuvers"—either Marshall's or some new version. Thinking perhaps of the confusion surrounding the formation of the Army's light infantry divisions in 1983–1984, he was concerned that the service carefully consider any changes it decided to make. At the same time, he knew that the Army had to maintain its readiness to fight, whatever else took place. During his first few months as Chief of Staff, he spoke several times of breaking the historic cycle of major fluctuations in Army readiness and size between wars. In too many of those cases, the Army had needed to regain its wartime competence through costly experience in the first battles of the next war.[18] Sullivan committed himself to avoid this interwar "hollow Army," as exemplified by his adoption of the motto: "No more Task Force Smiths." (*Figure 1* is a briefing slide from this period.)[19]

Given the constraints within which he worked, it is not surprising that Sullivan initially made a few false starts. Eager to build momentum for change within the Army, he began work on redesigning the Army's divisions during the first few weeks of his term. While en route to Europe in late June for his first visit as Chief of Staff, he analyzed several proposals for new division designs and identified options for further analysis. By early July 1991, however, Sullivan had realized, as he advised the DCSOPS and his Staff Group, that the Army needed to proceed more deliberately in reshaping its combat units than his earlier consideration of the redesign proposals indicated. He discarded the redesign options he had developed, along with a tentative timetable that would have fielded a prototype division and slice only two years later. Central in his mind—and in line with CBRS—was the need to finalize the Army's force-projection doctrine for the post–Cold War era before actually reorganizing the force. This doctrine, formulated in response to the new national military strategy, would drive the changes in the design of the force.[20] Pursuing his intent to include senior Army leaders in the corporate decisionmaking of the Army, he discussed revising the doctrine with the Army's four-star generals at the Summer Senior Commanders Conference, 6–8 August 1991.[21]

Also that August, GEN Frederick M. Franks assumed command of the Army Training and Doctrine Command (TRADOC).[22] Franks took very seriously TRADOC's role as the architect of the Army's future forces. He came to the command with many ideas about the ways in which land warfare was changing—ideas based on the Army's experience in Operation JUST CAUSE and on his own experiences as the VII Corps Commander in Operation DESERT STORM. He also had some definite thoughts on how Army doctrine should evolve to accommodate those changes, which he enunciated in terms of five "battle dynamics": early entry, lethality, survivability; battle space—mounted and dismounted; depth and simultaneous attack; battle command; and sustainment. These battle dynamics ultimately became part of the new doctrine.[23]

GEN Frederick M. Franks

After Franks had visited the elements of his command over the next few months and assessed their prospective role in accomplishing TRADOC's multifaceted mission, he came away with the sense that the Army had not established institutions to experiment with the changing nature of warfare. Thus, when he visited Sullivan on 1 November 1991, he discussed with the Chief of Staff the results of his assessment and recommended that the Army create some mechanism to experiment with change. In support of his recommendation, Franks cited examples from recent Army history, including both the Louisiana Maneuvers and the Howze Board studies that had resulted in the air assault concepts first tested and implemented by the Army in the early 1960s. Given his command's role as architect of the future force, Franks believed he should begin this experimentation with change in TRADOC.[24]

As it happened, BG Harold W. Nelson, Chief of Military History, had just given Sullivan one of the first copies of Christopher

R. Gabel's recently published book, *The U.S. Army GHQ Maneuvers of 1941*. Sullivan devoured it over the weekend of 18–20 October and passed out copies to the members of the General Staff Council the following Monday, emphasizing the importance of the insights in its penultimate chapter, which described how the Army's leaders went about identifying and making necessary changes in light of the maneuvers' results. For Sullivan, the book pointed out clearly the path that he should take. That weekend's reading and contemplation led to his decision that he would conduct a "Louisiana Maneuver" of his own to generate the necessary momentum for change. He also resolved, based on his earlier experiences, to use simulations and computers as part of that vehicle to set the necessary changes in motion and to speed their progress through iterative, simulation-based experiments within exercises while husbanding resources. Such experimentation created a win-win situation for the Army. Experiments, by their nature, can be conducted without fear of failure and can be used to learn what works and what does not, based on the experiment's governing hypothesis. The use of simulations to conduct them, while not cost-free, made them greatly less expensive.[25]

Sullivan and Franks understood each other well and agreed on many things about the Army, its doctrine, and the need for deliberate change. As AirLand Operations doctrine developed, they frequently discussed the emerging doctrine, conversing face-to-face or by telephone several times a week. Since both saw the evolution of the doctrine as inextricably linked with the other changes needed in the Army, a considerable part of their discussions also revolved around how the Army should change and what form those changes should take.[26]

Sullivan and Franks largely agreed, as well, on the pace at which change ought to proceed in the Army. Both men felt the Army could absorb only so many changes at any one time without losing its ability to respond to crises. They recognized that the Army had to reduce its size, inactivating and redesignating major units, and restationing many units in Europe and in the United States.[27] At the same time, both men also understood that the Army could not afford to make everything else, including force redesign, await the final outcome of either the doctrinal debate or the ongoing force reductions. The rapid evolution of the world around them would not permit that luxury. Thus, they would need to proceed along multiple lines of inquiry to investigate simultaneously as many alternative courses of action as possible. The emerging potential of distributed interactive simulations—different simulations linked electronically in ways that enabled them to interact—made such investigations possible and feasible, affording the Army the ability to test and evaluate materiel and force design options in simulation before actually executing them.

In seeking information and advice on the challenges confronting him, Sullivan cast wide his net. As in more usual matters, he made great use of the talents available to him on the Army Staff, notably the DCSOPS, LTG Peay; the DCSLOG, LTG Jimmy D. Ross (and, from March 1992, LTG Leon E. Salomon); his other staff deputies; and the head of the Army Initiatives Group in the ODCSOPS, COL Jack A. LeCuyer. Peay and Ross, longtime associates of Sullivan, often exchanged views with the Chief on doctrine, organization, and other subjects. Sullivan's own personal staff—particularly COL Michael V. Harper, the Chief of his Staff Group, and LTC Arthur "Rick" Gutwald, who was intimately involved in much of the early Louisiana Maneuvers spadework—provided input as well. The interaction of the Staff Group with LeCuyer, primarily, with other ODCSOPS and Army Staff officers, and with TRADOC was crucial to forging the Louisiana Maneuvers concept.[28]

Sullivan also took counsel of a variety of other friends, colleagues, and advisers as he sought ways to lead his evolving Army into the future. His coterie of contacts included historians, subordinates from previous op-

erational and staff assignments, and others who served him and the Army as colleagues, planners, and consultants. He usually communicated with these individuals informally and sporadically, depending on the information he needed and the type of advice he thought he required. Sometimes, Sullivan convened groups of these people to gather different perspectives on the issues confronting him. Those who knew him well often submitted unsolicited memos, essays, or articles to stimulate his thinking, even after he became Chief of Staff.[29]

Historians were among those whom he consulted most frequently. He had known MG William A. Stofft since they were students together in the Armor Officers Advanced Course at Fort Knox, 1964–1965, and he had maintained contact with Stofft as the latter moved on to become the Army's Chief of Military History, Director of Management on the Army Staff, and, after 1991, Commandant of the Army War College. Stofft provided historically based insights and advice, a function that BG Nelson, Stofft's successor as Chief of Military History, fulfilled as well. Sullivan had also known historian Dr. Roger J. Spiller since his tenure as Deputy Commandant of the Command and General Staff College. These historians provided Sullivan with additional grist for his intellectual mill.[30]

The range of former colleagues with whom the Chief maintained contact was extensive. In addition to Franks, Peay, Ross, and others with whom he routinely interacted anyway, he enjoyed close and longstanding ties with COL Lon E. Maggart. A fellow Armor officer, Maggart had long been associated with the community of Army intellectuals, beginning with his membership in GEN William E. DePuy's "Boathouse Gang" of doctrine writers who had produced the 1976 edition of FM 100–5 under GEN DePuy's guidance. This manual had integrated lessons learned from the 1973 Arab–Israeli War with other important doctrinal concepts to produce a startlingly new approach to Army operations. Maggart had served with Sullivan in the 3d Armored Division and the 1st Infantry Division and had maintained close contact with him over the intervening years, providing Sullivan a sounding board for ideas and a source of fresh thoughts.[31] Still another former subordinate was COL Robert D. Rodgers. Rodgers had worked for Sullivan and Maggart in both the 3d Armored Division and the 1st Infantry Division, and he had maintained contact with Sullivan over the years as well.[32] COL Richard A. Cowell, who came to the LAM Task Force as head of the Issues and then the Synchronization Directorate and later became the Task Force's last long-term Director, had served as Sullivan's cavalry squadron commander in the 1st Infantry Division. This list does not begin to exhaust the number of other officers to whom Sullivan turned for advice and information and with whom he "thought out loud" and discussed different ideas.[33]

Consultants in various fields also made contributions to Sullivan's thinking. Dr. Lynn Davis, then the Head of the RAND Arroyo Center, had received extensive briefings from TRADOC's DCS for Analysis (DCS-A) on the LAM concept and supported it. She then conversed with Sullivan several times and wrote several notes and essays in early 1992 to help him develop his own emerging concept of the Louisiana Maneuvers.[34] Another consultant whose input had some impact was LTG (Ret.) Frederic J. Brown, Sullivan's former boss as the Armor Center Commander, and an Army intellectual of long standing. Brown corresponded with Sullivan sporadically on the future course of land warfare and the Army.[35] Sullivan also made a point of discussing the Louisiana Maneuvers with GEN (Ret.) Jack N. Merritt, President of the Association of the United States Army, in order to gain the insights that the head of the Army's support organization could provide.[36]

In all of Sullivan's deliberations he considered ways to take advantage of distributed interactive simulations (DIS) to speed the process of change, shorten test and ac-

quisition cycles, and save money and lives while producing a more effective force. As Deputy Commandant at Fort Leavenworth, Sullivan had become intimately familiar with the power of DIS and could see in the Army's emerging capability in that arena a powerful tool that could speed achievement of many of these objectives. Thus, on a visit to Leavenworth on 12 September 1991, he engaged in a lengthy discussion over breakfast with GEN Franks, LTG Peay, and LTG Wilson A. Shoffner, Commander of the Combined Arms Command (CAC) and Fort Leavenworth. During that discussion, he addressed the electronic battlefield and emphasized the necessity of integrating creatively the Army's existing simulations capabilities.[37] During another trip to Leavenworth on 3–4 December 1991, he toured and received a briefing on the National Simulations Center, its new facility ("the Beehive"), and the Army's progress on harnessing DIS from COL Gale N. Smith, the center's head. Sullivan expressed considerable interest and directed Shoffner, Smith's commander, to work with the Army War College, the Army Staff, and the major commands to link, by 1994, the Army's emerging simulation capabilities for the purpose of a large-scale maneuver, which he called Louisiana Maneuvers.[38] At that point, Sullivan still thought of the Louisiana Maneuvers as a single event rather than an ongoing process. Only during February did the thought emerge, perhaps from several sources, that such a continuing process would better serve the Army. (See *Figure 2* an early visual conceptualization of the Louisiana Maneuvers.)[39]

Shoffner gathered a team of colonels from across the Army at Fort Leavenworth in January 1992 to perform the analysis the Chief of Staff had directed. Representatives from HQDA, AMC, FORSCOM, the Army War College, elsewhere in TRADOC, and other organizations participated in the week-long study in Classroom 5 of Bell Hall. Among those representatives was LTC Charles Venable, a member of TRADOC's DCS-A who was already helping to form the LAM Task Force. The participants wargamed the Louisiana Maneuvers with particular attention to the ways in which simulations could support them. They examined the issues concerning the Army and its functions under Title 10, U.S. Code, as well as tactics, techniques, procedures, hardware and software issues, and deficiencies in the available support. They then sought to define the simulations or the hardware or software that the maneuvers could employ.[40] Shoffner presented the results of the study to GEN Franks and several of his subordinates later that month. He also presented a similar briefing, entitled "Louisiana Maneuvers Concept," to Sullivan and others on 28 January as a preliminary to the Senior Commanders Conference at the end of March.

The Leavenworth analysis, Shoffner's presentations, and further work by the Deputy Chief of Staff for Analysis (DCS-A) at TRADOC showed that GEN Sullivan would need a special task force to conduct the Louisiana Maneuvers. Such a task force would enable Sullivan to dissociate the effort from the control of the Army Staff, institutionalize it, and have it perform a "forcing" function—that is, act as an enforcer of his decisions and orders and force actions and decisions from others—for the Chief. Shoffner probably was disposed to favor a task force in any case because of his previous experiences with special studies—and may have wanted the task force subordinated to him at CAC and reporting directly to the Chief. Franks, on the other hand, seemed to feel at this point that TRADOC could handle the requirement adequately within its existing structure, because experimentation with the changing nature of warfare was already a significant part of TRADOC's mission.[41]

Franks' views notwithstanding, Sullivan soon came to realize he would need a group that would operate under his own auspices, both for reasons cited above and to be free of the procedures and politics of the established Army Staff.[42] The Shoffner-directed study had indicated that use of the Army's burgeoning modeling and simulations capability to assess

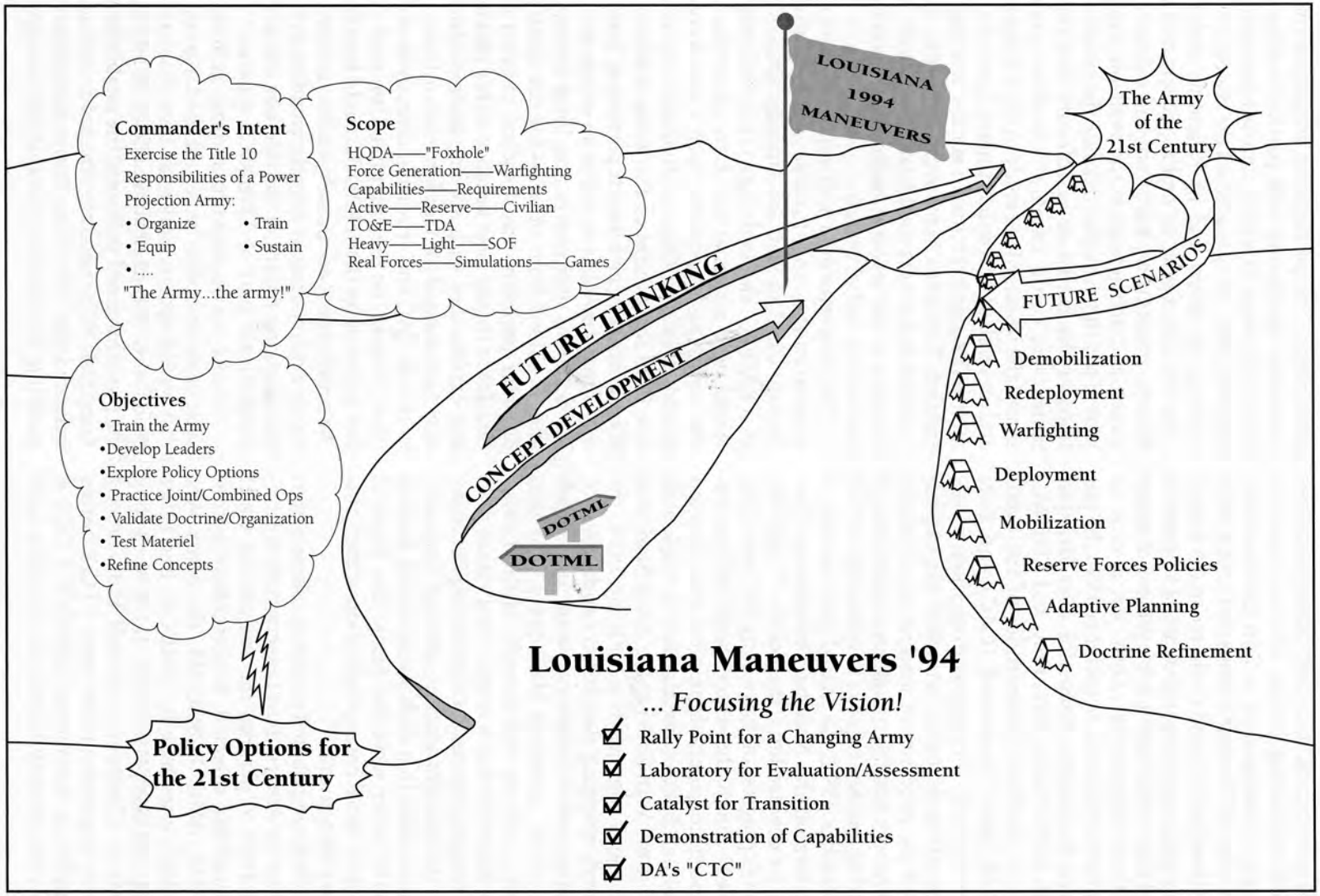

Commander's Intent
Exercise the Title 10 Responsibilities of a Power Projection Army:
• Organize
• Train
• Equip
• Sustain
• ....
"The Army...the army!"
Scope
HQDA——"Foxhole"
Force Generation——Warfighting
Capabilities——Requirements
Active——Reserve——Civilian
TO&E——TDA
Heavy——Light——SOF
Real Forces——Simulations——Games
Objectives
• Train the Army
•Develop Leaders
•Explore Policy Options
• Practice Joint/Combined Ops
• Validate Doctrine/Organization
• Test Materiel
•Refine Concepts
Policy Options for the 21st Century
LOUISIANA 1994 MANEUVERS
FUTURE THINKING
CONCEPT DEVELOPMENT
DOTML
DOTML
The Army of the 21st Century
FUTURE SCENARIOS
Demobilization
Redeployment
Warfighting
Deployment
Mobilization
Reserve Forces Policies
Adaptive Planning
Doctrine Refinement
Louisiana Maneuvers '94
... Focusing the Vision!
Rally Point for a Changing Army
Laboratory for Evaluation/Assessment
Catalyst for Transition
Demonstration of Capabilities
DA's "CTC"

Figure 2

options was feasible.[43] Sullivan also recognized that he would have to balance his own need to exercise control over the Louisiana Maneuvers and direct the Army's future with Franks' focus on TRADOC's role as architect of that future. His ultimate decision was to create a task force that would be part of his office and under his direct auspices as the overall director of the maneuvers. However, he would place the task force at Fort Monroe, in part to take advantage of Franks' offer of support, and also to allow Franks to serve as Deputy Director of the maneuvers, a decision he had made earlier.[44] An independent organization was also necessitated by the evolution of Sullivan's conception of the maneuvers away from a single, one-time event, however large, that an existing agency might well have organized and run, to an ongoing process whose end he could not then envision. As Harper remembered, between Thanksgiving 1991 and mid-February 1992, Sullivan's thinking about the Louisiana Maneuvers had evolved from a single event to an ongoing process to stimulate learning.[45] In his address to the AUSA Winter Symposium in Orlando, Florida, 19 February 1992, Sullivan first publicly described the Louisiana Maneuvers 1994 as a process rather than a single event.[46] This characterization continued into the future.

Competing Visions of How To Change an Army

Sullivan approached changing the way the Army changed knowing that he needed to get the resulting process "about right"; he could not imperil readiness nor could he leave the Army without an effective change process. To do this, he understood clearly that he could not mandate change without input from his senior colleagues; nor could he simply enunciate his own ideas and expect those colleagues to fall meekly into line. Indeed, for them to have done so would have been dangerous for him and for the Army. Instead, he would have to foster the sort of creative tensions among the Army's senior leaders that would elicit a full debate of all competing views as to how a new change process should evolve and proceed. Without such a debate and the achievement of a solid consensus, grounded in the collective wisdom of the group, he might risk deciding on a less prudent or fruitful course of action for the Army than it might otherwise take.[47]

Such debates naturally took place at the executive sessions of various commanders conferences and meetings of senior leaders. The assembled leaders generally agreed fairly quickly upon the vast majority of the items discussed at such gatherings, since most had been discussed often and generated little controversy. But these meetings also involved very different people with different experiences and, sometimes, opposing, strongly held views of what might be best for the Army. All views normally would be forthrightly expressed. These senior officers held firm to the principle that "disagreement is not disloyalty," enabling disagreements to be aired and debated in the spirit of arriving at the best solution for the Army. Never did GEN Sullivan perceive any of the opinions aired in these meetings to indicate a lack of loyalty on the part of the disagreeing party to him personally or to the Army. In fact, several very senior leaders worked actively to muster support for Sullivan's effort. The challenge for the participants lay in ensuring that their disagreements remained inside the conference room and did not color their actions outside it.[48]

While Sullivan's thinking about the Louisiana Maneuvers as a process to govern change in the Army was evolving, the DCSOPS, the Staff Group, and TRADOC DCS-A elements made several efforts over the course of late 1991 and early 1992 to develop a statement of the concept that would govern the maneuvers. Of necessity, this statement proved hard to finalize, for although all sought as best they could to support and give substance to Sullivan's intent, the Chief of Staff's own thinking about LAM constantly evolved during that time as he learned more about how he would have to proceed. The back-and-forth exchanges

among the players contributed greatly to that learning and evolution. A number of those involved in the concept's definition, even some at the highest levels, were unsure of where Sullivan wanted to go with LAM, particularly in terms of its relationship to existing Army processes. For some, their own perceptions of how such change ought best to occur colored their understanding of Sullivan's dissatisfaction with the existing processes and procedures and of how he wanted to effect change.[49]

One challenge in the struggle to develop a workable concept statement appears to have been the differing views of Sullivan and Peay on the Louisiana Maneuvers. Sullivan's concept was an expansive one. He wanted to "break the mold," get away from business as usual, work quickly and flexibly to evaluate issues and options, and allow the Army's "Board of Directors"—its fully involved senior generals—to consider issues and decide on them, as a corporate body, for the good of the Army. Key to the success of this process would be the relative speed with which full decision and action cycles could be completed. He thus saw the emerging Louisiana Maneuvers process as the best way to ensure that the most productive changes occurred in a timely manner with the Army's leaders fully engaged in guiding and implementing them. He focused mostly on operational-level issues because those were the aspects of the prospective maneuvers that he thought would provide the greatest returns for the Army.[50]

Peay's view, while supportive, was materially different. As the DCSOPS, and later as the Vice Chief of Staff, he believed that the force development processes that had governed change in the Army during the Cold War and that he, as DCSOPS, controlled, were entirely adequate to bring about whatever future alterations might be needed. Indeed, he believed that working through those processes was vital to ensuring that those changes that did occur were properly funded and institutionalized. In early 1992, he forwarded a thoughtful memorandum to Sullivan that described an exercise for training senior Army leaders for operations at the theater level of war. He voiced a number of suggestions and concerns about what he envisioned as the shape of the 1994 exercise, including discussions of the potential perils of joint involvement and of who should direct the exercise (CSA as Director, TRADOC Commander as Deputy Director, VCSA to chair in-process reviews, DCSOPS as lead ARSTAF proponent). Sullivan eventually adopted many of Peay's suggestions, but his vision of the purpose of LAM and of the form it should take remained different.[51]

By 1994 Peay's views had evolved somewhat and, in that year, he did describe the Louisiana Maneuvers as useful and suggested they might "make inroads on the margins" in the future—after the process had been in existence for over two years. He favored the intellectual debate and investigations entailed in the LAM process and found the results of the General Headquarters exercises useful, but he believed that the Army would continue to handle the high-cost issues through the normal, computer-linked process by means of which the services developed their Program Objective Memoranda (POM)—which, for established programs, was true. The POM projected prioritized funding requirements for approved programs for the five years beyond the current budget fiscal year. Most of the major funding decisions, Peay believed, would take place before the LAM process could act on the issues involved. He viewed the Board of Directors as a group of senior professionals who cooperated in the LAM process as another aspect of their assigned responsibilities, not as a separate body.[52]

One closely involved observer characterized the difference between Peay's and Sullivan's views on LAM as a disjuncture between Peay's concern with funding and protecting the whole Army in constrained times and Sullivan's focus on the need for effecting change in a time- and resource-constrained window. Peay, as both the DCSOPS and the Vice Chief of Staff, was principally

responsible for ensuring that the Army consistently functioned as smoothly as possible. For Peay and his successors, many major initiatives and activities had to be kept constantly on track to ensure the Army stayed ready and progressing. In their view, these activities supported GEN Sullivan's overall vision for the Army and provided the most capable force the Army could field within the constraints of its resources. Peay characterized these activities—ultimately, fourteen—as "major muscle movements." They included such programs as acquiring necessary sealift ships, emplacing POMCUS materiel afloat, implementing total asset visibility, exploring force digitization, and developing Joint Publication 3.0, an important Joint doctrinal manual.[53] Simply managing these and the other important actions for which he was responsible imposed considerable demands on his time and energies. In his view the Louisiana Maneuvers constituted a special program, in his view, in only one of his many areas of concern, and he wanted to ensure that his institutional interests in what became the LAM's mission area were not disrupted by LAM activities.[54]

GEN John H. Tilelli, Peay's successor as DCSOPS and as VCSA, has observed that Peay was also very concerned that LAM's process and activities not overwhelm and break the CBRS, which he knew worked, whatever streamlining benefits LAM achieved. Given the Army's constrained finances at the time and the ongoing drawdown and BRAC activities, Peay's attitude was reasonable.[55]

Whatever the opposing views aired in senior leader debates, Sullivan wanted to proceed with LAM. On 9 March 1992, he announced his concept for the maneuvers to the Army's senior leaders.[56] The message did not end the Army Staff's work on LAM but rather moved this effort into a new phase as the Staff sought to define the Louisiana Maneuvers process and organization. At a Louisiana Maneuvers in-process review for the Army senior leadership on 24 March, Sullivan approved the latest version of the concept and indicated that it should be presented to the Army's top commanders at the Spring Senior Commanders Conference at the end of March. He also stated that he needed to narrow the scope of the concept and that he would provide a list of his expectations for LAM to accompany a draft prepared by the Vice Chief of Staff and the Staff Group.[57] By the next day, the Staff Group provided a draft statement of the Chief of Staff's expectations for the Louisiana Maneuvers. Sullivan and the other conferees reworked it and, eventually, it reached the status of a charter.

GEN John H. Tilelli

Even at this stage, debate continued. Again, the various agencies developed differing versions of a charter, the most prominent being drafted by TRADOC. By mid-April, the ODCSOPS had evolved its own charter version, which Peay forwarded to GEN Franks. This proposal limited the operations of the LAM Task Force by confining the scope of its inquiries to strategic and Title 10 issues and imposed laborious approval procedures for its consideration of issues that would have rendered it unable to function agilely, as Sullivan envisioned. The

BG Tommy R. Franks

ODCSOPS draft charter met a cool response within TRADOC and elsewhere and resulted in a 16 April coordination meeting in which TRADOC and ODCSOPS representatives produced a much revised draft charter. TRADOC forwarded the revised document to LTG Peay on 23 April. As written, it embodies much of what came to be the charter of the LAM Task Force.[58]

An important aspect of revising the LAM Task Force charter included increasingly elaborate attempts at defining what became the "LAM process"—the procedure by which issues and suggestions from the field Army passed through the LAM chain to the Army's senior leaders for decision. First, the Chief of Staff's "war council" of senior Army leaders was to meet to resolve issues involving scenarios, policy options, and exercise outcomes. The council was to produce an action plan for conducting the LAM exercises. After the exercises, the war council would meet again to discuss their outcomes and recommend adjustments to policy and to provide a focus for the next round of exercises.[59]

Sullivan's draft list of expectations also mentioned a General Officer (GO) In-Process Review (IPR) working group, as suggested by LAM Task Force representatives. This group was to consist of general officer representatives of the war council members who would meet to analyze issues the LAM Office had gathered and prepared for their consideration. The participants in the GO IPR meeting would then decide which issues would go to the war council for its consideration. GEN Franks' contemporaneous draft charter included similar language.[60]

A Staff Group briefing to Sullivan in early May 1992 laid out the terminology that would be associated with the LAM process throughout its existence. It recommended that the LAM Office be labeled the LAM Task Force, the war council be called the LAM Board of Directors, in keeping with its corporate function, and the GO IPR be called a GO Working Group "that clearly has the [responsibility] to represent the Directors." The briefing also recommended revisions to the draft charter prepared by ODCSOPS and TRADOC.[61]

The final evolution in terminology, as well as substance, occurred after Sullivan, on 4 May, announced that BG Tommy R. Franks, Assistant Commandant of the U.S. Army Field Artillery School, would become the LAM Task Force's Executive Director. The early May briefing recommended, and Sullivan agreed, that the LAM Task Force's charter should be embodied in a letter of instruction (LOI) to BG Franks. The direct, personal, though widely distributed, letter enabled Sullivan to lay out the operating relationships among the many constituencies that would be involved in LAM; Sullivan and Harper redrafted most of the LOI on a trip to Canada from 18 to 20 May. Sullivan finalized and signed the LOI on 22 May and dispatched it to all concerned. (*Figure 3* depicts the relationship among the various entities in the LAM structure.)[62]

Forming the Louisiana Maneuvers Task Force

Even before January 1992, GEN Franks had begun to use TRADOC resources to launch the Louisiana Maneuvers. At his di-

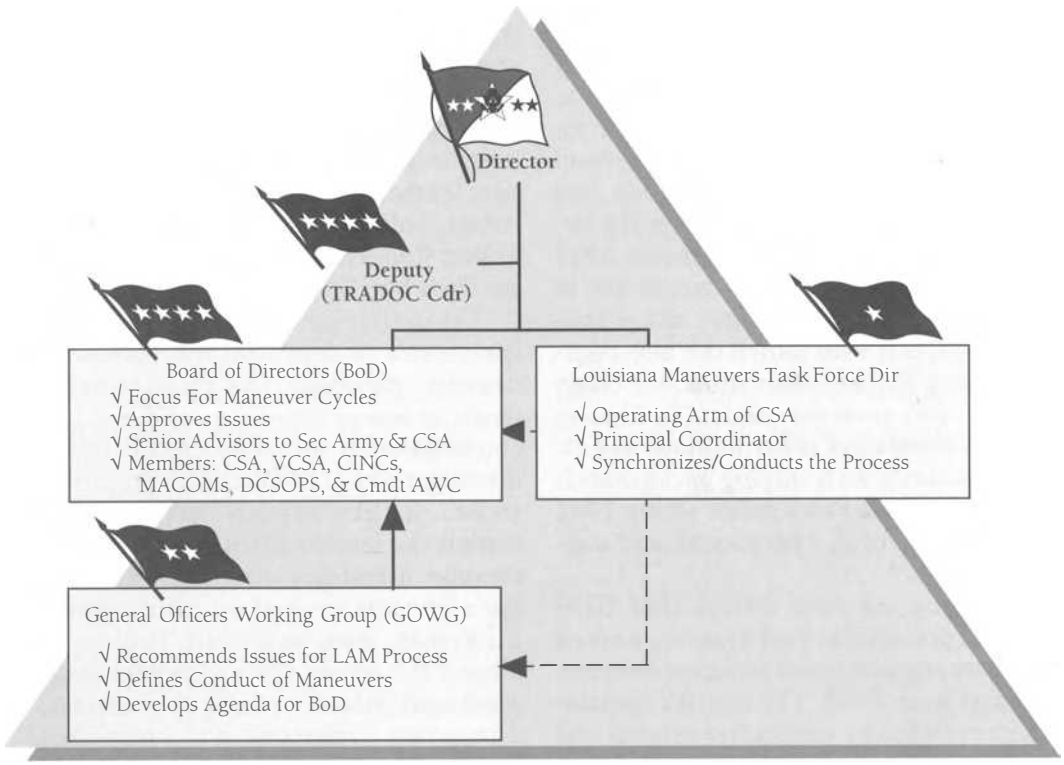


Figure 3

rection, COL David Blodgett, the Assistant Deputy Chief of Staff for Analysis (ADCS-A) at TRADOC, and Ronald J. Radda, a senior civilian analyst in DCS-A, began initial explorations of how to integrate the Army's work on distributed interactive simulations with GEN Sullivan's proposed Louisiana Maneuvers Task Force. Blodgett had served under Franks and Sullivan during their assignments as successive Deputy Commandants of the Command and General Staff College from 1986 to 1988, and during that period he had organized and launched the Army's Battle Command Training Program (BCTP). BCTP, the capstone of the Army's Combat Training Centers Program, was a simulations-based training and assessment exercise program for division and corps staffs. Thus, both generals knew of Blodgett's ability to develop significant evaluative and training programs that used simulations.[63]

Much of Blodgett's and Radda's work followed along the lines of the contemporaneous work at CAC under LTG Shoffner and COL Smith. They recommended to Franks that DIS should provide the tools to do the work Sullivan intended for Louisiana Maneuvers. They then analyzed the existing guidance for assigned and implied missions for the LAM and began deriving functions and the organizational structure necessary to accomplish them.[64]

The Chief of Staff's 2 March luncheon meeting at the Pentagon on Louisiana Maneuvers had provided GEN Franks with the direction he needed to move ahead with organizing the LAM Office. On 5 March, Blodgett briefed Franks on the progress of the mission analysis, laying out for him the functions the LAM Office would perform and the structure and funding it would need over the next three years. Franks approved

the briefing and established the organization on 24 March 1992.[65]

Blodgett was able to choose personally nearly all those who would work with him in establishing GEN Sullivan's task force. As his deputy, Blodgett chose Mr. Radda from among his staff in the DCS-A. Radda had worked with Blodgett on LAM since the beginning of DCS-A involvement in late 1991 and brought to the job wide experience in administration and simulations. Other analysts from DCS-A who joined the new organization were Richard Maruyama and Hugh Dempsey, both civilians, and LTC Charles Venable. A number of other military and civilian individuals with varying backgrounds also joined the Task Force in late March 1992 to perform analytical, operational, and support functions.[66]

This group, in new offices that GEN Franks had provided at Fort Monroe, worked to define its organizational structure between March and June 1992. The initial organization was to be led by a brigadier general and included twenty-five military and seventeen civilians. Headed by the Director's office, it included a small liaison office in the Pentagon and four directorates: Support, Issues Coordination, and Operations at Fort Monroe and Exercise Coordination at Fort Leavenworth. Colonels headed each directorate except Support, which was supervised by a senior civil service administrator (GM–14). The Support Directorate performed normal housekeeping and support functions, including space allocation, budgeting, contracting, provision of services, and supply and transportation. In addition, it did all the start-up logistical work necessary to enable the Task Force to function as an operational organization, ensuring the LAM MDEP ultimately was established in the POM and, eventually, assuming much of the responsibility for constructing the simulation center at Fort Monroe.[67]

The Issues Directorate served as a clearinghouse for issues arising from all parts of the LAM process. It coordinated with issue sponsors and proponents, soliciting and clarifying issues and proponency questions. It planned, organized, coordinated, and executed both the General Officer Working Groups and the Board of Directors meetings and acted on the decisions of both gatherings. It assisted, as well, in exploiting lessons learned during exercises involving LAM issues. Sullivan's former subordinate, COL Robert Rodgers, headed the Issues Directorate from May 1992 to April 1994.[68]

The initial concept was for the Operations Directorate to supervise the Louisiana Maneuvers' exercises. The directorate's Plans Division was to coordinate with the exercise community to integrate simulation-based investigations of LAM issues into various exercises. Its Exploitation Division sought to exploit the lessons learned from the several exercise investigations. Its Current Operations Division worked on current problems. BG Franks, once he arrived, frequently employed the directorate's members in a task-organized fashion. Among the first tasks the directorate undertook was organizing the first Board of Directors meeting, which took place on 14 October 1992. The directorate ultimately became responsible for running the Task Force simulation center in Building 11 at Fort Monroe and for conducting the technology demonstrations for which the Task Force became known.[69]

The Exercise Coordination Directorate at Fort Leavenworth was headed by COL Gale N. Smith and worked closely with the National Simulations Center. This directorate began operations in October 1992, after the first Board of Directors meeting had approved the first set of LAM issues for investigation. It sought to coordinate with proponents the use of particular exercises to investigate those issues. (See *Figure 4* for the LAM Task Force's organizational structure in early 1993, as it had evolved and was documented in the TDA of the Army War College.)[70]

In addition to conferring with TRADOC and the Army Staff offices on the LAM charter and process, Radda and Blodgett also had begun in March to brief various major com-

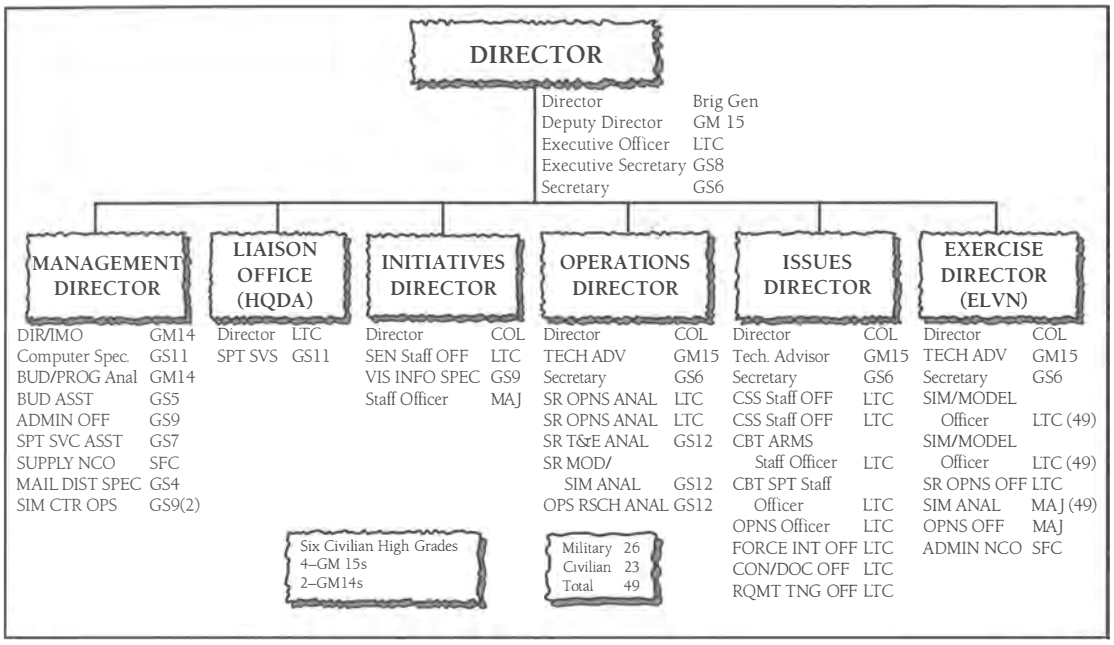


Figure 4

manders about the Louisiana Maneuvers, the likely benefits of LAM for the Army, and the possible evolution of the LAM. Radda developed a technical, analytically oriented briefing that he presented to technically oriented military and civilian colleagues throughout the Army, while Blodgett developed a more militarily oriented briefing for commanders and staffs. Both briefers were frank about the changes ahead and the ways in which the proposed DIS-based LAM exercises could facilitate those changes for the Army. They carried with them copies of Sullivan's 9 March message and other authorizing correspondence that enabled them to obtain the access they needed at both major command and ASA(RDA) levels to communicate their message.[71]

Contemporaneous Developments

While GEN Sullivan sought to change the way the Army changed, the Army itself was in the process of making changes much as it always had—through responding to operational requirements identified during previous exercises or operations and linking new or available technologies to those requirements. Many of these efforts, because of their importance for the Army, later found their way into the LAM process as high-visibility issues.

Then-LTG Jimmy D. Ross, as the DCSLOG until February 1992, continued working with the Army Materiel Command (AMC) to resolve a host of issues that been highlighted during Operation DESERT SHIELD/DESERT STORM and that followed on from the Army's ongoing reshaping. Four issues were particularly significant. The first, and the one on which he had labored longest, was an effort to develop antifratricide or combat identification measures and devices that effectively precluded fratricide in combat. This effort continued under Ross' auspices even after the Gulf War. The next issue resulted from the prohibitively expensive duplication of supply requests during the buildup and the inability of support agencies to identify or locate the supply items they had on hand at any given time. Total Asset Visibility (TAV) was the rubric assigned to the DCSLOG/AMC effort to know what supply items were

where and in what quantities, using technologies much like those employed by Federal Express, the private commercial delivery corporation. Related technologies also were employed to permit In-Transit Visibility (a subset of TAV) of supplies and equipment so that the locations of such items could be ascertained accurately during operational deployments and other movements. The third issue was Split-Based Logistics, an effort to use information technologies in support of the force-projection Army to permit necessary support of the projected force while deploying only a portion of the logistics support element formerly required. The final issue was achieving the pre-positioning aboard ships strategically placed around the world of the equipment and supplies needed to make the Army capable of truly projecting forces from the continental United States. When Ross moved to command of AMC and LTG Leon E. Salomon became the DCSLOG, these efforts continued apace, with both leaders recognizing their importance to the new, force-projection Army.[72]

GEN Sullivan himself initiated one such effort when he asked GEN Franks in October 1991 what the Army meant when it said that it "owned the night." Sullivan also wanted to know what the Army was doing to ensure that it did own the night—that is, that its night-fighting abilities were superior to those of all potential adversaries—and would in the future. This began an investigation within TRADOC, in which TRADOC teamed with AMC over the next few years, to satisfy the Chief's question.[73]

In December 1991, AMC's Tank-Automotive Command rolled out the M1A2 tank, the first U.S. tank designed with an organic capability to generate and employ digital data that enabled it to be equipped with the General Dynamics InterVehicular Information System (IVIS). This system would permit the tanks automatically to exchange digitized positional and other combat-related information to give them a shared, more complete view of the battlefield. It would serve as one of the main precursors of many of the Army's later efforts to digitize the battlefield and to conduct information warfare.[74]

In addition, as the Louisiana Maneuvers gathered momentum with the publication of Sullivan's 22 May LOI and the July arrival of BG Tommy Franks at Fort Monroe, GEN Franks was launching the TRADOC Battle Labs, an initiative of his own that held great promise for shaking up TRADOC's combat developments bureaucracy. The Battle Labs concept was an idea that Franks had developed over his first few months in TRADOC. Having explained the Battle Dynamics at the DESERT STORM Division Commanders Conference in March, Franks proceeded to publicize them around the Army, gathering feedback and working with MG Wesley K. Clark, his DCS for Concepts, Doctrine, and Developments (DCS-CDD), and his combat developments staff. COL William Hubbard, who arrived at TRADOC as the Battle Labs were being established, later became Franks' primary action officer. Hubbard had worked for Franks when the latter had headed the J–7 Directorate on the Joint Staff and had been involved with Franks' development of the Joint Requirements Oversight Council process for GEN Robert T. Herres, the Vice Chairman of the Joint Chiefs of Staff.[75] Hubbard formed the Battle Lab Integration and Technology Directorate within TRADOC's reorganized DCS–Combat Developments (DCS-CD) to manage and coordinate the effort within TRADOC.[76]

GEN Franks presented his plan to the public on 21 April at a conference for industry leaders in Atlanta. By then, he had decided he would form six Battle Labs at appropriate TRADOC schools. Fort Knox and the Armor School would house the Mounted Battlespace Battle Lab. Fort Benning and the Infantry School would have the Dismounted Battlespace Battle Lab. Fort Sill and the Field Artillery School would supervise the Depth and Simultaneous Attack Battle Lab, with support from the Air De-

fense Artillery School at Fort Bliss and the Intelligence School at Fort Huachuca. Fort Leavenworth and CAC would be the site of what became the Battle Command Battle Lab, with support from the Intelligence School and the Signal School at Fort Gordon. Fort Monroe and TRADOC headquarters would house the Early Entry, Lethality, and Survivability Battle Lab to take advantage of the multiservice environment of the Tidewater Virginia area. Later, a Combat Service Support Battle Lab was established at Fort Lee. A key aspect of the Battle Labs' work would be experimentation with inserting advanced technologies throughout the force—both vertically and horizontally—to enhance the overall capability of the Army. Such experiments initially were called advanced technology demonstrations. Franks followed up this presentation with a White Paper on 4 May 1992 that laid out his philosophy behind the Battle Labs and his objectives for them.[77]

Franks saw the Battle Labs as the way to experiment with future forms of warfare and to execute TRADOC's responsibility to be the architect of the future Army. In his view, they were a complement to the Louisiana Maneuvers effort. Whether they would do so still remained to be seen since the Battle Labs were only coming into existence as BG Tommy Franks reached Fort Monroe and opened the next phase of Gordon Sullivan's Louisiana Maneuvers.

Clearly, both the process by which Sullivan decided to mount the modern Louisiana Maneuvers and the form that the maneuvers took moved forward sporadically over the first year of his tenure. In many respects, the Army benefited from the tension that creating the LAM and the LAM Task Force generated within the institution, as the senior leaders and the staffs closely scrutinized and debated the ways in which the Army needed to change. As might have been expected in an essentially conservative institution, resistance to the vehicle Sullivan chose did remain because some sought to protect the Army from additional turbulence that the maneuvers might create. For Sullivan and all those involved, the next two years would be exciting and taxing as the Task Force became fully operational and the LAM process began to work.[78]

Notes

[1] *Final Report of the Special Study Group for General Gordon R. Sullivan, Vice Chief of Staff*, 14 June 1991, Fort Belvoir, Virginia, in the Sullivan Papers, uncatalogued at this writing. This two-volume document is the report of Gen. Sullivan's transition team, completed a week before he became Chief of Staff. Section III, Resources, addresses the decline in resources and recommends (p. 45): "Convince the four stars to 'break the mold' and to join the corporate team so we can begin to make the big changes that will strengthen the future Army." Annex B of the report, Resourcing the Force: "Breaking the Mold" Alternatives, cautions: "Break the Mold or...Break the Bank...and Break Readiness." Excerpts in historian's files.

[2] See, for example, Sullivan, "Speech at Arrival Ceremony of General Gordon R. Sullivan," 25 Jun 91, reprinted in *Sullivan: Collected Works*, pp. 3-4.

[3] On these topics, see Willard Latham, *The Modern Volunteer Army Program: The Benning Experiment, 1970-1972* (Washington, D.C.: Department of the Army, 1988), particularly pp. 102-106; Paul H. Herbert, *Deciding What Has to be Done: General William E. DePuy and the 1976 Edition of FM 100-5, Operations* (Leavenworth Papers, Nr 16) (Ft. Leavenworth, KS: Combat Studies Institute, U.S. Army Command and General Staff College, 1988), passim; John L. Romjue, *The Army of Excellence: The Development of the 1980s Army* (TRADOC Historical Monograph Series) (Ft. Monroe, VA: Office of the Command Historian, U.S. Army Training and Doctrine Command, 1993); Anne W. Chapman, *The Army's Training Revolution, 1973-1990: An Overview* (TRADOC Historical Study Series) (Ft. Monroe, VA: Office of the Command Historian, U.S. Army Training and Doctrine Command, 1991); Anne W. Chapman, *The Origins and Development of the National Training Center, 1976-1984* (TRADOC Historical Monograph Series) (Ft. Monroe, VA: Office of the Command Historian, U.S. Army Training and Doctrine Command, 1992); James Kitfield, *Prodigal Soldiers* (NY and London: Simon and Schuster, 1995), passim. Kitfield presents an account of how the leaders of the post Vietnam Army rebuilt it. For a very good summary of the Army's reconstruction in the years between Vietnam and DESERT STORM, see Robert H. Scales et al., *Certain Victory: The U.S. Army in the Gulf War* (Washington, D.C.: Office of the Chief of Staff, Army, 1993), pp. 1-38

[4] See Appendix E for Sullivan's resume during this period.

[5] Mark Sherry, "The Army CP, 1987-1993: Headquarters, Department of the Army Responds to An Era of Change," U.S. Army Center of Military History Working Papers, March 1997, pp. 21-43.

[6] James L. Yarrison, "The Vuono Years," (unpublished CMH manuscript, 1995), pp. 3-59 - 3-68 and n.125. See also Sullivan and Harper, *Hope Is Not a Method*, pp. 83-87.

[7] Lorna S. Jaffe, *The Development of the Base Force, 1989-1992*, passim. Letter, Vuono to Powell, 13 May 90, on the base force proposal; letter, Vuono to Powell, Jun 90, same subject, historian's files. See also Sherry, "The Army CP, 1987-1993," pp. 43-47.

[8] Lorna S. Jaffe, *The Development of the Base Force, 1989-1992*, pp. 40-41.

[9] Interview, Sullivan with Yarrison, 29 April 1997, p. 24. See also Letter, Sullivan to Mountcastle, 1 July 1998, in which Sullivan states: "...We were able to leverage Carl Vuono's work as well as his mentoring. We were his product – and, certainly, I more than most. Going back to 1978 at Fort Riley, I learned from him I had to put ideas into action – execute. He would often say to me: 'Okay, Sully, what do you want me to do?'"

[10] See, in particular, Gordon R. Sullivan, "America's Army: Maintaining Momentum While Accommodating Change," in *Army: 1991 Green Book* (October 1991), 24-32.

[11] Sullivan and Harper, *Hope Is Not a Method*, pp. 5, 11-12, 169-170. See also Interview, COL (Ret) Gale Smith with Yarrison, 28 June 1996, pp. 6-7.

[12] Office of the Chief of Public Affairs, Headquarters TRADOC, *Desert Storm One Year Later Conference Report, 2-3 March 1992*. See also DESERT STORM Special Study Project, Final Brief on Lessons Learned by DSSSP, undated, in CALL Data Base, Gulf War Collection, Group CALL, SG Lessons Learned, SSG DTOMLS BRFOOI, p. 30 of 37, Force Structure Initiatives. Most initiatives involved adding structure and capabilities to existing organizations. See also, Interview, GEN Frederick M. Franks with Dr. Susan Canedy, TRADOC Exit Interview, 28 November 1994, p. 12; Interview, F. Franks with Yarrison, 18 February 1997, pp. 11, 18-19; and Interview, BG (Ret) Harold W. Nelson with Yarrison, 18 September 1996, pp. 11-12. Historian's files.

[13] Sullivan letter to BG John W. Mountcastle, 17 October 1997, p. 2 and title page of draft. Emphasis is in original. Historian's files.

[14] See *Army Command, Leadership, and Management: Theory and Practice, A Reference Text*, 1992-1993 (Carlisle Barracks, U.S. Army War College, 1992) pp. 3-17 - 3-18, 11-1 - 11-8, for a textbook discussion of CBRS. See John L. Romjue et al., *U.S. Army Training and Doctrine Command Annual Command History, 1 January 1993 to 31 December 1993* (Fort Monroe, VA: Office of the Command Historian, USATRADOC, 1994), pp. 88-92, on development and promulgation of the Enhanced CBRS. See also John

L. Romjue, *American Army Doctrine for the Post-Cold War* (Fort Monroe, VA: TRADOC Military History Office, 1996), p. 77 n.43, commenting on CBRS's built-in, process-fixed slowness despite twenty years of reform efforts.

[15] See, for example, an advocate's position in Frederic J. Brown, *The U.S. Army in Transition II: Landpower in the Information Age* (Washington, New York, London: Brassey's (US), Inc., 1993), particularly pp. 87-98.

[16] Interview, Peay with Dr. Richard Hunt and Dr. Mark Sherry, 18 July 1994, pp. 11-16. See also Peay's letter to BG John W. Mountcastle, 16 October, 1997, p. 5: "I had been with the 9th ID High Tech Test Bed and ADEA process from the beginning. I saw first hand how and why it failed. I did not want our Chief to not have the right organization for LAM or it would not survive." Interview, MG Ronald E. Adams with Yarrison, 13 February 1998, p. 8.

[17] Sullivan's letter to Mountcastle, 17 October 1997, inside draft cover page (historian's files).

[18] Sullivan, *Collected Works*, Speech to the Union League of Philadelphia, 10 October 1991, pp. 11-12; Speech to the Eisenhower Luncheon of the AUSA, 15 October 1991, pp. 17-18; Speech to Army Session Luncheon of the ROA Mid-Winter Conference, 21 January 1992, pp. 30-31. See also Charles E. Heller and William A. Stofft, eds., *America's First Battles, 1776-1965* (Lawrence, KS: University Press of Kansas, 1986, particularly, John Shy, "First Battles in Retrospect," pp. 327-352, 403.

[19] See, for example, Speech to the Union League of Philadelphia, 10 October 1991, and Eisenhower Luncheon of the Annual Meeting of the Association of the United States Army (AUSA), 15 October 1991, both in Sullivan, *Collected Works*, pp. 11 and 17, respectively. See also T. R. Fehrenbach, *This Kind of War* (Washington, D.C.: Brassey's, 1994), pp. 95-107.

[20] Memorandum for COL LeCuyer from COL Harper, 10 July 1991, sub.: Doctrine Debate, in Sullivan Papers, Michael V. Harper Papers, Memorandums, June-December 1991, Box 21, Folder 2, July 1991, file 3. The Michael V. Harper subseries is hereafter cited as Harper Papers. See also Frederic J. Brown, *The U.S. Army in Transition II: Landpower in the Information Age* (Washington, New York, and London: Brassey's (US), 1993), pp. 87-98, on the development and functioning of the CBRS.

[21] Memorandum for COL LeCuyer from COL Harper, 10 July 1991, sub.: Doctrine Debate, in Sullivan Papers, Harper Papers, Memorandums, June-December 1991, Box 21, Folder 2, July 1991, file 3. See also Interview, COL (Ret.) Jack A. LeCuyer with Yarrison, 23 October 1996, pp. 5-6.

[22] Sullivan Calendars, August 1991, in the historian's files. Sullivan pinned on Franks' new rank at the Summer Senior Commanders Conference on 6 August. The change of command ceremony took place on 23 August.

[23] Interview, GEN (Ret.) Frederick M. Franks with Yarrison, 18 February 1997, pp. 17-18. Franks had his DCS for Concepts, Doctrine, and Developments, MG Wesley K. Clark, describe the battle dynamics at the March 1992 Conference of Desert Storm commanders. See Office of the Chief of Public Affairs, Headquarters TRADOC, *Desert Storm One Year Later Conference Report, 2-3 March 1992*, pp. 13-14. The battle dynamics are interspersed through the 1993 edition of FM 100-5, *Operations*. See also Tom Clancy with Franks, *Into the Storm: A Study in Command* (New York: G. P. Putnam's Sons, 1997), pp. 488-511.

[24] Interview, Franks with John Romjue, 17 November 1994, pp. 11-12; Interview, Franks with Yarrison, 18 February 1997, pp. 5-6. See also Franks, "Battle Command: A Commander's Perspective," *Military Review*, May-June 1996, 7.

[25] Interview, Sullivan with Yarrison, 29 April 1997, pp. 2-4. See also Interview, Nelson with Yarrison, 18 September 1996, pp. 12-15; Interview, LTG (Ret.) Charles E. Dominy with Yarrison, 16 September 1996, pp. 2-4.

[26] See, for example, Message, Cdr, TRADOC, to CSA, 161316Z Dec 91, sub: Louisiana Maneuvers—A Fifty Year Stride. Paragraph 1 shows the linkage the doctrine and the change process held for Franks: "Greatly enjoyed our discussion of the evolution of doctrine embodied in the FM 100-5 revision and the concomitant requirement to lead the Army through the change process." Paragraph 8 is also important: "While there is much to be done, the major thrust is clear. Our work with doctrine and FM 100-5 is convergent with our distributed simulation work. The two reinforce each other in a robust, though complex program. We will have taken a fifty-year stride in our large unit exercise capability and used it to cement our grasp on the updated realities of the battlefield dynamic." Franks naturally discussed the emerging doctrine at length with many other senior Army leaders, including LTG Peay, the DCSOPS. This message is located in the Records of the Chief of Staff, Army's Louisiana Maneuvers Task Force, 870-5a, Records of the Army Staff (To be deposited in NARA Records Group 319) (hereafter cited as LAM TF Files), Box 1, File 3-2b.

[27] Interview, Franks with H. O. Malone, 7 January 1993, pp. 3-4; Interview, Franks with Malone, 12 January 1993, p. 1.

[28] Harper had served with Sullivan in DCSOPS as the Chief of War Plans. During the Gulf War, Harper also served as head of the Chief of Staff's Strategic Planning Group, which sought to provide courses of action for future operations. His relationship with Sullivan thus continued over the course of both of Sullivan's first two assignments in the Pentagon, and Sullivan named him to his transition team and then to be Chief of his Staff Group when he became Chief of Staff. See Interview, Harper with Yarrison, 2 October 1996, pp. 3-4.

[29] See Interview, Nelson with Yarrison, 18 September 1996, pp. 9-10, on Sullivan's thinking. Many of these contacts took place over the telephone or through informal notes, which may or may not have found their way into his files. For example, Sullivan's "Breakfast Club," which met sporadically over the first year or so of his tenure, included, on occasion, the VCSA (GEN Dennis J. Reimer), the DCSOPS (LTG J. H. Binford Peay), the Commandant of the Army War College (MG William A. Stofft), the Chief of Military History (BG Harold W. Nelson), COL Robert Doughty (History Department Chairman at the Military Academy), Dr. Roger J. Spiller (historian at the Combat Studies Institute, U.S. Army Command and General Staff College), and the Chief's Staff Group (usually COL Michael Harper). The membership of this group varied, depending upon topics and schedules, but normally included Harper, Stofft, and Spiller. See Interview, Nelson with Yarrison, 18 September 1996, pp. 4-5, 9-10, 15-16; Interview, Franks with Yarrison, 18 February 1997, p. 7; Interview, Maggart with Yarrison, 27 September 1996, pp. 15-16. See also, for example, Letter, Roger J. Spiller, Combat Studies Institute, to Sullivan, dtd August 6, 1991, discussing a breakfast Sullivan had convened on 2 August of several advisers, including Spiller, in the Sullivan Papers, CSA Chronicles, August-September 1991, Box 4A of 16, Folder 1-2, file 22. See, as well, Memorandum from LTG (Ret.) Frederick J. Brown to Sullivan, dated December 25, 1991, on several topics including Louisiana Maneuvers, in Sullivan Papers, CSA Chronicles, October-December 1991, Box 4B of 16, Folder 5-3, file 3.

[30] See, for example, Memorandum for Breakfast Club Members from COL Michael V. Harper, 16 August 1991, sub: Update and Stuff, which covers a letter from Spiller to Sullivan, 6 August 1991, discussing the challenges Sullivan faced, in the Sullivan Papers, CSA Chronologies, August-September 1991, Box 4A of 16, Folder 1-2, file 22. See also essays by Nelson provided to Sullivan, one from November 1991, sub: Change in the Army (in the Sullivan Papers, Harper Papers, Miscellaneous, August-December 1991, Box 24, Folder 4, November 1991, file 7), and one a Memorandum for Chief of Staff, Army, 3 March 1992, sub: "Top Down Modeling" and the Louisiana Maneuvers (provided by BG (Ret.) Nelson, in historian's files).

[31] Interview, Maggart with Yarrison, 27 September 1996, passim. See also Letter from "Bert" (Maggart) to Sullivan, 25 May 1988, sub: Command and Control, in Sullivan Papers, Personal Papers, Sketch Books, December 1989-February 1995, Box 1 of 5, Sketchbook #1, 1st Infantry Division, September 1988-August 1989, 8 pages. See also Paul H. Herbert, *Deciding What Has to Be Done: General William E. DePuy and the 1976 Edition of FM 100-5, Operations*, Leavenworth Papers Nr. 16, Fort Leavenworth, KS: Combat Studies Institute, U.S. Army Command and General Staff College, 1988, pp. 85-93.

[32] Interview, COL (Ret.) Robert D. Rodgers with Yarrison, 28 June 1996, pp. 58-59.

[33] Interview, COL (Ret.) Richard A. Cowell with Yarrison, 2 July 1996, pp. 2-4.

[34] Memorandum, Dr. Lynn Davis, RAND Arroyo Center, to Harper on OCSA stationery, January 1992, commenting on talking points relating to Louisiana Maneuvers, 17 January 1992, in the Sullivan Papers, CSA Papers, January 1992, Box 08A of 16, Folder 1-1, CSA Memorandums, January 1992, file 12. See also: Letter, Davis to Harper, 10 February 1992, addressing a background paper on Louisiana Maneuvers, in the Sullivan Papers, Harper Papers, Messages and Letters, 1991-1994, Box 23, Folder 13, February 1992, file 3; Memorandum for Sullivan from Harper, 2/12/92, sub: Louisiana Maneuvers, which forwards to Sullivan the Davis background paper, in the Sullivan Papers, Harper Papers, Memorandums, January-December 1992, Box 21, Folder 9, February 1992, file 7; Memorandum for Record prepared by CSA Staff Group (probably Harper), 10 March 1992, sub: Discussion Between CSA and Dr. Lynn Davis, 5 Mar 92, which includes a lengthy discussion of Louisiana Maneuvers, in Sullivan Papers; Letter, Davis to Sullivan, March 13, 1992, sub: Louisiana Maneuvers, covered by undated handwritten note from Harper to Sullivan with Sullivan's comments thereon, in Sullivan Papers, CSA Papers, Box 8B of 16, February-March 1992, Folder 4-3, CSA Letters, March 1992, file 12. She declined to be interviewed for this work. See also letter from Ronald J. Radda to Yarrison, 18 October 1997, p. 2, on the DCS-A briefings to Dr. Davis (historian's files).

[35] See, for example, letter, Frederic J. Brown to Sullivan, 25 December 1991, on several topics, including Louisiana Maneuvers, in the Sullivan Papers, CSA Chronologies, October-December 1991, Box 4B of 16, Folder 5-3, file 3. Brown's first major contribution to Army thinking on the future was with Zeb B. Bradford, *The United States Army in Transition* (Beverly Hills, London: Sage Publications, 1973).

[36] See, for example, Letter from Sullivan to Merritt, 24 January 1992, following up a conversation that day on Louisiana Maneuvers, forwarding an explanatory paragraph and a graphic, and soliciting Merritt's thoughts.

[37] Memorandum for See Distribution, DACS-ZAA, 13 September 1991, sub: Trip Report—Fort Leavenworth, KS, 12 September 1991, para. 5.

[38] Memorandum for See Distribution, DACS-ZAA, 5 December 1991, sub: CSA Trip to Fort Bragg, North Carolina, and Fort Leavenworth, Kansas on 3-4 December 1991. See also Interview, COL (Ret.) Gale Smith with Yarrison, 28 June 1996, pp. 2-3.

[39] Interview, Harper with Yarrison, 2 October 1996, pp. 9-10. Sullivan's thought that LAM should be a continuing process only emerged in February-March 1992. An internal memo of 2 January 1992 from Harper to Sullivan, sub: Louisiana Maneuvers 1994, explores the

challenge of proponency (DCSOPS? DAMO-OD? -TR? -FD?, elsewhere?) and suggests the exercise could become annual or biennial. Sullivan Papers, Harper Papers, Miscellaneous, Box 24, Folder 6, February 1992, file 9. As late as 6 February 1992, Harper, in a lengthy MFR, sub: Meeting of the Dr. Spiller Group, 5 Feb 1992, discusses LAM 1994 (para. 5f) in terms of a single, complex, long exercise of possibly as much as 12 months' duration. (Sullivan Papers, CSA Chronicles, Box 10B of 16, February 1992, folder 2-2, file 4.) See LTG Peay's 12 February 1992 memorandum for Sullivan and Reimer, sub: Louisiana Maneuvers—1994, which responded to Sullivan's 10 January tasking to him, same subject. Peay states explicitly (para. 2), "We should view this as the start of a process, not just a discrete event." (LAM TF Records, file 3-4a). Lynn Davis, in the 13 March 1992 letter to Sullivan cited in n. 31 above (para. 3), assumes he had taken RAND's suggestion that LAM be a process. Both documents in LAM TF Files, Box 1, file 3-2c.

[40] Interview, Smith with Yarrison, 28 June 1996, pp. 4-6. The Army's functions under Title 10, U.S. Code are to organize, man, train, equip, deploy, and sustain Army forces for employment by the warfighting commanders-in-chief of the unified commands.

[41] Ibid., pp. 7-8. See also Briefing, "Louisiana Maneuvers Concept," as of 21 Jan 92 with attached note from Harper to GEN Franks, 29 January 1992, sub: CAC Briefings, conveying Sullivan's notes on the slide packet. In LAM TF Files, Box 1, file 3-2c. Sullivan was at Leavenworth on 28 January to address the Pre-Command Course class. See letter, Mr. Ronald J. Radda to Yarrison, 18 October 1997, p. 3.

[42] See quotation in Introduction, p. 6, from Sullivan and Harper, *Hope Is Not a Method,* p. 169.

[43] Interview, Smith with Yarrison, 28 June 1996, pp. 7-8.

[44] Ibid., pp. 9-10. See also the memorandum from Sullivan to Peay, 10 January 1992, sub: Louisiana Maneuvers 1994, cited in n. 36 above and Sullivan and Harper, *Hope Is Not a Method*, pp. 12-13 and 169-170.

[45] Interview, Harper with Yarrison, 2 October 1996, pp. 8-11.

[46] Speech text in the Sullivan Papers, CSA Papers, February-March 1992, Box 08B of 16, Folder 3-1, CSA Miscellaneous Papers, February 1992, file 13. Only a week before, he had discussed LAM in terms of a single, complex, long (possibly 12 months) event. See n. 34 above.

[47] Interview, Sullivan with Yarrison, 29 April 1997, pp. 11-16. See also Sullivan's letter to Mountcastle, 17 October 1997, sep. p. 3. A good example of the kinds of views Sullivan solicited and received is that of MG Theodore G. Stroup, the Director, Program Analysis and Evaluation, in OCSA, on 3 March 1992. Stroup offered his advice on many facets of the proposed LAM and the LAM TF in a wide ranging, informal note. In LAM TF Files, Box 1, file 3-2c.

[48] Sullivan (in his 17 October 1997 letter to Mountcastle, pp. 3-4) describes the situation and what evidently was one particularly contentious exchange. He made several points about the exchange: that all the parties to the exchange realized their need to work together better; that he felt that the openness such exchanges connoted ultimately was good for him and for arriving at the best solutions for the Army; and that he never doubted the loyalty of the other parties. See also Interview, GEN John H. Tilelli with Yarrison, 26 January 1998, pp. 2-4.

[49] See, for example, Peay's letter to Mountcastle, 16 October 1997, pp. 2-4. See also Memorandum, Jack A. LeCuyer to BG Mountcastle, 4 December 1997, sub: Draft History of LAMTF, pp. 1-4. Historian's files.

[50] BG Nelson, the Chief of Military History, attended the 2 March luncheon meeting on LAM and forwarded a memo to Sullivan the next day recommending how the Louisiana Maneuvers should be approached: "At yesterday's meeting I asserted that we should not begin concept development by being derivative....We must ask what we want to design and build before we apply the [available] tools." (Memorandum for Chief of Staff, Army, from Nelson, 3 March 1992, sub: "Top Down Modeling" and Louisiana Maneuvers, in LAM TF Files, Box 1, file 3-2c.) This perspective supported Sullivan's own and generated a positive response on 10 March 1992. In addition, LTG John J. Yeosock, when briefed on the LAM concept on 3 June 1992, echoed the importance of concentrating on operational issues. See Memorandum for Record, COL Lee F. Greene, LAM Office, 12 June 1992, sub: Trip Report to 3d Army, Fort McPherson, GA, 3 Jun 92, in LAM TF Files, Box 1, File 3-3b.

[51] Memorandum from Peay to Sullivan and Reimer, 12 February 1992, sub: Louisiana Maneuvers —1994, in LAM TF Files, Box 1, file 3-2c.

[52] Interview, Peay with Hunt and Sherry, 18 July 1994, pp. 11-16; Peay's letter to Mountcastle, 16 October 1997, pp. 2-3.

[53] Interview, Peay with Hunt and Sherry, 18 July 1994, pp. 14-16. See also VCSA Interview Questions, General J. H. Binford Peay III (As of 16 March 1994 - 1st Draft), p. 5. Peay said that he first formulated the muscle movements in April 1993, after becoming VCSA.

[54] Interview, Peay with Hunt, 23 January 1993, p. 20.

[55] Interview, LeCuyer with Yarrison, 23 October 1996, pp. 9-12; Interview, Rodgers with Yarrison, 28 June 1996, pp. 32-35, 46-50; Interview, Smith with Yarrison, 28 June 1996, pp. 7-9, 30-31; Interview, Blodgett with Yarrison, 15 August 1996, pp. 16, 30-31; Interview, Harper with Yarrison, 2 October 1996, pp. 10-12, 45-47; Interview, Sullivan with Yarrison, 29 April 1997, pp. 14-16; Interview, Harper with Richard Hunt, 6 July 1995, pp. 43-46. See Interview, GEN John H. Tilelli with Yarrison, 23 June 1997, pp.

10-11. See also Peay's letter to BG Mountcastle, 16 October 1997, pp. 2-3.

[56] See Sullivan's 9 March 1992 Message at Appendix D. See also Interview, Harper with Yarrison, 2 October 1996, p. 18. Sullivan also announced the LAM concept to the Army Staff at the General Staff Council meeting of 9 March 1992. See Memorandum for record, 9 March 1992, sub: GSC Memo #10-92, in Sullivan Papers, CSA Papers, Box 08B of 16, February-March 1992, Folder 4-2, March 1992, CSA Memorandums, file 2.

[57] Memorandum for Record, LTC Rick Gutwald, CSA Staff Group, to Harper, Sullivan, Reimer, Franks, and Peay, 27 March 1992, sub: Louisiana Maneuvers IPR, 24 Mar 1992, in Sullivan Papers, CSA Chronicles, January-March 1992, Box 10A of 16, Folder 3-2, Memorandums, March 1992, file 12. See also COL Blodgett's undated, unsigned analysis of the DCSOPS-proposed charter to MG Lionetti, the TRADOC Chief of Staff, sub: Louisiana Maneuvers Charter – DCSOPS Version, which describes the many impediments Blodgett saw established in that version. One of his recommendations was that a TRADOC-LAM representative meet with a DCSOPS representative to arrive at a mutually acceptable draft charter – which is what happened. Document in LAM TF Files, Box 1, file 3-2c.

[58] Memorandum for See Distribution from Harper, 25 March 1992, sub: CSA Expectations for Louisiana Maneuvers (Draft). LTC Gutwald faxed a copy separately to COL David Blodgett, TRADOC ADCS-A, GEN Franks' POC for getting LAM moving at TRADOC. Star note to Gen. Franks from LTG Peay, 9 April 1992, which forwards DCSOPS' version of the LAM charter. This document made the TRADOC commander subordinate to a LAM Decision network between him and the Chief of Staff, made him the rater of the BG heading the Task Force, and inserted the AWC Commandant as the BG's intermediate rater. It also made the DCSOPS responsible for synchronizing and integrating LAM exercises. The TRADOC Memorandum for LTG Peay from Chief of Staff, TRADOC, is dated 23 April 1992, sub: Louisiana Maneuvers Charter. Representatives were COL LeCuyer, DCSOPS, and COL Blodgett, LAM TF. All documents are in LAM TF Files, Box 1, file 3-2c.

[59] MFR from Gutwald, 27 March 1992, sub: Louisiana Maneuvers IPR, 24 Mar 1992, n. 57 above.

[60] See n. 57 above. See also Louisiana Maneuvers briefing packet from CSA IPR in LAM TF Files, Box 1, file 3-2c.

[61] Briefing packet, sub: Louisiana Maneuvers, in Sullivan Papers, Harper Papers, Box 24, Miscellaneous, Folder 9, May 1992, file 2. The referenced language is on pp. 5 and 6.

[62] In addition, Sullivan sent a separate message to GEN Fred Franks thanking him for his efforts on the charter and explaining why he had used an LOI. Memorandum for COL LeCuyer from Harper, undated but fax-machine dated 18 May 92, sub: LA Maneuvers. The memo covers the signed message to GEN Franks, same subject, and the much-reworked draft LOI. It also explains to LeCuyer how Harper and Sullivan came to be rewriting the letter by themselves, though Sullivan apparently discussed the rewrite with Peay at some point. (In Sullivan Papers, CSA Papers, Box 9A of 16, April-May 1992, Folder 2-3, CSA Memorandums, May 1992, file 9.) See Appendix H for LOI. See also Memorandum, LeCuyer to BG Mountcastle, 4 December 1997, sub: Draft History of LAMTF, pp. 3-4; in historian's files.

[63] Interview, COL (Ret.) David Blodgett with Yarrison, 15 August 1996, pp. 4-5. Blodgett also was the drafter of Franks' message to Sullivan, 161316Z Dec 91, sub: Louisiana Maneuvers—A Fifty Year Stride, referenced and quoted in n. 26 above, so he was well informed early about the evolving concept.

[64] Interview, Radda with Yarrison, 21 August 1996, pp. 2-6.

[65] Franks also had MG Lionetti, his Chief of Staff, send a message, Personal For GEN Reimer and MG Jerrold Putman, the Commander, PERSCOM, 161920Z March 1992, sub: Executive Secretariat for Louisiana Maneuvers (LAM), in which he referred to Sullivan's guidance at the 2 March luncheon and sought the VCSA's help in acquiring the right specialists for the new organization.

[66] Interview, Radda with Yarrison, 21 August 1996, p. 6.

[67] Letter, Charles M. Valliant to Yarrison, 24 August 1998, sub: Draft LAM Monograph, Jul 98, historian's files.

[68] Interview, Rodgers with Yarrison, 28 June 1996, pp. 3-6. Interview, Blodgett with Yarrison, 15 August 1996, pp. 6-7. Of Rodgers, Blodgett said: "Bob...was a Godsend. He had a great deal to do with where the Louisiana Maneuvers evolved to. He was one of the first arriving team members who was both an original thinker and able to carry a concept farther than it had gone."

[69] See Letter, Valliant to Yarrison, 24 August 1998, for a discussion of this evolution.

[70] John L. Romjue et al., *U.S. Army Training and Doctrine Command Annual Command History, 1 January to 31 December 1992,* Henry O. Malone, ed. (Fort Monroe, VA: Office of the Command Historian, U.S. Army TRADOC, 1993), pp. 21-23. This section, written by Dr. Anne Chapman, provides a very good synopsis of LAM's first year from the TRADOC perspective. See also a letter from Charles M. Valliant to Yarrison, 6 November 1997, p. 10.

[71] Interview, Blodgett with Yarrison, 15 August 1996, pp. 16-19. Interview, Radda with Yarrison, 21 August 1996, pp. 12-32.

[72] Interview, GEN (Ret.) Jimmy D. Ross with Yarrison, 12 November 1996 and 16 January 1997, pp. 4, 7-8, 48-49, and 56-57.

[73] Message, GEN Sullivan to GEN Franks, 222235Z Oct 91, sub: Terminology. See also Memo-

randum for Record, 29 October 1991, sub: General Staff Council Memorandum 43-91, in which Sullivan commented on his tasking to TRADOC on owning the night. See Owning the Night Chronology, 1991-1995, Appendix F. See also Letter, Salomon to Mountcastle, 4 August 1998, historian's files.

[74] Interview, Franks with Yarrison, 18 February 1997, pp. 24-25. See also Chronology of Army Digitization Efforts, 1991-1995, Appendix G.

[75] Interview, Franks with Yarrison, 18 February 1997, p. 24.

[76] Romjue, *American Army Doctrine for the Post Cold War*, pp. 74-75.

[77] Briefing packet, title: Atlanta XVIII, Atlanta, Georgia, 21 April 1992, GEN Frederick M. Franks, Jr., in historian's reference files, provided by GEN Franks. See Romjue, *op. cit.*, pp. 55-57. See also White paper, HQ TRADOC, 4 May 1992, sub: *Battle Laboratories: The Road to the Post Cold War Army.* in historian's reference files. See also Message from GEN Franks, Personal For all TRADOC school and coordinating center commandants, for info to all MACOM commanders and DCSOPS, 032248Z May 1992, sub: Commander's Intent: Battle Labs. Franks states: "Battle labs will define capabilities, identify requirements, and determine priorities for power projection army." The name of the Battle Lab Integration and Technology Directorate (BLITD) later became Battle Lab Integration, Technology, and Concepts Directorate. See also Frederick M. Franks, "TRADOC at 20: Where Tomorrow's Victories Begin," *Army: 1993-94 Green Book* 43:19 (October 1993), 55.

[78] Interview, Franks with Yarrison, 18 February 1997, pp. 10-12; Interview, Sullivan with Yarrison, 29 April 1997, pp. 11-13.

Chapter 2

THE LOUISIANA MANEUVERS PROCESS IN ACTION FROM 1992 TO 1994

In July 1992, BG Tommy R. Franks arrived at Fort Monroe with GEN Sullivan's LOI in hand and officially took charge as Director of the Chief of Staff's Louisiana Maneuvers Task Force. For the next two years he would serve as the LAM Task Force Director. The period saw the Army employed in responses to domestic and international crises in such places as Florida, Hawaii, Somalia, and Rwanda. In addition, the pace of downsizing accelerated as congressional budget-cutting reduced the Army's and DoD's budgets below levels envisioned for GEN Powell's base force. Nevertheless, the LAM initiative gave the service the ability to lead and shape these developments rather than merely reacting to them.

The departure of President George Bush and the inauguration of the Bill Clinton administration at the beginning of 1993 portended continued budget reductions, but one of its most immediate effects was to leave the Army without permanent civilian leadership for nearly a year. GEN Sullivan had to serve as Acting Secretary of the Army between 27 August and 22 November 1993, further taxing him and the Army Staff. At the beginning of his tenure, Les Aspin, the new administration's Secretary of Defense, initiated the Bottom-Up Review, to which the Army headquarters devoted considerable energy to ensure that due consideration was given the Army's contributions to national defense. The later deliberations of the Commission on Roles and Missions required the expenditure of similar amounts of institutional energy. In addition, the Clinton administration's early proposals for more tolerant policies concerning homosexuals in the military generated considerable controversy and diverted even more of the leadership's attention and energy.[1]

Within the Army, efforts to save money and to find more effective and efficient ways to employ what remained continued along with reductions in the military and civilian forces and the inactivation and consolidation of both units and posts. Efforts to bring about meaningful change in the Army continued, but always under the shadow of reduced funding and declining force structure and end strength.[2] As the Louisiana Maneuvers took shape and commenced, Sullivan, his staff, and the rest of the Army also had to labor mightily to ensure that the Army was able to keep its current commitments while looking to the future.

The Maneuvers—and the Maneuvering—Begin

BG Franks' arrival at Fort Monroe irrevocably changed the Task Force's relationship with TRADOC and the rest of the Army. GEN Frederick Franks had staffed the Task Force almost entirely with military and civilian personnel from TRADOC headquar-

ters agencies, with the notable exception of COL Robert Rodgers. This ad hoc group, which appeared to be under the TRADOC Commander's jurisdiction, had operated very much according to his day-to-day guidance as it developed what became the Louisiana Maneuvers and the LAM Task Force. The perception of many, even within TRADOC, was that the Task Force was a TRADOC agency. Although COL Blodgett, Mr. Radda, and the other members of the fledgling Task Force had increasingly worked under the Chief of Staff's office, BG Franks' arrival signaled to them and to the rest of the Army that the break from TRADOC was now official, despite their continued presence at Fort Monroe.

GEN Sullivan's LOI to BG Franks was broadly stated, particularly in its objectives for LAM, but it was quite specific in describing the responsibilities of the new Task Force Director. Perhaps the most important and telling statement in the whole letter, one that guided the Task Force's activities during most of its existence, was: "You will find yourself in a creative role. I will encourage you and your people in this regard." The passage underlines Sullivan's emphatic desire for an entrepreneurial spirit in the maneuvers and in the Task Force's operations.

The LOI gave the Task Force Director a lengthy list of tasks. According to the LOI, he was to develop and execute the Louisiana Maneuvers; organize and staff the LAM Task Force (under the supervision of the Deputy Director of LAM); organize the General Officer Working Group (GOWG); and operate the LAM Support System, which encompassed the Task Force, the GOWG, and the Board of Directors. In the process, he was supposed to establish permanent and continuous liaison with ODCSOPS to facilitate HQDA support. He was also to coordinate and integrate exercise scenarios and linkages; develop a concept for the long-term institutionalization of the LAM; assist sponsors to develop, package, and present issues to the GOWGs; and represent sponsors before the Board of Directors.

The letter further directed the LAM Task Force Director to work under the supervision of the Deputy Director of LAM—GEN Fred Franks—to develop a concept and plan for the interaction of the GOWG with the Task Force. In an effort to show quick results, Sullivan also wanted the LAM Task Force Director to begin in 1992 to develop and assess issues as pilot projects for possible inclusion in 1992 exercises. He gave BG Franks other specific guidance on how he expected the GOWG would function and how soon and often he expected to be briefed on LAM and LAM Task Force progress. Much of this language and the conceptualization behind it had been developed over the preceding months, during the lengthy back-and-forth over the LAM charter among TRADOC, the LAM Task Force nucleus, ODCSOPS, and the Chief's office.[3]

GEN Franks followed up Sullivan's LOI to the LAM Task Force Director with his own memorandum on 8 June. Although not related, the TRADOC Commander was well acquainted with the junior Franks, who had served as an Assistant Division Commander in the 1st Cavalry Division in GEN Franks' VII Corps during DESERT STORM. BG Franks had then served within TRADOC as Assistant Commandant of the Field Artillery School at Fort Sill, Oklahoma. GEN Franks' memo established initial ground rules for his subordinate's day-to-day relationship with him in his capacities as Deputy Director of the Louisiana Maneuvers and TRADOC Commander. GEN Franks also followed up on Sullivan's principal requirements, directing BG Franks to meet with him soon after his arrival at Monroe and to develop quickly a game plan that would resolve the outstanding organizational and procedural issues regarding the Task Force and the LAM process. During his early meetings with his junior, GEN Franks explained his vision that LAM would be the Army's agency to effect change in the way it both conducted land warfare and carried out its Title 10 responsibilities. He foresaw TRADOC's Battle Labs, which were then being organized, doing much of the ac-

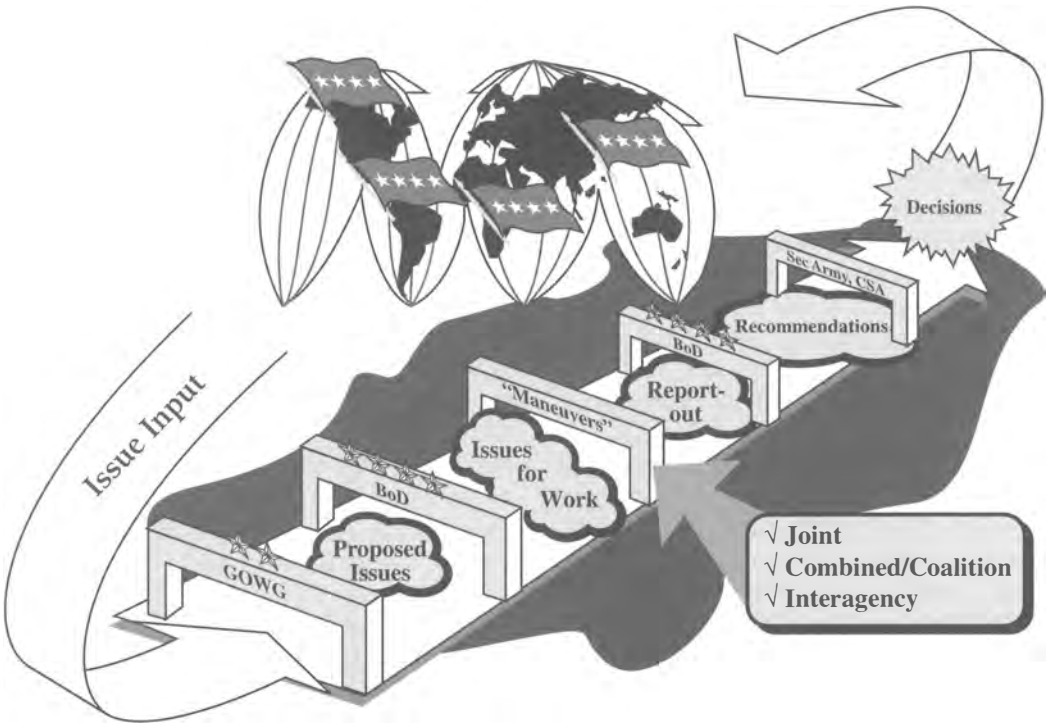


Figure 5

tual experimental work on land warfare and the VCSA, the Army Staff, and the MACOM headquarters doing the Title 10 work.[4]

Fortunately, BG Franks did not have to start from scratch in any of these areas. COL Blodgett, COL Rodgers, Mr. Radda, and the rest of the Task Force had already made a good beginning in almost every area addressed in the LOI and the memo and, in some particulars, had nearly resolved the issues under discussion. They had not yet settled fully either the organizational structure and composition of the Task Force or its funding, but the elements of the LAM process and many of the procedures the Task Force would follow in making it work were almost complete. As BG Franks and the Task Force addressed these matters, they would be in constant formal and informal contact with both GEN Franks and GEN Sullivan, keeping them informed on the Task Force's progress.[5]

Evolving the LAM Process

One of BG Franks' priority tasks, as GEN Sullivan stated and GEN Franks reemphasized, was to develop a plan for the interaction of the LAM Task Force, the GOWG, and the Board of Directors. Many of those who had contributed to developing the LAM charter drafts and the LOI were heavily involved in elaborating that process. In particular, COL Rodgers, as head of the Issues Directorate, labored diligently and creatively to refine the procedures that GENs Sullivan and Franks desired and devised a system that worked with remarkably little substantive modification over the next two years. (See *Figure 5* for a graphical depiction of the LAM process.)[6]

The Task Force played a key facilitating role throughout the LAM process. A cycle in the process began with the Issues Directorate soliciting "issues" (ideas, suggestions, or questions, requiring more than one agency's effort to resolve) from the major commands and the Army Staff. The Issues Directorate would then refine the scope and focus of these statements in preparation for the meeting of the GOWG. The GOWG, consisting usually of

one- or two-star representatives of the four-star commanders and selected other officers, then met and received appropriate information briefings on the process and their role in it. The sponsors of the various issues then presented their issues to the assembled GOWG, which discussed them and voted whether to recommend that the Board of Directors consider particular issues for exercise or experimentation in the next cycle of Louisiana Maneuvers. Finally, the group voted on the priority of the issues selected.

From the GOWG, the Task Force carried the prioritized issues to the Board of Directors, which met at least twice a year as part of a scheduled Army senior commanders conference. The participants were the Army four-star commanders and the Army War College Commandant, the DCSOPS, often the DCSLOG, the Vice Chief, and the Chief of Staff. Selected three-star commanders and a few two-star officers also participated in some Board deliberations. The Board was to function as the Army's corporate board of directors, with the members putting aside their parochial regional or command-related concerns and considering the issues recommended by the GOWG, as well as other matters, on the basis of what was best for the whole Army. In addition to judging an issue's worthiness for exercise, experimentation, and funding and providing strategic direction for the investigation of those approved, the members also allocated or assumed responsibility—became *proponents*—for particular issues. They often offered resources, such as participation in their exercises, to further resolving an issue.

Once the Board made its decisions, the Task Force's Issues Directorate ensured that those assigned proponency for the issues understood their responsibilities and that appropriate other agencies were designated to support the proponents' efforts. The Issues Directorate then worked with the Operations and Exercise Directorates and with the proponents to develop experimentation and analysis programs that often included participation in exercise simulations.

One important way in which the LAM Task Force then encouraged innovation in the Army was by allocating "seed" money to fund initial experimentation. HQDA used funding from various sources throughout the Army for LAM issue investigation, an expenditure in the $6.5 million range beginning in FY 94 (October 1993–September 1994). Ultimately, the Task Force allocated the funds to proponents based on the priorities established in the GOWG and approved in the Board of Directors meetings.[7]

With increasing frequency, the members of the Task Force—from the Operations Directorate, in particular—traveled and talked to government researchers and industry as they sought new, better tools and more innovative approaches to investigating and resolving issues. They especially sought more powerful and sophisticated simulations that could replicate reality with ever greater fidelity so that the exercises and the experiments conducted within them would yield more realistic, detailed, and reliable results. Through this search process, they also discovered promising technologies and devices of all sorts and advised interested agencies about them.[8] The increasing involvement of Task Force members in this "technology scouting," while useful to the Army, would lead some to observe that they had strayed from their original purpose and were too involved at levels of detail below the strategic/operational level that the critics believed Sullivan had originally intended. Closer analysis of the results of this activity—and of Sullivan's responses to those results—indicates that they were very much what the Chief of Staff intended.[9]

The LAM process was iterative. Following the exercise, experimentation, and analysis program for that year's round of Louisiana Maneuvers, the Task Force would collect, analyze, and refine the results and prepare to submit them with a newly solicited round of issues to the next GOWG, thereby starting the cycle again.[10] Eventually, the Issues Directorate codified the process that proponents' action officers should use to

move an issue from approval by the Board of Directors through investigation and evaluation to recommendation for the next GOWG/Board of Directors cycle.[11]

A cardinal rule governing the entire process and the relationship of the Task Force to the rest of the Army was that the LAM Task Force itself should only facilitate and catalyze the investigation of issues; it should never become an issue proponent or an action agency on a par with the other participants in the process. Some of the organization's first members had thought that the Task Force itself would be primarily responsible for issues and their analysis. BG Franks and his senior staff, however, realized that he had insufficient status, as a brigadier, to resolve issues on his own and that the only way to ensure the Board of Directors would react objectively to and assume responsibility for proposed issue resolutions was to make the members of the Board the issue proponents. This proved to be the best solution under the circumstances. Sullivan needed the Task Force to be free to ensure that proponents lived up to their responsibilities and to facilitate their issue experimentation and evaluation programs and not to be burdened with furthering a competing agenda of issues of its own.[12]

Birthing and Growing Pains

Like most such processes, this one suffered birth pains as the proposed procedures and methods of operation met the test of implementation. The initial set of issues submitted by the commands was criticized as being too oriented toward the present and too concerned with lower level problems; many addressed only local procedural challenges. GEN Sullivan himself even worked over drafts of a number of the issue statements, modifying them for inclusion in the LAM process. Thus, among the first set of issues actually submitted to the GOWG, many bore the imprint of the Chief of Staff himself, though few in the GOWG knew this.

The initial GOWG also demonstrated some of the challenges inherent in attempting a collegial process to evoke and evaluate issues. The first gathering, on 15–16 September 1992 at Fort Monroe, brought together sixteen officers as primary participants, most of them major generals. Dr. Lynn Davis, head of the RAND Arroyo Center, moderated the working sessions. Most of those present at the first meeting had only a vague understanding of what they were to accomplish. As a result, the more vocal members of the group felt little constraint in voicing, sometimes loudly, their strongly held opinions. This tendency was exacerbated when the group was divided into two committees that met in separate rooms to consider the issues submitted and to identify other issues for the Board of Directors' consideration. Since the participants were still operating with only vague ideas of what they were to accomplish, the committees came up with a combined list of nearly 300 issues, many of which overlapped or restated other issues or which were the concern of one or two of the participants. The resolution session toward the end of the conference was as loud as the initial sessions and, in some instances, rancorous. Cooler heads prevailed as Dr. Davis helped the participants understand that the list of issues they forwarded to the Board of Directors must, of necessity, be much shorter than three hundred. The voting process that followed produced a list of twenty issues.[13]

Before the issues could go to the Board, they passed through two more reviews. Rodgers' Issues Directorate reworked and polished the issue statements, forwarding them to GEN Franks and LTG Peay. These officers refined and combined several of the issues, arriving at a list of ten items for the first LAM Board of Directors.

The first Board of Directors meeting took place as an adjunct to the 1992 Association of the United States Army (AUSA) Annual Convention in Washington, D.C., and the associated Fall Senior Commanders Conference. The four-hour session, which involved the fifteen-member Board of Directors and several other general officers who witnessed its initial segments, was held at the Institute

for Defense Analyses simulations center in Alexandria, Virginia, on 14 October 1992. Following BG Franks' introductory briefing, Task Force members presented a series of demonstrations of operational simulations and other available technologies to support evaluation of warfighting and Title 10 issues. The Board itself met in executive session for about an hour at the end of the afternoon. The body addressed the modified issues forwarded from the GOWG, approved the list for further investigation and evaluation in the Louisiana Maneuvers in 1993, and assigned proponents.

This final list of issues included five Title 10/departmental issues and five warfighting issues and folded in several investigations begun before the initiation of the LAM process. The Title 10/departmental issues included the question of whether the Army needed numbered continental U.S. armies (CONUSAs); the identification and assessment of new technology to improve lethality and deployability and conserve resources; the acceleration of the acquisition process; the validation of changes to mobilization policy; an assessment of the Army's ability to deploy worldwide three divisions in thirty days and a corps in seventy-five days; and a three-part sustainment issue: analysis of the implications of varying war reserves' stockage levels, analysis of split logistical operations, and assessment of improvements in the visibility of all Army assets. The warfighting issues were equally broad and varied; they included assessment of the requirement for headquarters above corps; military operations with unfamiliar forces; domination of night operations into the 21st century; enhancement of command and control in combat across the force, including battlefield digitization and fratricide reduction; and command, control, communications, computers, and intelligence (C4I) and battlefield information dissemination. The Issues Directorate then took the approved issues and the proponency assignments and began working with the proponents to develop evaluation plans.[14]

The timing of the first GOWG and Board of Directors meetings caused the Army to compress, for FY 93, the schedule that Sullivan had foreseen for the Louisiana Maneuvers. Theoretically, the issues for an upcoming fiscal year should have been solicited by the Task Force from proponents, discussed by the GOWG, approved by the Board of Directors, and inserted by planners in evaluation modules embedded in upcoming Army and CINC exercises before the fiscal year ever began. These evaluation modules would have detailed the experimentation with organizations, equipment, or policies called for in the evaluation plans. The culminating exercise, beginning in FY 94, was to be the General Headquarters exercise (GHQx) that was to involve the HQDA Staff. That, at least, was what Sullivan envisioned in the beginning.

To begin the next cycle in a timely manner, the second GOWG convened at Fort Monroe on 7–8 December 1992. This session reexamined the 1993 Board of Directors issues and those issues not forwarded from the first GOWG to the Board, and discussed proposed issues for FY 94. Many of those participating had also participated in the first GOWG, and their experience eased the process.

More important to the functioning of this GOWG and to its productivity, COL Rodgers and his staff had searched diligently and fruitfully before the second meeting for some way to level the playing field within the meetings so that all present could contribute without openly conflicting with their colleagues. They found their solution in an electronic meeting system that the Army already was developing through the Georgia Tech Research Institute. Each GOWG participant had access to a networked computer terminal that was tied to a larger split screen. Issue submissions or other items would appear on the large screen and on each terminal's screen. The participants could type their own responses at their terminals and those responses would appear anonymously on the main screen. Each individual could then weigh the responses of others in craft-

ing his own and the process could proceed synergistically. Once the participants had given their reactions, a weighted voting system in the software easily identified the issues on which a consensus existed and their priority. These were approved and forwarded by the GOWG to the next Board of Directors meeting. This system worked so well that the Task Force not only directed its use at all of the subsequent GOWG meetings, but also worked to extend it to other forums of this type. The Army War College even installed the system in the conference room at its Collins Center. Once the center opened in 1994, all ensuing LAM and Force XXI GOWGs used its facilities.[15]

As a forum for discussing the various issues, the GOWGs served their purpose fairly well, but they encountered some vexing problems. First, few of the participants were involved in more than two consecutive sessions. As the faces changed, much of the institutional knowledge behind particular issues and ideas was lost. Perhaps as important, most participants represented organizations or staff sections concerned with current, day-to-day operations. Looking into the future required a wrenching readjustment for them, and some never could enter fully into the spirit of the exercise.

The Board of Directors meetings also served the purposes for which they were intended: the Army's corporate leadership did provide strategic assessment and direction of the issues they discussed. Although the membership changed as various participants retired or left for other assignments, observers have characterized the majority of those who participated as willingly supporting the process, even though Sullivan's approach might not have been the one they would have preferred. Some became more engaged in the process than others, once they saw the advantages that their commands could reap from their own creative involvement. All sought the improvement of the future Army.[16]

GEN Jimmy D. Ross, of the Army Materiel Command, was one of the most closely involved of the Army's major commanders. AMC had been engaged as early as 1991 in investigating the owning-the-night question (with TRADOC) and in seeking solutions to other logistics- and materiel-related problems. In addition, Ross established the Simulation, Training, and Instrumentation Command (STRICOM) in Orlando, Florida, in August 1992 to better integrate the use of simulations into Army processes. The new command's ability to respond to the concerns of the LAM Task Force and to assist the functioning of the LAM process was immediately evident. Ross also formed a special LAM Task Force counterpart group in his headquarters in February 1993 and used it to find ways in which AMC could fit its materiel and sustainment issues into the LAM process. Both he and GEN Salomon, his successor, worked closely throughout their tenures at AMC with GEN Sullivan and with the TRADOC commanders to ensure that AMC was as involved as possible in speeding the resolution of LAM issues, in many cases through speeding the development and acquisition of needed materiel. They also wanted to ensure that those other leaders were aware of AMC's readiness to help them and of AMC's work with LAM. AMC's particular areas of concentration concerned ready computer access to information on locations and stockage levels of supply items (*total asset visibility*), enhancement of mobility, modernization of materiel, streamlining of acquisition, and split logistics operations. On these issues, their subordinates worked closely, as well, with the Combat Service Support Battle Lab at Fort Lee, Virginia.[17]

The Process Produces—Some Examples

As the participants became more involved in the LAM process, they worked with the Task Force to address issues of increasing scope and importance, often drawing into the process as issues other investigations that already were ongoing elsewhere in the Army. Frequently, what proved to be subsidiary aspects of more inclusive issues had appeared and been investigated during the first

rounds of GOWG–Board of Directors deliberations. Over time, as investigations into these subsidiary issues proceeded, their implications for broader, more inclusive issues affecting Army operations became more fully understood. As understanding of these implications grew, related issues were linked and investigations into them evolved in directions that bore more squarely on what board members came to realize were actually the Army's core concerns.

For example, incidents during the Gulf War and subsequent congressional investigations had heightened the Army's concern with fratricide. This interest actually had led to an Army effort, even before DESERT STORM began, to enable dependable "combat identification" and to enhance "situational awareness." These initial studies were led by then-LTG Jimmy D. Ross, the DCSLOG, because mostly materiel solutions—that is, identification devices—were being sought at that point. Still another approach to limiting fratricide was for all friendly forces to know accurately the location of other friendly elements on the battlefield, which global positioning systems and automated digital reporting systems made possible. Thus, the concept of a "common relevant picture" of the battlefield evolved and dovetailed with ongoing efforts to digitize the battlefield and the Army's communications structure to enable soldiers at all levels to achieve such a picture.

The related issue of enhancing battle command throughout the force, in part through battlefield digitization, was an important issue from early in the LAM process. A separate issue, but one with some links to this investigation, was a holistic review of C4I and information dissemination to ascertain future requirements and the direction of future developments. As these investigations proceeded, it became clear that the central issue to which these issues and elements of others led was *battlefield visualization* as an element of battle command in information warfare.

Battlefield visualization involved using digital information technologies integrated horizontally across the force—including global positioning system receivers—to provide a common awareness of the battlefield situation to all engaged components, enabling commanders to make decisions based on timely information of friendly and enemy locations and actions. The digitization also resulted in automation of some battle command functions, such as the issuance of computer-generated maps, overlays, and orders. It primarily focused, however, on providing a vastly improved common knowledge of the battlefield situation among the various echelons and on creating operational and tactical advantages based on this superior knowledge. When combined with rapid communications means, this superior situational knowledge created the ability within those forces to respond more rapidly, more lethally, and in greater concert than their opponents. Perhaps even more far reaching were the implications for logistical and supply-production requirements and organizations of information technologies that permitted hitting and neutralizing artillery or mortar targets quickly with even initial salvoes.[18]

The visibility of battlefield digitization as an issue within the LAM process and the resulting attention and priority it received from the Army's senior leadership helped to ensure that TRADOC's efforts to conduct increasingly complex and rewarding experiments with digitized forces could proceed. This heightened awareness also assured that digitization and Horizontal Technology Integration (HTI), of which digitization became only one aspect, received attention and funding from Congress.[19]

One of the most important efforts for the design and capabilities of the future force was the series of digitization experiments that were led by the Mounted Battlespace Battle Lab at Fort Knox in 1992. GEN Franks and other armor community leaders, including the Armor School and Center Commandant, MG Paul E. Funk, had seen both the challenges and possibilities inherent in the M1A2 when it first appeared in December 1991. One initial concern was that the IVIS displays and their manipulation would distract

tank crews from proper attention to their own vehicles' situations and missions.[20]

Franks, sensing that the capabilities of this new system and of soldiers to employ it needed stringent investigation, worked with the Program Executive Officer for Armored Systems Modernization, MG Peter M. McVey, to exercise a platoon equipped with M1A2s as part of a National Training Center (NTC) rotation.[21] To prepare soldiers to operate the digitized equipment, Funk and his Battle Lab established a digital learning center for the months preceding the first experiment. This learning center contained workstations that employed the actual digitized systems and was available to the soldiers in the experimenting units twenty-four hours a day.[22] In September 1992, Funk and the Battle Lab sent the M1A2-equipped platoon to the NTC to exercise with a unit from the 1st Cavalry Division. The results were extremely promising in terms of the platoon's ability to increase dispersion, and thus security, anticipate events, and act more rapidly in concert through its enhanced situational awareness. Franks himself found that the soldiers' ability to absorb the new technology and exploit its capabilities far outstripped the expectations of the senior leadership.[23]

The promising results of this experiment led Franks to direct that Funk investigate further the potentials indicated in the September exercise. Funk conducted follow-on experiments at Fort Knox in November–December 1992 and in March–April 1993. In the latter exercise, Funk and the Battle Lab tested the effect of horizontally integrating IVIS-like technology across the components of a combined arms task force in the first real warfighting field experiment with these technologies. The results demonstrated the potential that linking aviation, artillery, armor, and infantry elements could have for greatly enhancing situational awareness, synchronization, and combat effectiveness. These same results contributed considerably to the decision in March to mount the digitized battalion task force Advanced Warfighting Experiment (AWE) in spring 1994 during NTC rotation 94–07. In July 1993, a digitized armored company from the 3d Squadron, 8th Cavalry, exercised at the NTC with other elements of the 1st Cavalry Division. Franks described all these efforts as Advanced Warfighting Demonstrations and all were pointed toward the next experiment the following spring.[24]

During NTC rotation 94–07, MG Larry R. Jordan, Funk's successor; BG Lon E. Maggart, his assistant; and GEN Franks brought to fruition Operation DESERT HAMMER VI. This operation, which had been orchestrated over the course of the preceding year, was to be a more comprehensive Advanced Warfighting Experiment, testing the effects of digitization on a battalion task force's capabilities in a combat-like environment. Having melded together the efforts of forty-four different agencies, they joined a digitized armored battalion task force from the 194th Separate Armored Brigade at Fort Knox with a brigade of the 24th Infantry Division. This digitized task force demonstrated in DESERT HAMMER how even a unit not well trained on the digitized equipment could use the enhanced capabilities it provided to compete against the NTC's highly trained opposing force. While the experiment pointed up the need for greater training in doctrine, tactics, techniques, and procedures and the use of the digitized equipment within the task force, it also demonstrated how rapidly and creatively the young soldiers were able to integrate the new technology into their operations and procedures. For GEN Sullivan, the successes of the experiment and their implications for the future confirmed his earlier intention to press ahead with the information-based redesign of the 21st century operational force, later termed Force XXI.[25]

Within HQDA, the Vice Chief of Staff, GEN Peay, recognized both the progress of the numerous battlefield digitization initiatives and the need to integrate them and rationalize their direction and potential costs. He therefore directed the ODCSOPS to study the totality of the Army's digitization efforts so that the most viable could be included in the POM budget cycle. Lengthy, high-level

discussions through much of 1993, particularly regarding the communications equipment, software, and protocols to permit horizontal integration of battlefield systems, had resulted in some progress but had not resolved all outstanding issues.[26] Thus, MG Jay M. Garner, the ADCSOPS for Force Development (DAMO-FD), and MG Ronald V. Hite, Deputy for Systems Management in OASA(RDA), cochaired a meeting in early November 1993 to address the scope and costs of these efforts. The meeting resulted in the TRADOC and ASA(RDA) representatives describing numerous costly but unintegrated programs. MG Garner then instructed his Director of Requirements (Combat), BG Ronald E. Adams, to form a special task force (STF) to study how the various digitization initiatives should be integrated and managed.[27]

Adams' STF consisted of officers, DA civilians, and contractors from ODCSOPS, TRADOC, DISC4, OASA(RDA), DPA&E, CECOM, and Mitre Corp. The group worked overtime from 16 November through 22 December, with Adams ultimately briefing its recommendations to GEN Sullivan at a Requirements Review Council session on 22 December 1993. The STF recommended that an Army digitization office be established within the Army Staff and made a number of other recommendations about the allocation of digital information systems within the force, the need for an experimental unit, and related issues. GEN Sullivan enthusiastically accepted the Adams group's recommendations and directed the establishment of a second STF to recommend a management structure for the new office. BG Joseph E. Oder, the new Director of Horizontal Technology Integration in DAMO-FD, headed the second STF on Digitization.[28]

On 14 January 1994, Sullivan and Secretary of the Army Togo D. West announced the formation of this second Special Task Force on Digitization to explore existing technology, make initial plans for information architecture, and lay the groundwork necessary for the establishment of the Army Digitization Office (ADO) and the realization of the digitized battlefield. Even as AWE 94–07 was proceeding, the Digitization Special Task Force published, on 14 April 1994, the concept plan for the ADO. Finally, on 8 July 1994, the Special Task Force issued its final report, and the ADO came into existence with MG Joe W. Rigby as its director. Establishment of the ADO and its management structure put into place a major piece of Sullivan's plan to achieve Force XXI.[29]

Another example of an issue that evolved far beyond its initial visualization was the growth of a requirement to investigate the exploitation of space-based capabilities to enhance the Army's warfighting capabilities. The issue of evaluating and incorporating space-based capabilities into the Army, including the development of doctrine, training programs, materiel, and an investment strategy, was nominated during the second GOWG (7–8 December 1992). The issue was approved for FY 94 investigation during the second Board of Directors meeting (3 and 5 March 1993), with U.S. Army Space Command (later Space and Strategic Defense Command) leading as the proponent.[30]

The investigations proceeded quickly and led rapidly to the definition of capabilities that the Army needed to exploit to perform its space-oriented functions and to the identification of commercial, off-the-shelf technologies to facilitate this exploitation. The results of experimentation and evaluation of this issue enabled horizontal integration within the Army of improvements in communications as well as intelligence collection and dissemination, including tactical imagery, mapping, weather forecasting, and missile warning. The resulting advances these improvements permitted in the areas of en-route mission planning and rehearsal and of warning and response to tactical ballistic missile attack were dramatic. The Army Space and Strategic Defense Command validated its research and proposed solutions in the tactical ballistic missile–related areas during live-fire tests at White Sands Missile Test Range, New Mexico. In addition, a request for procurement of a package of com-

mercially available, space-based C4I equipment from the Commander of the Joint Task Force Somalia in November 1993 resulted in the rapid definition and acquisition of the items required through the ongoing LAM process investigation into the space issue.[31]

On the other hand, owning the night, an investigation begun in October 1991 before LAM or the Battle Labs had taken shape, proceeded apace during this period. Although it was not one of the warfighting issues approved at the first GOWG, Peay, Franks, and Sullivan agreed that it belonged on the list of issues that the first Board of Directors meeting would consider. That first meeting (14 October 1992) approved owning the night as one of the ten FY 93 LAM issues. Nearly a year's effort within TRADOC, AMC, and HQDA had preceded the action, but its inclusion as a LAM issue gave it immediate high-level visibility throughout the Army's senior leadership. As noted earlier, AMC had joined the investigation effort in late 1991; planning and initial experimentation at Fort Benning as TRADOC's portion of the effort actually began shortly thereafter, during October 1992. MG Jerry A.White, the Infantry Center Commander, led the experimentation team, which joined the efforts of all interested agencies, including ASA(RDA), AMC, ODCSOPS, and TRADOC. GEN Franks officially chartered the Dismounted Battlespace Battle Lab (DBBL) at Fort Benning on 26 January 1993, appointing MG White as the Battle Lab Director. Among other things, the charter tasked White specifically to focus his efforts on optimizing the night-fighting capability of the combined arms force, with particular emphasis on focal plane arrays and second generation forward-looking infrared (2d generation FLIR).[32]

The DBBL took the lead in experimentation designed to enhance current night-fighting capabilities and to extend those capabilities across the force. Simultaneously, the 2d generation FLIR technology began to emerge. The early emphasis on integrating such technologies across the force led to designs for 2d and 3d generation FLIR devices and installation modules for about 120 systems that provided significantly more standardization, commonality, and ease of maintenance than otherwise might have occurred had the initial design efforts not been horizontally integrated.[33]

Efforts within the TRADOC-AMC-HQDA night vision communities that would produce the 2d generation FLIR technologies over the next two years continued. At the same time, however, the GOWG and the Board of Directors recognized early (late 1992–early 1993) that owning the night meant more at a strategic level for the future Army than just being able to fight well tactically at night. Redefining the LAM issue under the rubric of "Continuous Operations" and including owning the night in it, the leadership recognized that fighting better at night than prospective opponents, while significant, was only one aspect of operating continuously and controlling OPTEMPO throughout the course of operations. The Board of Directors shepherded this broader, more inclusive issue and the investigations of it through succeeding iterations of the LAM process. Experiments with continuous operations, and particularly their owning-the-night aspects, continued in numerous simulation exercises. The experiments' results helped the doctrine writers and combat developers understand better how the future force should be organized, trained, and equipped to operate continuously.[34]

The GHQ Exercises

The Louisiana Maneuvers began with an ultimate objective of conducting a General Headquarters exercise (GHQx) in 1994. During much of 1992, this still seemed to be the objective, although GENs Sullivan and Franks considered evaluating some known issues in 1992 as part of the preparation to conduct the 1994 maneuvers. Among the decisions coming out of the first Board of Directors meeting on 14 October 1992, however, was a directive for a General Headquarters exercise in the spring of 1993.

With cancellation of the 1993 version of Exercise PRIME DIRECTIVE, the exercise that was to have been the vehicle for much GHQx 93 experimentation, it became necessary to find other ways to evaluate the 1993 LAM issues and to assess HQDA's ability to perform its Title 10 functions. As of the initial exercise coordination conference on 12–13 January 1993, HQDA had not yet settled on a way to do this, but during a LAM Quarterly IPR later in the month, GEN Sullivan directed that a GHQx be conducted during FY 93 in which the DA staff would participate and be forced to allocate scarce resources. By February, Sullivan had chosen to participate in Exercises ULCHI/FOCUS LENS (Korea) and FUERTES DEFANSAS (SOUTHCOM) during July and August. Through mandating DA participation in these exercises, Sullivan sought to accomplish the GHQx 93 mission, which was to stress the headquarters' crisis-response and decisionmaking system to see if the Department could resource, synchronize, and maintain asset visibility in two concurrent regional conflicts. When conducted 12–28 August, GHQx 93 did challenge existing capabilities, particularly the staff in the DCSOPS' Operations Directorate, which established a Crisis Action Team to support the two exercise headquarters on mobilization, deployment, sustainment, and redeployment issues.[35] The Army's Concepts Analysis Agency and the Joint Staff supported the exercise, which postulated one major regional contingency (MRC) and one lesser regional contingency (LRC), occurring nearly simultaneously, to better test the Army Staff.

GHQx 94, a four-phase CPX, began in November 1993 and consisted of four weeks of active play spread in increments over eight months. Although the exercise again presented a scenario of two simultaneous regional crises, it involved many more agencies and participants than had the previous version and included, in the third phase, a linkage to the Command and General Staff College's end-of-course exercise, PRAIRIE WARRIOR 94. A highlight of PRAIRIE WARRIOR 94, from the point of view of the LAM, was the first full exercise, through simulation, of the Mobile Strike Force (MSF), a brigade task force with Information Age equipment and capabilities.[36]

The extensive GHQ exercise resulted in several observations, which the ODCSOPS Operations Directorate briefer listed as "insights" in his presentation to the July 1994 Board of Directors meeting. First, force projection requires proactive, anticipatory decisionmaking; second, force projection with a two-MRC strategy requires establishing priorities and ensuring a balanced force structure; third, continuous staff interaction is necessary to ensure National Command Authority and CINC decisions that allocate scarce Army resources effectively; fourth, early access to Reserve Component forces is essential in support of a force-projection Army; fifth, total asset visibility is essential to support a force-projection Army; sixth, projected available deployment dates for RC combat forces are inconsistent; and, finally, some units identified for the first MRC could not initially meet published criteria for deployment. The Board of Directors approved the DCSOPS recommendations and taskings resulting from the findings, and the Director of the Army Staff distributed the briefing slides with his own cover memo, setting suspense dates for corrective action plans. DCSOPS representatives also received approval of the concept for GHQx 95 at the same July 1994 Board of Directors meeting.[37]

Although Sullivan understood quite well the essential Joint character of modern war, and although the Army secured Joint Staff support of the GHQx's, the Army made no concerted effort, at least during the first two years of the Task Force's existence, to involve the Joint Staff or the Joint Chiefs any further in the Louisiana Maneuvers. While the Joint Staff apparently expressed some interest in what the Army was doing with LAM, certainly GEN Powell, as an Army officer, could not push greater JCS involvement. Sullivan himself was concerned on two counts: first, that integrating the other services would be very tough to do, and, second, that if other

services participated, the Joint Staff would take over the process, depriving him of the flexibility and initiative he needed to make LAM work effectively for the Army. Admittedly, these events occurred during the time of the Bottom-Up Review and the deliberations of the Committee on Roles and Missions, a period when all services were concerned about their own capabilities and programs. Whatever the reason, early opportunities that may have existed to include the other services in LAM were ignored, though the Air Force and TRANSCOM were involved to a limited extent.[38]

Other Task Force Issues—Structure, Manning, Funding

Although the Louisiana Maneuvers process was reasonably well developed when the Task Force began operations, questions about Task Force structure, manning, and funding remained open for some time. The Task Force's table of distribution and allowances (TDA), the document that allocated personnel and authorized supporting equipment, continued in a draft stage well into 1993, over a year after the organization began its work. In part, the delay stemmed from the inclusion of the Task Force on the TDA of the Army War College. The Army Staff, under pressure to reduce service headquarters, adopted this expedient to avoid adding HQDA spaces.

In addition, once he had settled in, BG Franks reorganized the Task Force, forming his own Initiatives Group from the Operations Directorate's Current Operations Division. This group, generally consisting of three to four people, was responsible for marketing the Louisiana Maneuvers and the efforts of the Task Force. They coordinated briefings on both topics for visitors to Fort Monroe and for audiences elsewhere, whether in the United States or overseas. The files of the Task Force contain copies of the hundreds of briefings BG Franks and others presented to such audiences. The Initiatives Group also coordinated preparation of the first of the widely distributed LAM Task Force Significant Activities Reports, which described everything the Task Force had done or been involved in up to 25 February 1993.[39]

The composition of the Task Force in terms of military and civilian slots changed over time. Initially, the Task Force consisted overwhelmingly of civilians, reflecting the initial, temporary duty assignment of mostly TRADOC DCS-A personnel to the fledgling organization. Over time, the Task Force's composition became more military until, by November 1993, it included twenty-six military, ranging in grade from brigadier general to sergeant first class, and twenty-three civilians, ranging from GM–15 to GS–4.

One result of the improvised manning arrangements was the departure of Mr. Radda, one of the founders of the Task Force, in May 1993. Although the originally proposed TDA called for a Senior Executive Service slot as the Task Force Director's Science Adviser, the final version deleted the slot. Once COL Blodgett departed for a new assignment in December 1992, the Deputy Director's slot was civilianized at the GM–15 level and Mr. Radda, as a temporary assignee, chose not to compete for that slot but to return to his permanent position in TRADOC's DCS-A. A civilian member of the Operations Directorate, Mr. Charles Valliant, became the Deputy Director of the Task Force and ultimately served in that position until the Task Force disbanded.[40]

Like its TDA documentation, the Task Force's funding was handled circuitously. Instead of coming straight from HQDA, the funding went through TRADOC's operating funding agency, and TRADOC's priorities influenced the Task Force's budget. As a result, TRADOC's resource managers sometimes had to be reminded to support the Task Force appropriately. The Army Budget Office exercised particularly sharp vigilance over TRADOC's handling of LAM finances to ensure that the Task Force actually received its allotted funds.[41]

Finding money to fund the Task Force's activities fell to the DCSOPS, who was responsible for setting priorities in the Army, and

this responsibility became increasingly onerous as budgets continued to shrink. Some members of the Task Force had to remind those whom the Chief of Staff had directed to provide funding that they needed to comply. These reminders usually met with reasonable success, since none wanted the Chief to become involved in following up on such instructions. Once the LAM program was integrated into the POM for FY 95 and beyond, the issue of funding became less immediately pressing and served to institutionalize at least one aspect of LAM within the Army. The LAM budget, however, was still subject to the taxes that DCSOPS imposed on agencies and MACOMs with increasing frequency to pay for immediate requirements.[42]

Related Experimentation—Battle Lab and Other Activity

The Louisiana Maneuvers process explored issues at higher levels and enabled the Army's senior leadership to take a strategic view of them and to provide appropriate guidance. At the same time, a great deal of related, lower level, experimentation was taking place both in the Task Force and in other parts of the Army. As the Task Force and other agencies became aware of promising new technologies, they would frequently arrange demonstrations to enable the developers to showcase potential solutions to Army problems. Various agencies, usually in conjunction with the Battle Labs, also mounted Advanced Warfighting Demonstrations and Experiments as part of their issue evaluation plans or as part of other efforts to enhance readiness and training.

The Combat Service Support Battle Lab at Fort Lee, in concert with AMC and the DCSLOG, experimented with numerous technologies, many already commercially available, to meet its requirement for total asset visibility, whether in storage or in transit. Additional investigations into other aspects of sustainment, such as Split-based Logistics and the status of and best configuration for the many kinds of War Reserve Stocks, also received a great deal of attention from the logistics community. This effort fed into the AMC-led development of the Logistics Anchor Desk concept for integrating logistical data from myriad sources and an orientation on meeting the customer's needs. In GHQx 94, ULCHI/FOCUS LENS, ATLANTIC RESOLVE, and other command post exercises, the Log Anchor Desk demonstrated the ability to control split-based logistics as well as to monitor the location and inventory of Army assets.[43]

In Europe, USAREUR and the Defense Advanced Research Projects Agency (DARPA) worked together to link constructive, virtual, and live exercise simulations in a seamless Synthetic Theater of War (STOW-Europe, or STOW-E). STOW-E's original purpose was to raise the training level of USAREUR units before their combat training center rotations, but it was found to have even broader utility as a training and mission planning and rehearsal tool in the real world, in both Army and Joint environments. USAREUR conducted "proof-of-principle" or verification tests at Grafenwoehr, Germany, in March 1994, linking several simulations, and intended an even broader use of STOW-E in Exercise ATLANTIC RESOLVE (a simulation-based exercise scenario that replaced REFORGER) later that year. STOW-E, while a USAREUR effort, linked well with similar LAM Task Force and National Simulations Center work, producing widespread improvements in the use of DIS-based capabilities for training, readiness, mission planning, and mission rehearsal throughout the Army.[44]

Getting the Message Out—Publicizing LAM and Change in the Army

Between 1992 and 1994, GEN Sullivan worked hard to explain his evolving vision of the 21st century Army and the purpose of the maneuvers. Through communications to the Army, appearances before AUSA gatherings, and testimony to Congress, he sought to explain the Louisiana Maneuvers to a wide variety of audiences both inside and outside

the Army. For all his efforts and the publicity generated by the LAM Task Force, much of the Army, even after two years, remained ignorant or poorly informed about the Louisiana Maneuvers, the LAM Task Force, and the Task Force's mission.[45]

Sullivan used all the traditional means available to a Chief of Staff to communicate with the Army's leaders. He sent personal messages to senior Army leaders and selected others. In one such message, following the October 1993 Board of Directors meeting, he wrote:

> I am often asked, "But, Chief, what exactly is LAM." I tell them that LAM truly is about changing the way we change. It is neither a program nor a budget line. It is not an exercise nor a series of exercises. It is not a replacement for the test community; the POM process, CBRS, or the Army Staff; nor is it a showcase for the Battle Labs or a way to inject me into your exercises. It does not belong to the TRADOC or any other command; it belongs to us all. It is a mechanism whereby we and our leaders can fast track changes to our Army—policy changes in any warfighting or Title X area. It is a "forcing function" to empower our best and brightest to focus their energies on the future. Over the next year, we will continue to institutionalize this process and, as you transform your commands, we will break the Cold War decision processes to be more responsive to warfighting requirements, to leverage technological changes, and to unleash the tremendous power of Army people. LAM is helping us to do all those things.[46]

He also wrote letters to Army general officers and published them in the *Chief of Staff's Weekly Summaries*. He encouraged attendees at commanders and commandants conferences to send him their ideas on LAM and on changing the Army. He gave speeches throughout the Army, particularly early in his tenure when he was grappling with communicating the need for change and later as he discussed the increasingly sophisticated vehicle the Louisiana Maneuvers had become. His numerous articles and interviews in Army- and defense-related publications eloquently laid out his themes for the Army of continuity, change, and growth.[47]

Sullivan also made productive use of the Chief of Staff's relationship with the Association of the United States Army (AUSA). GEN (Ret.) Jack N. Merritt, the AUSA President, had conferred with him and had already produced useful advice as Sullivan formulated the LAM concept in late 1991 and early 1992. As the Louisiana Maneuvers proposed problems and the high-tech orientation of many of their solutions took shape, the role for AUSA, particularly as a mediator for the Army with industry and as an advocate for Army points of view and programs outside the Army, grew larger. The AUSA-sponsored Winter Symposium in Orlando in February 1992 was the forum in which Sullivan first described LAM as a process rather than a single event. The AUSA Annual Meeting in Washington, D.C., 12–14 October 1992, provided coverage of LAM's beginnings. Over the course of the next few years, AUSA worked closely with Sullivan's office, the LAM Task Force, AMC, and TRADOC to use its periodic symposia and annual meetings as forums in which LAM and related topics could be publicized to the Army and other audiences. The primary Army displays at the 1994, 1995, and 1996 annual meetings, which linked dissimilar simulations in ever more sophisticated demonstrations of their capabilities, were team efforts mounted by the LAM Task Force, AMC, and a host of others from government and industry. The exhibits were entitled Army Experiment I, II, and III, in part to show their Army-wide applicability and to emphasize the multiple sources of support for them.[48]

Many of these efforts in conjunction with AUSA seemed successful. Certainly the dialogues that took place at the various symposia between Army officials and members of industry revealed good understanding by

each group of the other's efforts and positions. Their presentations made clear both their extensive cooperation and their efforts to assist the Army in achieving the changes it proposed to make, particularly in areas like acquisition streamlining. The demonstrations of emerging technologies, particularly in the simulations fields, that took place at these gatherings also evidenced a close Army-industry joint effort. [49]

Many visitors to such gatherings as the AUSA symposia and annual meetings are part of a focused, parochial audience who participate as an aspect of their jobs. This was not true, however, of most attendees. Civilian officials from the Department of Defense, members of other services, representatives of members of Congress, and others from outside the Army also attended for a wide variety of reasons, as did members of the media. Without some context, however, such outsiders could have departed with only an incomplete understanding of what Sullivan hoped to achieve, despite the Army's and AUSA's efforts.

Sullivan also publicized to Congress his efforts to change the Army both through his testimony, beginning with his appearances in early 1992 before the House and Senate Armed Services Committees, and through the associated Army posture statements. On each occasion, he explained the Louisiana Maneuvers as they evolved and also discussed Force XXI as that effort took form. He spoke, as well, with individual legislators and members of their staffs on numerous occasions.

The Louisiana Maneuvers Task Force also played an important role in publicizing what Sullivan intended to accomplish by mounting the maneuvers. Before the actual formation of the Task Force, COL Blodgett and Mr. Radda briefed the proposed maneuvers to the various commands and to the Army's models, simulations, and analytical community. Once BG Franks arrived and took charge of the Task Force, he and his staff presented literally hundreds of briefings to interested domestic and foreign audiences, including foreign liaison officers, several of whom also observed the GOWGs; visiting representatives of foreign military establishments; members of other services; members of Congress; Army Secretariat, Defense, and Joint Staff officials; and others.[50]

Since simulations and modeling were such a crucial part of LAM, the Task Force also established its own simulations center in Building 11 at Fort Monroe in the late spring of 1993. GEN Franks often placed it on the itineraries of visiting dignitaries, as an example of the ways in which the Army was moving proactively into the future. GEN Sullivan, other members of HQDA, the Secretary of Defense, and GEN John Shalikashvili, the Chairman of the Joint Chiefs of Staff, among others, visited the facility and witnessed demonstrations of the simulations' increasingly sophisticated capabilities.[51]

The Task Force also used other means to spread the word. By late spring 1993, it had completed a 15-minute video for widespread dissemination to the Army and to Congress. The video explained the purpose of the Louisiana Maneuvers and gave examples of some of LAM's activities, with voice-overs from several senior leaders. Sullivan included a copy of the video as part of his periodic command report to the Secretary of Defense. The Task Force undertook a further excursion into media communications with publication and widespread dissemination of its pamphlet, *Louisiana Maneuvers: The First Year,* on 1 March 1994. A highly illustrated summary of what was actually the first two years of LAM, it set the stage for Sullivan's announcement shortly thereafter of the Force XXI Campaign.[52]

Yet, despite all these efforts to help the Army in the field and the general public to understand the Louisiana Maneuvers and Sullivan's vision for them, many in the Army, even those in significant positions of authority, readily admit that they had only a superficial understanding of LAM. Two officers who served as division commanders before being called to serve in the Pentagon during this period later related that they had little or no

real understanding of what Louisiana Maneuvers was about or what LAM was accomplishing before they reached the Pentagon.[53] Misunderstandings about LAM persisted. Other officers still believed that it was to be a large field exercise, like its predecessor. Others continued to believe that the Task Force, because it was located at Fort Monroe, was a part of TRADOC. To many, the first two years of LAM's existence seemed not to have produced anything for the Army. How either Sullivan or the Task Force could have better alleviated this lack of understanding, given their diverse efforts, is problematic.

On the Road to Force XXI

On 5 March 1994, GEN Sullivan announced to his general officers that the service had begun its transformation into the Army of the 21st century, which he labeled "Force XXI." In the letter, Sullivan described the numerous, superficially disparate efforts the Army had been making to field the new force and enjoined the general officers' cooperation and support for the campaign ahead.[54] In truth, much work remained before the Army could mount a campaign to achieve Force XXI. Although Sullivan had espoused his vision of a digitized battlefield early in his tenure, the capability to realize that vision was only gradually becoming attainable. MG Funk and others throughout the Army's experimentation, information management, and communications communities had worked hard to achieve the integration of many different processing and communications technologies to realize Sullivan's vision. Much of their work, however, was still theoretical or, at best, prototypical, without major concrete achievements that could be seen or touched by a casual observer.

Sullivan's initial conception of the Force XXI effort included not only the Army Digitization Office, but also the redesign of the operating force, a project he had put off in the summer of 1991. Even as late as 5 May 1994 at the Armor Conference, Sullivan referred only to the operating force redesign aspect of the effort. GEN Franks, who as the TRADOC Commander was responsible for such redesigns, announced the initiation of the Force XXI Joint Venture on 9 May. The commander's intent he had received from Sullivan was to design the entire force, from foxhole to factory, with an emphasis on digital connectivity among all of its elements. In point of fact, TRADOC's Battle Lab Integration and Technology Concepts Directorate (BLITCD) had already begun formulating concepts for a heavy division redesign. These concepts included, as well, proposals for an experimental force that would serve as a testbed for the new organizational designs. All of these efforts received additional impetus from the results of AWE 94–07.[55]

AWE 94–07 produced other useful lessons in the formulation of experimentation plans. The two concepts of a "good idea cutoff date," beyond which new ideas would not be integrated into the experiment, and of an "everything in place date," by which all personnel, equipment, and other elements to be tested in the experiment must be present, were crucial to the validity of future experiments. These concepts governed the conduct of later Force XXI experiments with the experimental force.[56]

During April and May, however, the realization dawned on Sullivan and others that many of the Army's legally mandated responsibilities and much of its manpower resided in the institutional, or TDA, portion of the force and that much of the Army's activity occurred in areas of the operational continuum other than warfighting. Thus, the Force XXI Campaign, if it was truly to succeed in producing a 21st century *force*, must include the redesign of the institutional or TDA Army. As the planners in the LAM Task Force, with input from TRADOC, the Chief's Staff Group, ODCSOPS, and elsewhere, crafted a plan for the Force XXI Campaign, they created an additional axis to achieve the redesign of the TDA Army in much the same fashion as Joint Venture would the operational Army. In late May 1994, the LAM Task Force presented to General Sullivan a con-

cept that included a third, TDA/Institutional Army axis. The Chief of Staff approved the concept and disseminated it to the field as Force XXI Campaign Plan Guidance.[57]

The LAM Task Force had assidously prepared the way for Army-wide acceptance of the Force XXI Campaign during the preceding months. In conjunction with newly assigned COL Richard A. Cowell, COLs Smith and Rodgers had crafted a series of briefings on the upcoming Force XXI Campaign. Traveling throughout the Army, Cowell and Smith presented the material to the several members of the Board of Directors. Each briefing, stressing that the success of the Force XXI effort depended on the recipients' support and contributions, served to elicit useful comment and to persuade the individuals to take ownership of the Force XXI concept and their part in it.[58] At the Army War College, 13–14 July 1994, the new LAM Task Force Director, BG David Ohle, presented the Force XXI Campaign Plan to the next meeting of the Board of Directors, which accepted it for implementation.

BG David Ohle

Conclusion

By mid-July 1994, a month after Ohle succeeded Tommy Franks as Director of the Task Force, an important phase in the life of the modern Louisiana Maneuvers had ended and a vastly new one had begun. The Louisiana Maneuvers process had grown and matured and had served both to foster a receptiveness to change among the Army's leaders and to engage the Army's senior leaders in deciding what was important for the institution's corporate future. The LAM process and the LAM Task Force—acting for the Chief of Staff and often in conjunction with TRADOC's Battle Labs and other agencies—had facilitated and nurtured many of the high-technology approaches and programs that would lead the Army toward Force XXI. But the future would also produce many changes for the Louisiana Maneuvers and for the Task Force. Sullivan's decisions at the 12–14 July Board of Directors meeting, while approving implementation of the Force XXI Campaign, also included several other elements that led to the end of the formal Louisiana Maneuvers initiative.

Notes

[1] GEN Sullivan to BG Mountcastle, 17 October 1997, pp. 2 and 18. Historian's files.

[2] On the challenge of trying to mount a significant change effort during a period of increased austerity, Sullivan later observed (Letter to Mountcastle, 6 June 1998), "I can't state with certainty the impact of the budget/POM wars on LAM, writ large, but it did, I know, create a trade off environment filled with tension – the tension is best summed up as [a] today/tomorrow balance." This environment persisted throughout Sullivan's tenure.

[3] Sullivan LOI, 22 May 1992, see Appendix H.

[4] Memorandum for Brigadier General Tommy R. Franks, Director, Louisiana Maneuvers Task Force, from Gen. Franks, 8 Jun 1992, sub: Organizing Louisiana Maneuvers, was sent to BG Franks at Fort Sill, in LAM TF Files, Box 1, File 3-2d. See also GEN Franks to BG Mountcastle, 23 February 1998. GEN Franks followed up the 8 June 1992 memorandum with his signature of a memorandum of instruction on LAM Task Force stationery to BG Franks, 6 January 1993, sub: Louisiana Maneuvers, which details the relationship between TRADOC and the LAM TF, in LAM TF Files, Box 2, File 3-4g1.

[5] Interview, Rodgers with Yarrison, 28 June 1996, pp. 4-8; Interview, Radda with Yarrison, 21 August 1996, pp. 6-13; Interview, Blodgett with Yarrison, 1996, pp. 5-14.

[6] See above, Chapter 1, n. 58-61.

[7] Briefing packet, "Resourcing Louisiana Maneuvers, MDEP TLAM," 21 December 1993, presented by LAM TASK FORCE to the Army Staff, in LAM TF Files, Box 4, File 3-7c. See also Louisiana Maneuvers Task Force, Louisiana Maneuvers Significant Activities Report, 24 June 1993, widely distributed, which contains a breakout of funds allocated to issue proponents for issue investigation, in LAM TF Files, Box 3, File 3-5i. See also Letter, Charles M. Valliant to Yarrison, 6 November 1997, describing the funding allocation procedure, in historian's files. BG Franks proposed to MG Theodore G. Stroup, the Director of Program Analysis and Evaluation, OCSA (Eyes Only Message, 241700Z Dec 92, sub: Integration of LAM Requirements into PPBES), that as a means of institutionalizing funding for LAM requirements in PPBES, issue proponents submit requirements for funding through the LAM TF for prioritization and forwarding to DCSOPS. MG Stroup replied (Eyes Only Message, 081300Z Jan 93, sub: SAB) that given the fiscal climate, he believed continuation of current practices for funding unfinanced requirements would be the most politically feasible, in LAM TF Files, Box 3, File 3-6e1.

[8] See, for example, from a slightly later period, Memorandum for BG Ohle from COL Richard Cowell, 22 December 1994, sub: 18-22 December 1994 Results, which describes some of the technologies and companies Cowell had turned up that could provide useful enhancements to the operational Army. In LAM TF Files, Box 1, File 3-3d.

[9] One result of the Operations Directorate's search for new and better research tools was Mr. Richard Maruyama's compilation, *The Tools: Models and Simulations*, which the LAM Task Force published and distributed on 27 May 1993. This compilation includes descriptions of 74 models and simulations then available and categorizes them for the subjects for which they were appropriate evaluative tools. In LAM TF Files, Box 10, File 5-1. On technology scouting, see particularly Interview, LTG (Ret.) Paul E. Blackwell with Yarrison, 16 October 1996, pp. 10, 13-14. See also letter, Ronald J. Radda to Yarrison, 18 October 1997, p. 4. Historian's files.

[10] Interview, BG (P) Tommy R. Franks with Dr. Anne Chapman, TRADOC History Office, 8 April 1993, pp. 5-9.

[11] The procedural guide for proponents' action officers was developed over time but was finalized by the West Point Department of Mathematical Sciences in early 1994. Copy in historian's files, provided by LTC Kirby Brown.

[12] Interview, Rodgers with Yarrison, 28 June 1996, pp. 10-13. LAM TF Roundtable, Afternoon Session, 14 May 1996, pp. 128-130. See also letter, Radda to Yarrison, 18 October 1997, p. 5. Historian's files.

[13] The group also included the British military attaché, a brigadier, and the French liaison officer to TRADOC. In addition, the author attended these sessions. See also Interview, Rodgers with Yarrison, 28 June 1996, p. 8. Rodgers observed: "You had some strong personalities in there. . . . I was concerned [in the next iteration] about how do we level the playing field because you literally have some generals in there who could suck the air out of a room. They would dominate the discussion."

[14] Read-ahead packet, Board of Directors, First Meeting, 14 October 1992, in LAM TF Files, Box 5, file 4-2, and associated notes from the first parts of the meeting, in historian's files. Only the Board members attended the session in which issues were discussed. See also Sullivan's message, DACS-ZA, 191223Z Oct 92, sub: Louisiana Maneuvers Board of Directors Meeting, 14 Oct 92, Personal for the members of the Board of Directors, with information copies to the ARSTAF and other participants, in LAM TF Files, Box 5, file 4-2. Sullivan described the meeting's results enthusiastically and sought comments and suggestions from participants on how to improve and refine the process. His enthusiasm resulted in the LAM TF's production in the next few weeks of a

widely distributed video with senior-officer voice-overs that displayed highlights of the meeting. He only confirmed the next Board of Directors meeting for 3-5 March 1993 to BG Franks during a trip to Redstone Arsenal and Fort Rucker, Alabama, on 4-5 February 1993. See Memorandum for Distribution from Sullivan, 11 February 1993, sub: Trip to Redstone Arsenal and Fort Rucker, Alabama, in LAM TF Files, Box 1, File 3-4b. See letter, Valliant to Yarrison, 6 November 1997, p. 15. Subsequent Board of Directors meetings took place on 3-5 March 1993, 20 October 1993, 13-14 July 1994, 20-21 October 1994, 1-3 March 1995, and 11 July 1995.

[15] Interview, Rodgers with Yarrison, 28 June 1996, pp. 8-11, 18-19. See also CMH Memorandum for Chief, RA, from Yarrison, 9 December 1992, sub: Louisiana Maneuvers (LAM) GO Working Group (GOWG) Meeting. See also the Electronic Meeting System printouts from the meeting in historian's reference files. Subsequent GOWGs took place 28-29 July 1993, 15-16 February 1994, 24-25 August 1994, 15-16 February 1995, and 3-4 October 1995.

[16] Assessments of the effectiveness of the Board of Directors concept have been mixed, though building consensus among the Army's leaders through such a device was one of the original recommendations of Sullivan's transition team. See Chapter 1 above, n. 1. For the range of assessments, see Interview, Rodgers with Yarrison, 28 June 1996, pp. 21-26; Interview, Harper with Yarrison, 2 October 1996, pp. 22-25; Interview, Franks with Yarrison, 18 February 1997, pp. 12-15; Interview, Sullivan with Yarrison, 29 April 1997, pp. 10-12; Interview, Tilelli with Yarrison, 26 January 1998, pp. 2-5. See also e-mail memorandum from BG Franks to GEN Franks, 11 August 1992, sub: Visit with GEN Saint, in LAM TF Files, Box 2, File 3-4f.

[17] Interview, Paige with Yarrison, 15 August 1996, p. 2.

[18] Message, PEO Command and Control Systems, personal for multiple addressees, 291222Z July 1993, sub: Digitized Mapping, agrees that "our goal should be a map display in every combat vehicle." In LAM TF Files, Box 3, File 3-6e2. See also Interview, LeCuyer with Yarrison, 23 October 1996, pp. 14-16.

[19] Franks' letter to Mountcastle, 23 February 1998, in historian's files.

[20] Interview, Franks with Yarrison, 18 February 1997, pp. 24-25. See also John L. Romjue, *American Army Doctrine for the Post-Cold War*, pp. 137-138.

[21] Franks' letter to Mountcastle, 23 February 1998.

[22] Interview, COL (Ret.) John Klevecz with Dr. Susan Canedy, 16 July 1996, p. 7. Funk briefed Sullivan and Franks on battlefield digitization efforts and plans as part of a VTC held at Monroe during Sullivan's visit there on 21 August 1992.

[23] Interview, Franks with Yarrison, 18 February 1997, pp. 24-26. Franks' letter to Mountcastle, 23 February 1998. In all those places and in Tom Clancy with Franks, *Into the Storm: A Study in Command* (pp. 509-510), Franks particularly notes the importance of his conversations, beginning at the NTC, with the platoon sergeant of the M1A2 platoon, then-SFC Philip Johndrow, and how those discussions opened his eyes to the possibilities for nearly every aspect of future warfare inherent in an accurate, common relevant picture of the battlefield.

[24] Messages from GEN Franks Personal for GEN Sullivan, 061533Z Apr 93, sub: Advanced Warfighting Demo of Battlefield Synchronization (AWDBS), and 011705Z Sep 93, sub: Advanced Warfighting Demonstration (AWD): Battlefield Synchronization, reporting to Sullivan on the results of the March-April demonstration and the July 93 exercise at the NTC with the 1st Cavalry Division, both messages in historian's files. See also John W. Cranston, *U.S. Army Armor Center and Fort Knox Annual Command History, 1 January 1993 to 31 December 1993*, pp. 63-70, for discussions of the experiments and of planning for AWE DESERT HAMMER VI (NTC 94-07) in April 1994. For a summary, see John C. Johnston, "The Journey to Force XXI's Mounted Component," *Armor*, CIII:2 (March-April 1994), 14-16.

[25] Interview, Franks with Yarrison, 18 February 1997, pp. 24-27; Interview, Maggart with Yarrison, 27 September 1996, pp. 31, 43; Interview, Sullivan with Yarrison, 29 April 1997, pp. 21-22. Maggart joined Funk as his Assistant Commandant at Knox in 1994 and succeeded Funk as Commandant when the latter moved on to corps command. See also Sullivan writing in his sketch books, 24 April 1994, in Sullivan Papers, Personal Papers, Sketch Books, December 1989-February 1995, Box 1 of 5, Sketchbook #8, April-December 1994, "*NTC*: Took a risk, not a big one but a risk, and it apparently paid off. My goal was to conduct experiment with purpose of beginning process of real change—set next CSA up—get press telling our story, excite Army, involve industry, move into 21st century. Real risk was it would collapse of its own weight. Press would declare failure & whatever support we had in Congress and amongst informed public would evaporate. Failure would have been seen as 'proof' Army is really Willie and Joe & *not* high tech—take it down & bring it back when needed." See also Sullivan and Harper, *Hope Is Not a Method*, pp. 175-176. See also the comments in Interview, Blackwell with Yarrison, 16 October 1996, pp. 11-12, 31-33; and Interview, Hubbard with Yarrison, 9 July 1996, pp. 14, 28-29, and 16 July 1996, pp. 29-33. Sullivan later observed (Letter, Sullivan to Mountcastle, 1 July 1998), "By 1994 I had become experienced enough to know [that] much of what was being touted as an experiment was in reality a demonstration, rather than a reasonably controlled scientific experiment capable of withstanding scrutiny on Capitol Hill and a close look within DOD. Thus the requirement for up front hypotheses and MOE, and the involvement of OPTEC and Army Audit Agency in the process." In historian's files.

[26] Message from Cdr SigCen to PEOs, PMs, and TRADOC School/Center Commandants/Commanders, 171928Z Mar 93, sub: Brigade and Below Data Distribution, references a 17 February 1993 Senior Officer Review at which GEN Franks asked the Signal Center to resolve standardization of protocols and battlefield functional areas. Numerous meetings and communications over the course of the next seven months led to discussions of concerns about the capabilities of different systems and standards with only partial resolution of the issues. See extensive documentation in historian's files.

[27] Sullivan, Comments, 17 October 1997, p. 2. See also Interview, MG Ronald E. Adams with Yarrison, 13 February 1998, pp. 1-3, and Interview, Tilelli with Yarrison, 26 January 1998, pp. 5-9. Tilelli observed that at the point where Adams' STF was established, the Army's leadership was still grappling with what digitization meant and portended. As Adams points out in the interview cited, his STF's definition of digitization was the first he had seen.

[28] Interview, Adams with Yarrison, 13 February 1998, pp. 6-10. The Director of Information Systems, Command, Control, Communications, and Computers (DISC4) is a member of the Army Secretariat. The Director of Program Analysis and Evaluation is an Army Staff officer in OCSA. See also Briefing, STF on Digitization, "The Army Vision: Control the OPTEMPO + Control the Environment + Control the Battlespace = The Digitized Battlefield," 22 December 1993, passim. See, in addition, Interview, Oder with LTC James J. Carafano, 23 September 1996, passim.

[29] See Appendix G, A Chronology of Army Digitization Efforts, 1991-1995, with associated documents, in historian's files. See also Interview, Oder with LTC James J. Carafano, 23 September 1996, pp. 4-6, and Interview, Rigby with Carafano, 17 September 1996, pp. 4-16.

[30] *GOWG II Executive Summary for BG Franks*, undated, Tab E, Issue 10. See also Board of Directors Meeting II, 5 March 1993, Issue: Exploitation of Space; and Louisiana Maneuvers Board of Directors Meeting, 20 October 1993, Tab F-8, Exploitation of Space, which includes the issue evaluation plan. In LAM TF Files: Box 5, File 4-3; Box 5, File 4-5; and Box 6, File 4-9, respectively.

[31] Interview, LTC Kirby Brown with Yarrison, 6 August 1996, pp. 15-17. See also U.S. Army Space and Strategic Defense Command Memorandum for the Louisiana Maneuvers Board of Directors, 5 October 1993, sub: Issue Evaluation Plan Executive Summary, with enclosures, in LAM TF Files, Box 11, File 5-3b. See a series of articles in *Army*, 43:12 (December 1993): Donald M. Lionetti, "The Shields and Swords of a 21st-Century Army," 16-20; James J. Cravens, "Cruise Missiles Become Increasing Threat," 22-25; Tommy R. Franks and Kirby R. Brown, "Meeting the Challenges from Space," 26. Message, CDR USACAC to CJTF Somalia, 011436Z November 1993, sub: Commercially Available Space Based Capabilities, solicits that Commander's input for the design of the package. In LAM TF Files, Box 3, File 3-6e3. See also Memorandum for Sullivan from GEN Franks, 12 January 1994, sub: FY93 LAM Commercial Space Package (CSP), which lays out the package to be acquired, and Sullivan's response, January 1994, sub: SAB, in Sullivan Papers, Correspondence/Flag Letters/General Office/ Message Files, Box 8B of 10, January-February 1994, Folder 4, January 1994 General Office Files, file 13.

[32] Messages, Cdr Field Artillery Center to Franks, 171930Z Dec 91, sub: Owning the Night (in Franks, SG AD, MSG-132, pp. 25-26), and Cdr Signal Center to Franks, 191624Z Dec 91, same sub (in Franks, SG AD, MSG-118, pp. 13-14), respond to Franks' Message to schools/MSCs, 061910Z Nov 91, same sub. Both messages evaluate their respective branches' nightfighting capabilities. See also TRADOC DCS-CDD chart for HQ, TRADOC, Review and Analysis, 1st Qtr, FY 92, 11 Feb 92, sub: Owning the Night. The chart lists actions taken to that point, indicating the effort: "involves participation of CG and DCS-CDD; answers CSA question to CG; all TRADOC schools/MSCs participating; AMC participating; TF assembled for Jan [92] assessment; assessment includes: night vision, electro-optical, primary weapons systems, radar, laser, IEW, and satellite systems." In Franks, SG AD ALPHA-063, HQ TRADOC Semi-Annual Review and Analysis, 21 February 1992. MG White (in "Owning the Night," *Infantry*, May-June 1992, 1-2) discusses nightfighting equipment. Franks established the Dismounted Battlespace Battle Lab in August 1992 and assigned owning-the-night responsibilities to it. Additional discussions, experiments, and briefings led to a Senior Officer Review at Ft. Benning, 3 December 1992, that included owning the night, the week before GOWG II. See Letter, White to Franks, 10 December 1992, sub: Senior Officer Review, in Franks, SG AD, COR-098, MG Jerry A. White. See copy of the charter, Franks to White, 26 January 1993, in historian's files, original at DBBL. See Appendix F.

[33] Interview, COL William Hubbard with Yarrison, 9 July 1996, pp. 22-23, and 16 July 1996, pp. 38-40. See also, Interview, Franks with Yarrison, 18 February 1997, pp. 24-25.

[34] See Second LAM GOWG, 7-8 December 1992, files in which "continuous operations" is defined as an issue. LAM TF Files, Box 5, File 4-3. See also Louisiana Maneuvers Board of Directors Meeting, 20 October 1993, booklet, Tab F, '94 Issue Evaluation Plans, Tab 7, Continuous Operations, in LAM TF Files, Box 6, File 4-9. See also Appendix F, Owning the Night Chronology. Supporting documents in Historian's files.

[35] See Sullivan message, 191223Z Oct 92, sub: Louisiana Maneuvers Board of Directors Meeting, 14 Oct 92, Personal for attendees and others, on the concept coming out of the BoD, in LAM TF Files, Box 5,

File 4-2. See also Memorandum for See Distribution, DACS-LM-ECL, 28 January 1993, sub: Louisiana Maneuvers Exercise Coordination Conference, signed by COL Gale Smith, which summarizes the results of the 12-13 January conference, in LAM TF Files, Box 12, File 6-1. See next Memorandum for Distribution, from LTC Austin Bell, ECC, 25 January 1993, sub: Louisiana Maneuvers (LAM) Quarterly Update, in LAM TF Files, Box 1, File 3-4b. Sullivan also conferred with BG Franks during his 4-5 February 1993 visit to Redstone Arsenal and Fort Rucker, Alabama, and discussed the revised plan to execute a linked GHQ exercise in summer 1993. (See Memorandum for Distribution, DACS-ZAA, 11 February 1993, sub: Trip to Redstone Arsenal and Fort Rucker, Alabama, in LAM TF Files, Box 1, File 3-4b, and BG Franks' Memorandum for Record, 6 February 1993, sub: Trip to Huntsville, 4 February 1993, in LAM TF Files, Box 1, File 3-3c1.) See also a follow-on LAM Exercise Directorate memo, 24 February 1993, sub: Initial Planning Conference, GHQ-X 93, which describes the agenda for the 3 March conference to plan for the July-August GHQx, in LAM TF Files, Box 12, File 6-3. The mission statement is contained in an undated LAM Task Force briefing package from about this timeframe. See also John C. Dibert, "General Headquarters Exercise Insights," *Military Review*, March-April 1997, 62. In addition, the Task Force mustered Concepts Analysis Agency support, and the Director of the Joint Staff approved Joint Staff support for the ARSTAF portions of the GHQx.

[36] The PW 94 iteration was actually the second exercise of the MSF. It had been tested in PW 93 but had been kept separate from the main body of the exercise and did not involve student players. See Message, Cdr, USACAC, to other TRADOC school commandants, 161320Z April 1993, sub: Prairie Warrior 93 Taskings, which sets forth requirements to develop the MSF for employment in that exercise; in LAM TF Files, Box 12, File 6-3. See also Memorandum for Director, LAM TF, from LTC John A. Klevcz, 5 May 1993, sub: Mobile Strike Force Coordination Conference Trip Report, and Memorandum for BG(P) Franks from LTC Henry S. Tuttle, 26 May 1993, sub: Notes from CSA Visit to Mobile Strike Force, both in LAM TF Files, Box 1, File 3-3c1. Sullivan saw great power in the MSF's first efforts, but emphasized his belief that all commanders must have a common perception of the situation. Sullivan believed the successes of AWE 94-07 in April 1994 would invigorate the MSF play in PW 94. See Sullivan writing in his sketch book on 24 April 1994 at the NTC, in Sullivan Papers, Personal Papers, Sketch Books, December 1989-February 1995, Box 1 of 5, Sketchbook #8, April-December 1994: "I predict it will have a positive impact on Mobile Strike Force—told Freddy to send some key folks to stimulate CGSOC [Command and General Staff Officer Course] students." Dibert, "General Headquarters Exercise Insights," does not discuss Mobile Strike Force play in PRAIRIE WARRIOR, but it is included in the HQDA exercise directive for GHQ 94 and did occur. See Memorandum for See Distribution, from DCSOPS, 15 Nov 1993, sub: HQDA Directive for Exercise GHQ-94 (U), Annex F, pp. 31-32, in Historian's files. Information cited is unclassified. The concerns DCSOPS had with MSF in GHQx 95 surfaced in 94, also. In addition, CGSC was concerned that experimentation in PRAIRIE WARRIOR might contaminate the students' learning experience. See Interview, Blackwell with Yarrison, 16 October 1996, pp. 35-36, for his reservations.

[37] Initial planning, of course, began even before GHQx 93. See Memorandum for Director, Louisiana Maneuvers Task Force, 24 June 1993, sub: Louisiana Maneuvers/GHQ-X94 Planning and Coordination, from the DAMO-ODO, BG Joseph Kinzer, responding to Franks' memo of 16 June 1993, same subject. DCSOPS issued planning guidance in a message, 091250Z Sep 93, sub: Initial HQDA Planning Guidance for Exercise General Headquarters 94 (GHQ-94). Interestingly, GEN Franks responded, as the Deputy Director of LAM, to LTG Tilelli's message with his own, 151640Z Sep 93, sub: Planning Guidance, providing nuances on Tilelli's original. See Dibert, "General Headquarters Exercise Insights," 62-64, for discussions of the exercise play and the insights. See also Memorandum for See Distribution, 12 Aug 1994, sub: General Headquarters Exercise 94 Recommendations to the Force XXI Board of Directors, signed by LTG Charles Dominy, the DAS. All documents in LAM TF Files, Box 12, File 6-5.

[38] Letters, Sullivan to Mountcastle, 17 October 1997 and 6 June 1998. See also Letter, Radda to Yarrison, 18 October 1997, indicating that the simulation tools for joint DIS were not available as of the beginning of the GHQxs and that the services and Joint Staff had tacitly agreed among themselves to let the Army take the lead in developing DIS so that all eventually could use it. See, as well, Interview, Blodgett with Yarrison, 15 August 1996, pp. 19-20. See also Letter, Valliant to Yarrison, 6 November 1997, p. 19, on TRANSCOM and USAF involvement. Finally, Sullivan's decision to go slow on early joint involvement in LAM reflected Peay's advice from February 1992. See Chapter 1, n. 51, above.

[39] LAM TF Roundtable, Afternoon Session, 14 May 1996, pp. 124-128. The externally oriented Significant Activities Reports are in the LAM TF Files, Box 3, file 3-51.

[40] Letters, Radda to Yarrison, 18 October 1997, and Valliant to Yarrison, 6 November 1997, clarify how this worked out. Senior Executive Service members are civil service civilian equivalents of general officers.

[41] Interview, BG (Ret.) William West with Yarrison, 21 November 1996, p. 20.

[42] Interview, Brown with Yarrison, 6 August 1996, pp. 15-16. Brown relates an instance in which he so

reminded BG Eric Shinseki, the Director of Training in ODCSOPS, of such a directive. In his Interview with Drs. Richard Hunt and Mark Sherry (18 July 1994, pp. 12-15), GEN Peay commented on the difficulty of finding money for this and all other things needing funding. See also LAM TF Roundtable, Afternoon Session, 14 May 1996, pp. 114-117, for discussion of an instance when the Task Force decided not to push for directed support in order to avoid confrontation. See also Letter,Valliant to Yarrison, 6 November 1997.

[43] Interview, COL James Paige with Yarrison, 15 August 1996, p. 2. See also Louisiana Maneuvers Significant Activities Report, 20 July 1994, signed by BG Ohle and widely distributed, para. 6, in LAM TF Files, Box 3, File 3-5i. See also Letter, Ross to Mountcastle, 1 December 1997, and Interview, Ross with Yarrison, 12 November 1996 and 16 January 1997, passim. ULCHI/FOCUS LENS is an annual combined US-Korean exercise.

[44] Message from CINCUSAREUR to multiple addressees, 151823Z September 1993, sub: Synthetic Theater of War—Europe (STOW-E) Initiative for REFORGER 94, in LAM TF Files, Box 3, File 3-6e3. Louisiana Maneuvers Task Force Significant Activities Report, 20 July 1994, Technology, para. 3, in LAM TF Files, Box 3, File 3-5. See also Interview, Henry with Yarrison, 7 August 1996, pp. 21-22; Interview, LeCuyer with Yarrison, 23 October 1996, p. 21. See Jimmy D. Ross, "High-Fidelity Combat in a High-Tech Box: Legacy for 90's in Louisiana Maneuvers," *Army*, 43:10 (June 1993), 16-20, and John G. Roos, "Is It For Real? The Rush to Training Simulation," *Armed Forces Journal International*, January 1995, 24-26.

[45] A typical early reaction was that noted by LTC Gutwald of Sullivan's Staff Group at a 23 July 1992 meeting of joint representatives at the Defense Modeling and Simulations Office. At the meeting, both DoD and Air Force representatives voiced concern that LAM was perceived outside the Army as a "smoke and mirrors project for the Army to leverage TOA." All recommended, once they understood the program establishment of an information/ media strategy to inform the public and quell adverse speculation. See Memorandum for Record by Gutwald, 27 July 1992, sub: Louisiana Maneuvers Meeting at Defense Modeling and Simulations Office, 23 July. Historian's files.

[46] Message, Sullivan to Board of Directors members, 311200Z October 1993, sub: Louisiana Maneuvers Board of Directors Meeting, concerning the preceding week's meeting, paragraph 7. Message in Franks Papers, SG AD, MSG-152, pp. 65-67.

[47] See Sullivan, *Collected Works*, and especially, e.g., Message, Sullivan to attendees and others, 151055Z Apr 94, sub: Division Commanders' and TRADOC Commandants' Conference, 4 April 1994, para. 8. Historian's files.

[48] See Message, from Sullivan personal for MACOM commanders and selected others, 161430Z September 1993, sub: AUSA Campaign Plan, in which Sullivan describes how he envisions folding his themes into the next year's AUSA forums. See also Message from Sullivan, personal for MACOM commanders and others, 181553Z November 1993, sub: AUSA, the Road Ahead, which elaborates on the earlier plan. Both in LAM TF Files, Box 3, File 3-6e3. See also after action reports on all three experiments in LAM TF Files, Boxes 15 and 16, Files 8-10a – 8-10c. See also Valliant, Comments, 6 November 1997, historian's files.

[49] Much as AUSA and its monthly publication, Army, served to publicize Louisiana Maneuvers and the Force XXI, so, too, did the *Army Times*, which published numerous interviews with Army leaders and accounts of Task Force activities throughout the period of the Louisiana Maneuvers. See also Interview, Merritt with Yarrison, 10 June 1997, passim. Sullivan later noted (Letter, Sullivan to Mountcastle, 6 June 1998), "I felt Jack Merritt and AUSA was the gateway to the Army retired community and, I thought, support. While it did give me an opportunity to get our ideas out, . . . it never really gave me access to [the] intellectual support I sought. Rather, we were critiqued. Some of the criticism was necessary and helpful, but I never felt [their] complete understanding of our quest for their support for change and growth. Perhaps my greatest failure in this context was my failure to understand that the 'AUSA community' is not a community but a complex gathering of interested folks. I now know this."

[50] A British Army officer was even assigned to the LAM Task Force. Initially, the slot was tied to the National Simulation Center and to LAM activity at Fort Leavenworth. When that officer, LTC Nigel Brown, departed in October 1994, his successor, LTC Michael Parish, was assigned to the LAM TF Synchronization Division in the Pentagon, where he served until the Task Force was disbanded. See Letter, Parish to Yarrison, 30 October 1997, p. 1.

[51] See Louisiana Maneuvers Task Force Significant Activities Reports, 24 June 1993, 23 November 1993, and 20 July 1994, widely distributed, for descriptions of demonstrations conducted. See also e-mail message from COL Julius Coats, LAM Operations Director, 26 April 1993, to several addressees, sub: Mtg Notes, LAM Briefing for CG, 23 Apr 93, which forwards the subject notes from LTC K.H. Boll of GEN Franks' Planning Group concerning the briefing and demonstrations GEN Franks received on 23 April. A further e-mail message from COL Rodgers to BG Franks, 28 April 1993, sub: GEN Franks' Questions During Sim Cntr Update, elaborated on GEN Franks' concerns. Both in historian's files.

[52] *Louisiana Maneuvers: The First Year*, published by Director, Louisiana Maneuvers Task Force, Office of the Chief of Staff, Army, 1 March 1994. See Interview, Radda with Yarrison, 21 August 1996, pp. 13, 35-38; Interview, Blodgett with Yarrison, 15 August 1996, pp. 6, 11-13.

[53] Interview, Blackwell with Yarrison, 16 October 1996, pp. 3-7; Interview, GEN John H. Tilelli with Yarrison, 23 June 1997, pp. 1-2.

[54] Sullivan, *Collected Works*, pp. 316-317, Letter to the Army's General Officers, sub: Force XXI, 5 March 1994. Sullivan followed this letter with a much more detailed message, Personal For, to a long list of generals, 081415Z Mar 94, sub: Building the Force for the 21st Century—Force XXI. This message is at Appendix I. See also Interview, Harper with Yarrison, 2 October 1996, pp. 34-35, on Sullivan's decision to name the force redesign effort Force XXI.

[55] Speech, Armor Conference, Fort Knox, KY, 5 May 1994, in Sullivan, *Collected Works*, pp. 258-262. See also Message, from CG TRADOC to multiple addressees, personal for, 091649Z May 94, sub: Force XXI Joint Venture Initiation. Action addressees were primarily those who would be part of the Joint Venture, in historian's files. TRADOC's DCS-CD had addressed the redesign of the armored and mechanized divisions yet again in early 1993, distributing a briefing, based on CSA guidance, entitled, "Designing the Division for the Force Projection Army," of which a copy was faxed to BG Nelson, the Chief of Military History, on 24 February 1993. CAC hosted a Heavy Division Redesign Action Officer Work Shop in April 1993 (See LAM TF Memorandum for Distribution, 12 April 1993, sub: Trip Report—Heavy Division Redesign Action Officer Work Shop (AOWS) #1, in LAM TF Files, Box 1, File 3-3c1.) Sullivan and Franks had discussed formation of an Experimental Force in sufficient detail by mid-1993 that Franks, on 14 September 1993, forwarded a TRADOC Concept for an Experimental Unit to Sullivan. In Sullivan Papers, CSA Historical Files, Box 7B of 10, September 1993, Correspondence/Flag Letters/Messages/General Office Files, Folder 2 of 2, Correspondence Files, September 1993, file 13. See also Interview, Hubbard with Yarrison, 16 July 1996, pp. 44-49.

[56] See draft Message from Sullivan to GEN Franks, September 1994, sub: Joint Venture, which lays out these concepts. Historian's files.

[57] Interview, COL Richard Cowell with Yarrison, 2 July 1996, pp. 6-7. Cowell laid out the discussion of the operational continuum rationale. See also Interview, COL Gale Smith with Yarrison, 2 July 1996, pp. 42-45. See draft message from Sullivan (drafted by COL LeCuyer), Personal For selected general officers, including BG David Ohle, the next LAM Task Force Director, May 94, sub: Force XXI Campaign Plan Guidance, faxed to GEN Franks on 23 May 94. A cover note from newly promoted MG Franks indicates he had discussed it with GEN Franks on 27 May and the latter was satisfied with it. See also Interview, Frank Joe Henry with Yarrison, 7 August 1996, pp. 16-17; and Interview, LeCuyer with Yarrison, 23 October 1996, pp. 32-34.

[58] Interview, Smith with Yarrison, 2 July 1996, pp. 41-43; Interview, Cowell with Yarrison, 2 July 1996, pp. 4-6. Rodgers retired from the Army at the end of April 1994. Thus Cowell and Smith did most of the briefing. Smith also retired at the end of June 1994.

Chapter 3

REORIENTING LAM: THE FORCE XXI CAMPAIGN

The most important result of the Louisiana Maneuvers Board of Directors meeting of 14 July 1994 was the Board's approval of the proposed Force XXI Campaign Plan, thereby opening the execution phase of the effort. The meeting also had significant implications for the Louisiana Maneuvers process itself, since General Sullivan announced at the conference that he had decided to move the LAM Task Force to Washington, D.C., with the primary mission of facilitating and coordinating the Force XXI Campaign.[1]

The bold step forward for the Army that initiation of the Force XXI Campaign represented resulted from the imaginative hard work of soldiers and civilians throughout the Army over the preceding several years. Mounted in the face of continuing shortages of funding, reductions in the size of the force, and unit inactivations and restationings, while still supporting numerous overseas deployments of Army forces, the campaign to design and emplace the 21st century Army was a credit to its authors' courage and optimism.

The Campaign

The approved campaign plan for Force XXI brought together the expected three axes: Joint Venture, the Institutional/TDA axis, and the Army Digitization Office (ADO). As the official architect of the future operational Army, GEN Franks—still the TRADOC Commander—directed the Joint Venture axis in which all of the Army's MACOMs and major staff agencies were to cooperate with TRADOC to redesign the field Army. The new Vice Chief of Staff, GEN John H. Tilelli, headed the Institutional/TDA axis. He would supervise the redesign of the base Army, that structure that was primarily responsible for fulfilling the obligations assigned to the Army under Title 10 of the U.S. Code and supporting the newly configured operating force. The Army digitization axis continued under the direction of the ADO chief, MG Rigby. Rather than function as a separate arm of the campaign, it served to wrap together the other two axes, helping them to interact and progress synergistically. Even the graphics that depicted the relationship of the campaign's axes came to portray them in this way (see, for example, *Figure 6* from a briefing presented in January 1995).

Sullivan's Force XXI Campaign pulled together the many developments of the past few years in digitization, simulations, and information warfare with the objective of fielding Force XXI, the 21st century Army. It also responded to the Army's need to justify its investment after two years of experimentation with these advanced technologies. In fact, the Force XXI Campaign would both overwhelm the original Louisiana Maneuvers and dominate the LAM Task Force's operations during much of its remaining existence.

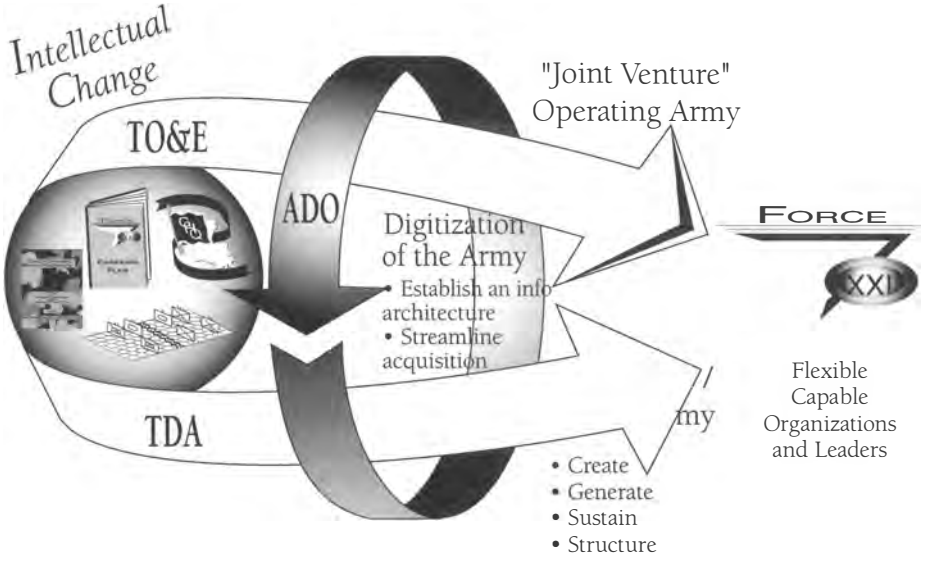


Figure 6

From Monroe to D.C.

The Chief of Staff's decision to have the Task Force synchronize the Force XXI Campaign and to move the Task Force from Fort Monroe to the Washington, D.C., area resulted from a process as deliberate as that for launching the campaign. That decision, however, generated a series of thorny issues and conflicts. Indeed, Sullivan's decision on the Task Force had numerous implications—large and small—for the Army, the Louisiana Maneuvers, and the LAM Task Force. According to his draft LOI to Ohle, Sullivan now viewed LAM as conducting "an economy of force" operation for him in managing the Force XXI Campaign. Members of the Task Force also observed that another key element in his decision and subsequent directive to Ohle was his desire to move the Task Force's simulation center to the Washington area. He wanted to have there the capability for the kinds of modeling, simulations, and technology demonstrations that had been conducted at Fort Monroe.[2]

Whatever Sullivan's desires as they concerned the Task Force's simulation center, he was quite explicit about his plans for the Task Force—and for the DCSOPS' interaction with it—in his 15 June 1994 welcome letter to MG Paul E. Blackwell, the DCSOPS-designate. In the letter, Sullivan tasked Blackwell to take charge of simulations and become the Army's simulations czar, from a staff perspective. He also made Blackwell the ARSTAF lead for LAM. He stated further:

> LAM is my vehicle to integrate change in the Army. We have, very purposefully, initiated an enormous range of changes, at every level. LAM is my vehicle to keep all of that aligned, to reinforce success, to help us allocate resources, and to make policy decisions. LAM short cuts the bureaucracy. As you know, I am moving the LAM Task Force to Washington, while leaving cells at Monroe, Carlisle, Leavenworth and perhaps other places. I am charging the VCSA [GEN Tilelli] to represent me on a day to day basis in the LAM process. The position of Deputy Director will be disestablished concurrent with General Franks[']' retirement. Your responsibility is to be the ARSTAF proponent for LAM and to sit as a member of the Board of Directors.[3]

Reorganization and Relocation

To accomplish its new mission as Sullivan envisioned it, the Task Force had to undergo

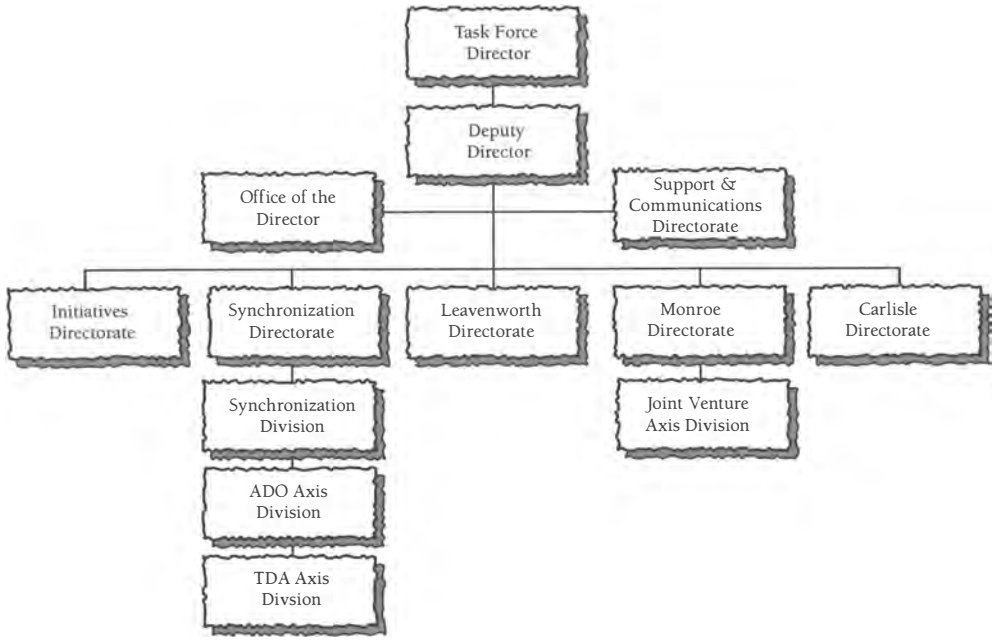


Figure 7

a transformation from a structure crafted to manage the Louisiana Maneuvers process to one that, primarily, would synchronize the Force XXI Campaign. Initial plans called for the bulk of the Task Force to move to Washington with only a small remnant continuing at Fort Monroe.[4] The final organization was more evenly dispersed geographically, with directorates or groups of directorates in the Washington area, Fort Monroe, Fort Leavenworth, and Carlisle Barracks. (See *Figure 7* for the structure of the reorganized Task Force.)

BG Ohle, a part of the Task Force headquarters, and portions of the Initiatives and Synchronization (formerly Issues) Directorates, ultimately resided in the Pentagon, where they absorbed the former Pentagon Liaison Office. The Initiatives Directorate received responsibility for supervising what remained of the original LAM process and also assisted in the overall Force XXI marketing effort. The Synchronization Directorate was responsible for coordinating the Force XXI Campaign. It organized the Synchronization Working Groups (SWGs), which ultimately became arenas for discussion and coordination, at the colonel level, of actions and issues associated with melding together the different parts of the Force XXI Campaign. The directorate contained a Synchronization Division, which was responsible for overall Force XXI synchronization, an ADO Axis Division, and a TDA Axis Division, the latter two responsible for coordination within their axes.

The Deputy Director, the Support and Communications Directorate, remnants of the Issues and Initiatives Directorates, and most of the former Operations Directorate—now known as the Monroe Directorate—remained at Fort Monroe. The Support and Communications Directorate continued its functions without much change. The rest of the Monroe Directorate contained a Joint Venture Division, which monitored Joint Venture activities, and an Information Synthesis Division, which investigated new technologies and synthesized the insights gleaned.

In accordance with Sullivan's desires, the Task Force also maintained presences at other key sites. The Exercise Directorate at Fort Leavenworth became the Leavenworth Directorate, with many of the same functions. It

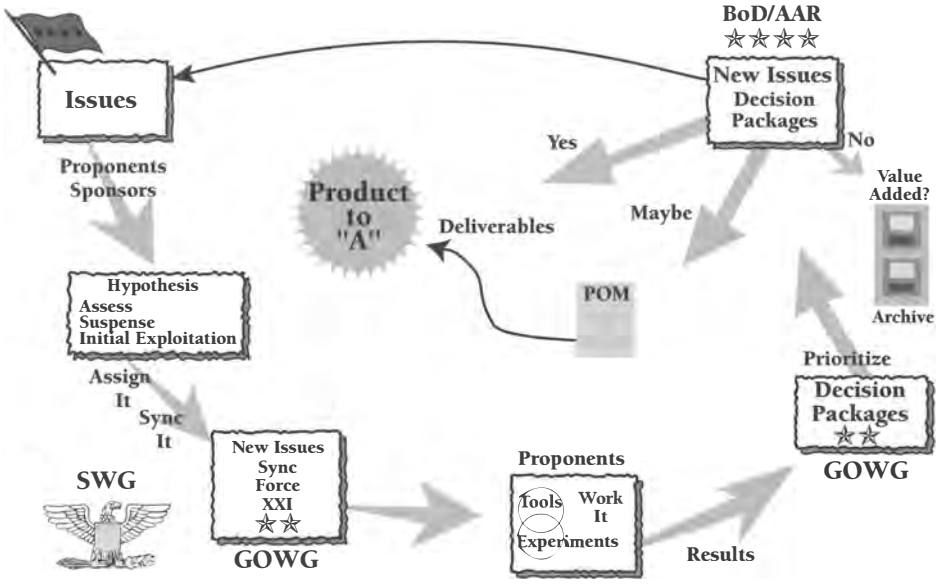


Figure 8

also assumed responsibility for coordination with CAC and for mounting the Army Experiment demonstrations at the AUSA annual meetings in Washington, D.C. Finally, the Carlisle Directorate was established at the Army War College to meld War College efforts at the strategic and Title 10 levels with changes taking place in the rest of the Army.[5]

The concept of designating the several directorates by the names of their locations originated with Ohle. Although the necessary assumptions of new duties and some relocations—Ohle's, for example—began shortly after Sullivan's decision, the new organizations did not use their new organizational titles until the following October. The decisions on where exactly the Washington contingent would reside did not occur until after mid-October.[6]

As to the actual synchronization, Mr. Frank J. Henry, Acting Director of the Leavenworth Directorate since COL Smith's retirement, developed the first versions of the procedures the Task Force used to synchronize the Force XXI Campaign in concert with a few of his senior analysts. (See *Figure 8* for a graphic depiction of the revised LAM process.) This approach called for the "meister" of each axis to align the planned events—the AWEs, ATDs, ACTDs, and exercises—with known program milestones and to coordinate known decision points affecting that axis with those of the other axes. One primary purpose of this alignment was to ensure that the events, milestones, and decisions that were necessary precursors to those in other axes would occur in the proper sequence and in a timely manner. The other was to ensure that, where conflicts existed over timing or allocation of resources, they could be resolved long before the events in question took place. Henry worked with COL Cowell, the Synchronization Director, and COL LeCuyer, head of the Army Initiatives Group in ODCSOPS, to ensure that the Synchronization Directorate could use the methodology to do its job and that the ODCSOPS understood how the Task Force would synchronize the campaign. LeCuyer's contribution, based on his experience and LTG Blackwell's guidance, was the synchronization "bubble chart." (The basic ODCSOPS chart is illustrated in *Figure 9*.) In addition, the LAM Task Force developed a more elaborate synchronization matrix that the Synchronization

CSA's Intent

We will use a rolling baseline to focus our efforts, and make all key (fielding and support) decisions for the operating force and our Title 10 functions by the year 2000. Information-Age technology for battle command, battlespace, depth and simultaneous attack, early entry, and combat service support will underwrite our capabilities to project and sustain the force, dominate maneuver battle, win the information war, conduct precision strikes, and protect and sustain the force across the continuum of military operations.

Lanes/Departmental Process	Lane Meister
Control Event	
Decisions ★★★★	
Intermediate OBJ	
Decisive Point	
Joint Venture	
Training/Training Development	
TDA/INST	
ADO	
Simulations	
Acquisition	
Events (MACOM/JCS Exercises)	
Doctrine & TTP	
Leader Development	
Modernization	
Personnel	
Analytical Baseline	
External Events/ Independent Variables	

Force XXI: A Process... Not an Endstate ... to make all key decisions by 2000!

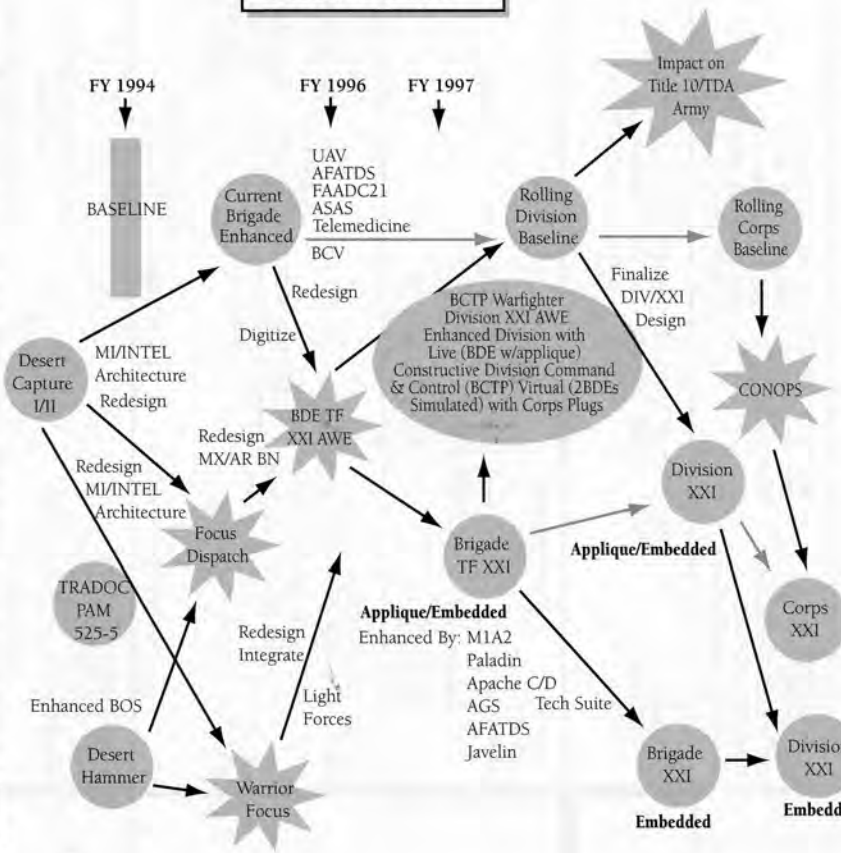
The Fundamental Hypothesis:

•If we know the performance of a baseline organization,

•Then we can apply Information-Age Technology to that organization, conduct experiments, and gain insights into improved battlefield performance,

•Which will cause us to redesign operational concepts and units to optimize military capabilities.

Force XXI...



... America's 21st Century Army

As of 1 Nov 1994

Force XXI Design Principles

- Redesign division C2 around information technology enhancements.
- Dominate battle space: speed, space and time.
- High tempo (control), overwhelming lethality, and superior survivability.
- Simultaneously execute, mount, and recover from operations.
- Capable of quick, decisive victory with minimum casualties.
- Easily tailorable, rapidly deployable, operationally agile.
- Divest tasks that inhibit core functions: fight and win battles and engagements.
- Joint and combined warfighting: Organizations must be effectively employable as part of a joint and multi-national team to achieve decisive results in a future war and OOTW in all operational environments.
- Capability to conduct continuous operations.
- Force XXI operating forces will focus on massing lethal effects, not massing the force.
- Modularity: Detach and employ separately that force structure or a piece of force structure best able to meet the mission requirement.
- Leader development: Force design will consider the long term implications for leader development and branch health against the current baseline designs for leader-to-led ratios and the leader development action plans in the Leader Development Decision Network (LDDN).

Force XXI Strategic Objective

Transform the force from an Industrial-Age Army to a knowledge- and capabilities-based, power projection Army (Force XXI) capable of land force dominance across the continuum of 21st Century military operations, by leveraging information technology to advantage the Army's quality people, and by redesigning the fighting forces and the Army's sustaining base to better support those forces.

Figure 9

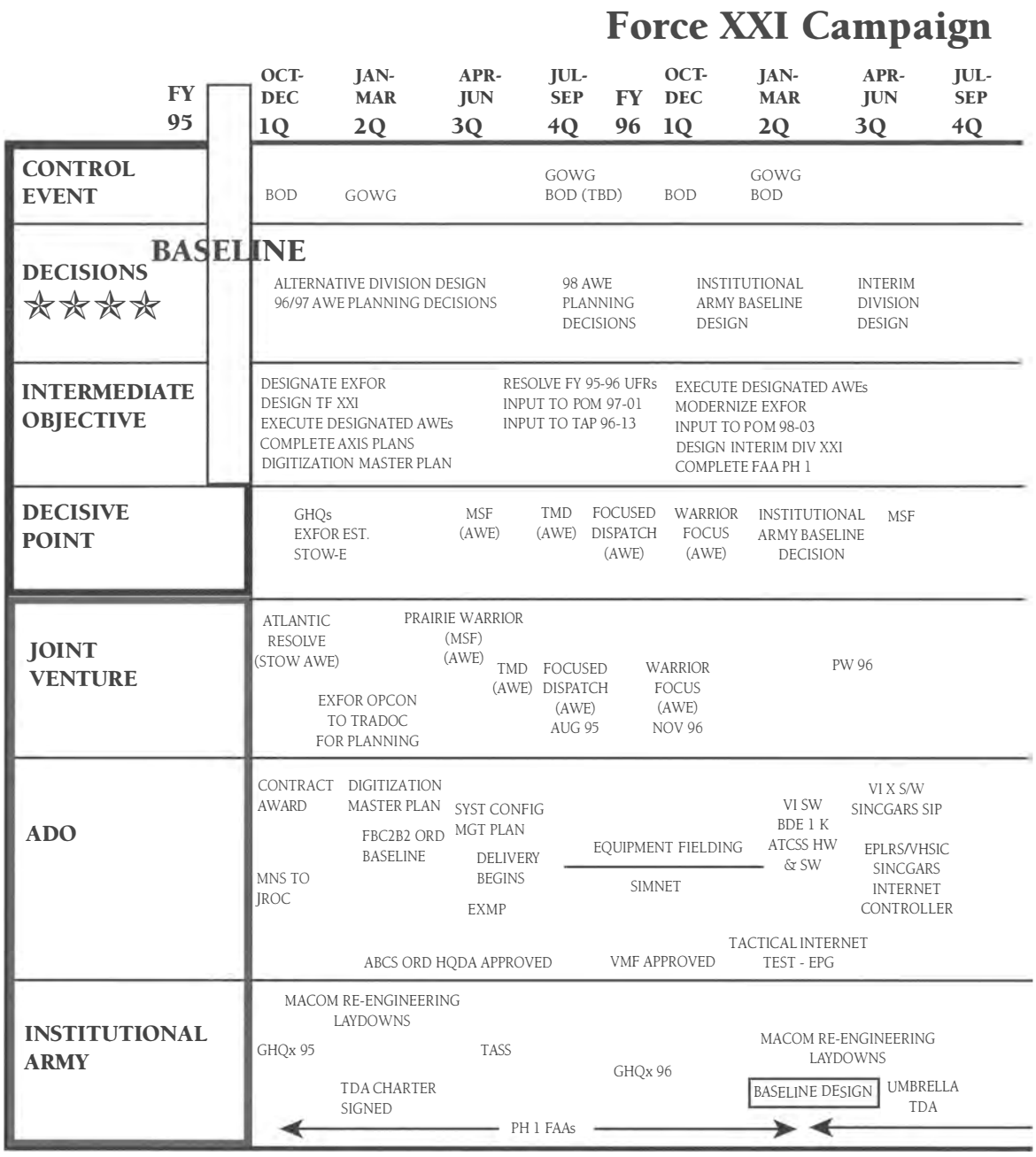
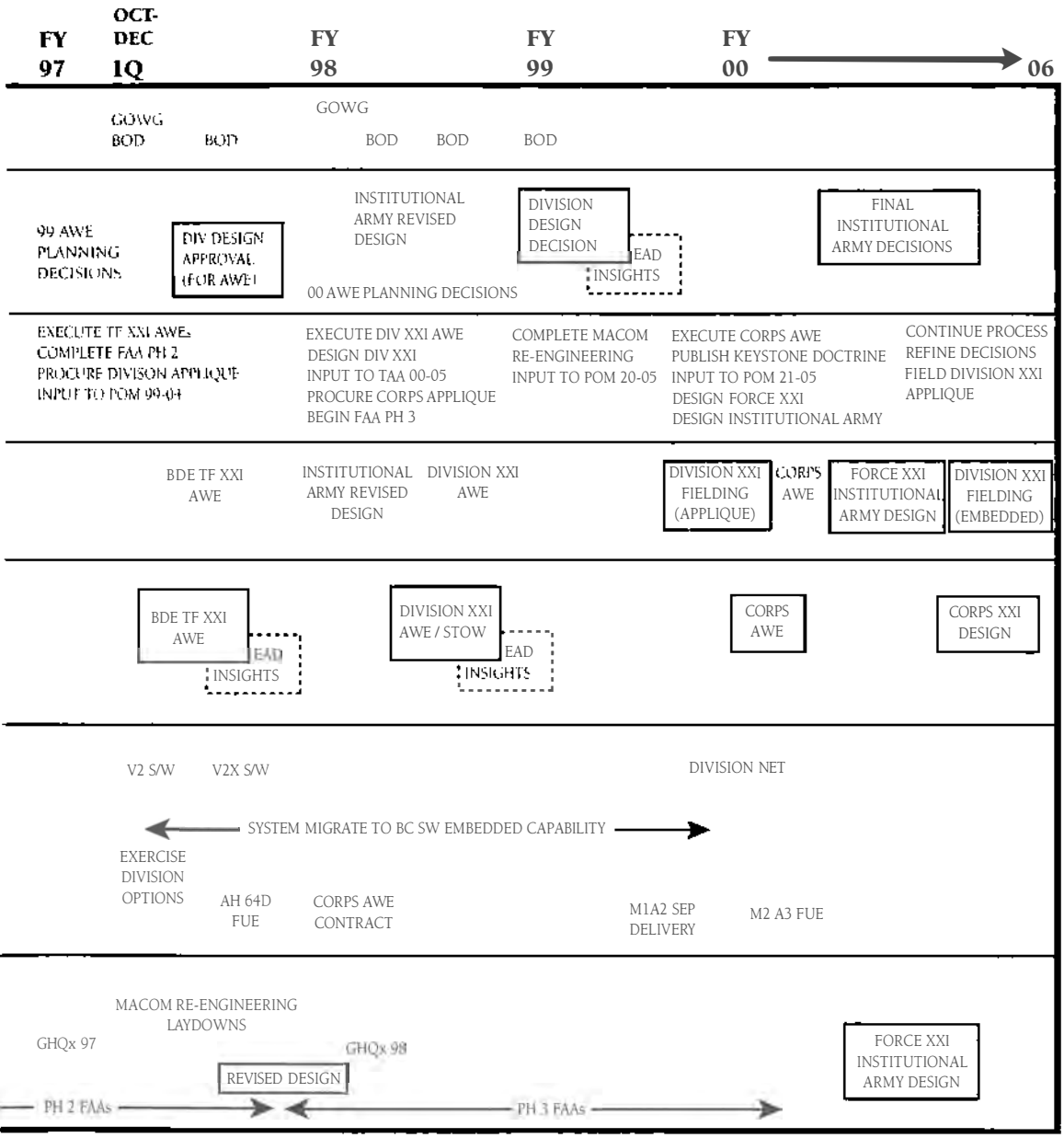


Figure 10

Directorate used throughout its existence. The matrix, which initially appeared at the Task Force's first Synchronization Working Group (SWG) on 27–28 July 1994, became a useful tool for those involved in managing the Force XXI Campaign (see *Figure 10* for an example).[7]

As time passed, the SWG meetings gained more attention within the Army. The colonel-level meetings, ultimately conducted by the Task Force at the Army War College and various sites in the Washington area, grew in size from only a few attendees at the first

Synchronization Matrix



two to a hundred or more at some of the later sessions. In part, the meetings expanded because, as the SWG process matured, more agencies realized the importance of a high profile in the Force XXI process for future funding. They therefore arranged for "lanes" for their activities, either within the axes or independent of the axes, but reflected on the synchronization matrix. The lanes enabled agencies such as those involved in personnel, materiel, training, and leader development to display their Force XXI activi-

ties and programs for all to see. While these additional displays should have been of some use to the synchronizers, more cynical observers noted the presentation of many projects within the displays, particularly those with catchy names followed by "XXI," and suggested that the purpose was to ensure the continued viability of the agencies' programs.[8]

During BG Ohle's tenure as Task Force Director, June 1994 to June 1995, the Task Force conducted six ever-larger SWG meetings, which became consumed with informational briefings. The need for presentations at the SWGs about all of the activities within the axes and lanes was a primary reason for this growing absorption with merely presenting information. The presence of those interested in each lane and axis accounted for much of the greater size of the meetings. As the LAM Task Force's synchronization process sought to accommodate ever larger numbers of people and amounts of information, it also became more cumbersome.[9]

As useful as its efforts were to the initial coordination of the Force XXI Campaign, the Task Force's ability to synchronize the campaign was severely weakened by its lack of directive authority. In this respect, whatever procedure the Task Force emplaced would prove to be only as effective as the willingness of the other participants to cooperate allowed.[10]

Challenges and Tensions

Sullivan's relocation of the Task Force was bound to create tensions. First, it ran counter to DOD policy at the time to reduce the size of service headquarters and to move as many headquarters agencies away from the Washington area as possible. The transfer of even a forty-member agency into the National Capital Region, and possibly into the Pentagon, set off alarms throughout the Department of the Army. Furthermore, the Task Force had only recently begun to move into the newly renovated Old Post Office building at Fort Monroe, and the prospect of uprooting the many families and civilian employees involved and resettling them in the Washington area was a dauntingly expensive proposition.

In the end, after an unavailing search for leased space in the Crystal City area of Arlington, Virginia, the Director of the Army Staff, LTG Charles E. Dominy, and the DA Space and Building Management Services office temporarily placed the Task Force in a two-room Pentagon office suite in the ODCSOPS area. The size of the space available and considerations of cost and politics dictated that less of the Task Force move north than originally envisioned. In the end, BG Ohle, his secretary, and the Washington elements of the Initiatives and Issues Directorates occupied this exceedingly cramped space. Also, the Army diverted several incoming uniformed personnel from Fort Monroe to the Pentagon so that, in the end, only a few individuals and families had to move from Monroe to Washington. Thus, the Task Force's organizations in the Pentagon consisted primarily of military personnel, largely because of their inherent mobility. The Pentagon office became operational in July 1994, but only in late January 1995 would much of the Task Force's Washington element move into spaces in the Hoffman Building.[11]

The relocation to the Pentagon of the Task Force's headquarters and the split Initiatives and Issues Directorates, though forming a smaller element than Sullivan had envisioned, also served to eliminate much of the need for the former relationship between the Task Force and the TRADOC Commander. This was as Sullivan had planned, at least as early as June.[12] Although LTG William W. Hartzog was supposed to become the TRADOC Commander, the Senate had not acted on his nomination, and GEN Franks continued to serve beyond his original retirement date. When Franks finally turned over his command to Hartzog in October, BG Ohle already had moved to the Pentagon from Fort Monroe, leaving the remnants of the Task Force tenant on Fort Monroe. By

Sullivan's directive, the new TRADOC Commander not only had no relationship with the Louisiana Maneuvers as Deputy Director, but, in fact, he also had no experience of that former relationship. The Task Force's change in mission, as well as location, made the continued involvement of the TRADOC Commander at his former level superfluous in most respects, though the Joint Venture synchronizers continued to work with TRADOC in the latter's role as head of the Joint Venture axis.[13]

Perhaps most crucial for the Louisiana Maneuvers' future, the move to Washington increased the tension between the Task Force and the ODCSOPS. A certain amount of friction had already existed between the Task Force, which reported directly to the Chief of Staff, and both TRADOC and ODCSOPS during the preceding two years. It was mild, though, by comparison with the irritation that arose between ODCSOPS and the Task Force with the latter's relocation and change of mission.

The new DCSOPS, LTG Paul E. Blackwell, took office on 19 July 1994 seeking to carry out Sullivan's multifaceted mandate for his office. He took seriously Sullivan's charge that he be the ARSTAF proponent for LAM and sought, in concert with his other responsibilities, to develop ways in which processes such as synchronization of the Force XXI Campaign could be institutionalized into the Army. He expressed considerable respect for GEN Sullivan and for the role the LAM Task Force played for GEN Sullivan, characterizing it as, "in a very real sense, your Operational Maneuver Group." Further, he pledged that

> I will, in concert with the VCSA, give guidance and direction to the TF to embed Force XXI in America's Army. As the role of the LAM TF shifts from that of forcing the Army to [look] at the "way we change" to that of the integrator for Force XXI, it is appropriate to ensure that its charter and organization reflect this changed function. I will energize and synchronize ARSTAF Force XXI actions, participate in Joint Venture and assume proponency under the VCSA for re-engineering of the Title 10/TDA Army and the Army Digitization Office. I take it as a given that ODCSOPS will continue to energize and direct ARSTAF LAM issue sponsors who assist issue proponents across the Army by providing advice and guidance from a Departmental perspective and by developing resource tradeoff alternatives for issue decision packages. The ODCSOPS Force XXI FD Integration Division is the lead agency for this effort. Additionally, ODCSOPS, in close cooperation with the LAM TF, will design and execute the annual GHQ exercises.[14]

Blackwell appears also to have come to believe, as had his predecessors, that at least some of the areas in which the Task Force continued to involve itself rightly fell under his purview. The notion that the acknowledged synchronizer of the Army would not, ultimately, solely manage synchronization of the Army-wide redesign campaign did not make sense to Blackwell and many others around him. Blackwell had not assumed his new position when the 14 July Board of Directors meeting approved the Force XXI Campaign Plan, though he attended it. It took him only a few weeks thereafter, however, to erect the Force XXI Integration Division in DCSOPS' Force Development Directorate (DAMO-FDT, activated August 1994), mentioned above, to coordinate the various aspects of the campaign for the Army Staff. Blackwell stated that he believed he should have received the whole synchronization mission, and he activated the new agency believing that he would be receiving spaces and personnel from the LAM Task Force for that purpose, as the letter quoted above implies. He was nettled when neither the mission nor the people materialized immediately.[15]

Over the first year of the Force XXI Campaign, the DCSOPS' monthly synchronization meetings of mostly general officers increasingly supplanted the SWGs and even

the GOWGs in importance. In addition, most of those involved in managing the activities of the axes had become accustomed to coordinating with their counterparts to ensure that most conflicts were avoided or resolved at the level of colonel and below. The DCSOPS also dictated, for the most part, the agendas of his synchronization meetings. Under LTG Blackwell, briefers and discussants religiously adhered to the times allocated, and the meetings, though sometimes rescheduled, never lasted more than ninety minutes. Many general officers participated, a number of whom made the relevant decisions. Thus, this short, focused forum, which met more frequently than the SWGs, provided the DCSOPS and the others involved with a more efficient tool for proper coordination of their efforts than the SWGs. The composition of these meetings and his own role also enabled the DCSOPS, rather than the GOWGs, to set at least some of the agendas for subsequent Board of Directors' meetings.[16] Ohle saw the DCSOPS' assumption of increasing responsibility in this area as an indication that one of the processes the Task Force had started was becoming embedded in the Army Staff, and he relinquished the function gladly. By February 1995 most synchronization functions had passed from the Task Force to DCSOPS and the axis "meisters." Ultimately, the Task Force reassigned two officers from the Synchronization Directorate to ODCSOPS to assist with the synchronization effort.[17]

Within the LAM Task Force, Force XXI activity naturally took precedence over LAM issue identification as the campaign progressed. The synchronization effort fed into the former LAM process with the SWGs' outputs going to the Force XXI GOWGs. These GOWGs, while still responsible for identifying new LAM issues for investigation, were primarily supposed to synchronize further the three axes' campaign plans and decision points, adjust the Force XXI Campaign Plan as necessary, and prioritize recommendations for resources. As finding funds for new experiments became more difficult, new ideas—and thus new ways to spend money—became less welcome. Only two GOWGs met during BG Ohle's tenure.[18] Those GOWGs that did occur during the remainder of Sullivan's tenure were largely information sessions with very little, if any, work on new issues or challenges. The major issues were all being handled by the Force XXI axes and ODCSOPS through their internal channels.

Likewise, the Task Force's new focus on Force XXI synchronization and issues inevitably meant less attention to LAM issues not directly related to Force XXI and to the LAM process. Shortly after the Force XXI Campaign opened, the Task Force met at the 24–25 August GOWG with the proponents of outstanding LAM issues to align them with the axes of the Force XXI Campaign. All involved understood that, in a time of increasingly constrained resources, those issues which could not fit into the new campaign likely would lose their priority with the Board of Directors and, as a result, their funding. Many viable and potentially fruitful issue evaluations were "archived" and fell by the wayside as a result of this winnowing.[19] Although the GOWGs continued until October 1995, the LAM process after the fall of 1994, as it had to do with the original intent of the Louisiana Maneuvers, exerted significantly less influence.

In the eyes of a number of observers, the opening of the Force XXI Campaign also had the effect of distancing the four-star members of the Board of Directors from the resolution of challenges and issues important to both their commands and to the whole of the Army. In the revised process, the Board, which met following the GOWG, an intervening SWG, or another form of in-process review, went over campaign progress, provided appropriate guidance for the future, recommended accelerated funding for particular programs, and allocated resources for Force XXI. Once TRADOC, the ADO, and the Vice Chief of Staff, represented by the DCSOPS, took charge of their respective axes, however, the more usual staff processes assumed the task of moving Force XXI for-

ward. Thus, the decline in the need for the four stars' input and their proponency for resolution of LAM issues—the feature that had driven the Louisiana Maneuvers process—made them seem less responsible for the solutions to Army problems and less important to the overall workings of the new Force XXI development process. As a result, their involvement in and enthusiasm for these new change processes may have waned, particularly in light of the lower priority assigned to issues that might have been important to them.[20]

The original LAM process rolled forward through much of 1995. But for all intents and purposes it ceased to serve as an agent for substantive change in the Army by the late fall of 1994. As the LAM process lost momentum and as other agencies assumed more and more of the synchronization mission, the Task Force became mostly a special mission force for the Chief of Staff. This was a significant change in the organization's orientation. Although it always had been a part of the Chief of Staff's office, the Task Force's focus while working the LAM process had been on issues and challenges affecting the whole Army and on responding to the whole of the Army's leadership through the Board of Directors. Now it functioned more like a different sort of Staff Group, reacting to special missions and quick-response taskings from Sullivan. Much of its original *raison d'être,* if not its utility to the Chief and the Army, seemed to have dissipated. Perhaps sensing this, Sullivan and Harper discussed as early as the summer of 1994 whether or not they should "declare victory and close down LAM." At that point, Sullivan decided against it, probably to ensure that the Task Force remained available to get the Force XXI Campaign started.[21] As it turned out, those parts of the Task Force primarily responsible for the synchronization of the Joint Venture campaign continued to be busy with that mission until the spring of 1995, but most of the rest of the Task Force found itself working increasingly on Sullivan's special projects. [22]

For example, elements of the former Operations Directorate not tasked with synchronizing the Joint Venture axis continued to search for promising new information-based and information-producing technologies that could enhance the capabilities of Force XXI when ultimately it took the field. [23] The catalyzing, coordinating, and facilitating efforts of Task Force members such as COL Charles Moldenhauer, LTC John Geddes, Mr. Richard Maruyama, and others were critical to the success of programs like battlefield visualization, the synthetic theater of war (STOW), and the several technologies that made possible a common, relevant situational awareness. Ironically, the decline of the original LAM process gave these Monroe Directorate individuals the freedom to play what proved to be a very useful role for the Army in these arenas. The Task Force's Significant Activities Reports for this period are replete with accounts of conferences, meetings, and demonstrations in which they were involved. Most of these fruitful programs, particularly STOW-E and STOW, might not have progressed as quickly or as far as they did without their efforts. In LTG Blackwell's opinion, however, these activities were at a level of detail below that at which a Chief of Staff task force should be operating.[24]

The Louisiana Maneuvers and the Force XXI Campaign Through Ohle's Year

The Force XXI Campaign's first year coincided with BG Ohle's tenure as Task Force Director. Ohle had served as General Sullivan's executive officer during Sullivan's first year as Chief of Staff, and Sullivan knew him well. After a stint as an Assistant Division Commander in the 1st Infantry Division, he had been selected by Sullivan to lead the Task Force because of his knowledge of the Army and Sullivan's confidence in him. As he directed the Task Force in its reorganization and relocation, he ensured that it played a central role in initially synchronizing the many developments that took place as the Force XXI Campaign gathered momentum.

In fact, the Force XXI Campaign showed dramatic progress on many fronts during its first year. After receiving its charter on 9 June 1994, the ADO began its search for computer technologies that would assist in producing the digitized command, control, communications, and intelligence infrastructure needed for Force XXI, building on the work of the Digitization Special Task Forces that had preceded it.[25] Contractors received information about the Army's needs in the several technological areas at AUSA gatherings, in Army publications, and in more business-oriented publications. They then produced technologies that the ADO and the Army Research Lab explored. Many responses and technologies obtained in this fashion ended up in the Brigade Task Force XXI AWE.[26]

Just as the ADO had begun its work before overall approval of the campaign plan, so also had the Joint Venture axis enjoyed an early start, with initial efforts following shortly after completion of Advanced Warfighting Experiment (AWE) 94–07. In the fall of 1994, TRADOC, which supervised the Joint Venture program, published TRADOC Pamphlet 525–5, *Force XXI Operations*. This pamphlet laid out the conceptual foundation for the evolution of Army operations into the 21st century, particularly in terms of the impact of information technologies on those operations. In addition, the campaign plan for the Joint Venture, once approved, described the experimentation sequence, beginning with a heavy brigade task force AWE and progressing through division and corps AWEs, with accompanying experimental exercises for logistics organizations and other portions of the reorganized, digitized force.[27]

The Army designated the 2d Armored Division as the experimental force (EXFOR) that would participate in these experiments on 2 December 1994. Among the considerations that underlay the choice of this division were the costs, the availability of training areas at Fort Hood, and the recent decisions about where the ten-division Bottom-Up Review force would be stationed. Preparation of the EXFOR thus began in TRADOC, FORSCOM, III Corps, and the 2d AD at Fort Hood, Texas, as all involved sought to avoid the mistakes made with the 9th ID/HTTB.[28] At TRADOC, GEN Hartzog convened his first meeting of Joint Venture representatives to discuss EXFOR specifics on the morning of 19 December 1994. On 14 February 1995, GEN Sullivan issued the Force XXI Experimental Force Prime Directive, delineating his intent, the EXFOR concept of operations, and assignment of responsibilities.[29]

The Institutional/TDA axis had a somewhat slower start. Having been joined to the other two axes late in the planning, the Vice Chief of Staff and the DCSOPS had to decide precisely how they wanted this part of the campaign to proceed. The original campaign plan had included schedules and a structure of seventeen functional area assessments (FAAs), an ambitious design that caused the Board of Directors discomfort and led the DCSOPS to revise both the schedules and the FAA structure on 18 November 1994. The actual FAA presentations were to be preceded by briefings from each of the MACOMs on how they proposed to reengineer their organizations and operations beginning in January 1995. Revisions in the process caused this schedule to be delayed until February 1995. In fact, the final draft Institutional/TDA Army Redesign Axis Campaign Plan was not distributed for comment until 15 February 1995.[30]

Although the three axes of the Force XXI Campaign were moving forward reasonably well in their individual efforts, Sullivan, by the end of August 1994, was dissatisfied with the articulation of Force XXI as a whole. He realized that without a clear, unifying design for the whole of Force XXI, his ability to lead the Army through the beginnings of the change process would be constrained. On 28 August, he wrote to GEN Tilelli, the Vice Chief of Staff:

> I am both satisfied and frustrated. We have made progress in the transformation from a Cold War Army to an Army responsive to the demands

of the 90's. Yet, we have not made the bold step into the next century which we have alluded to in numerous speeches, papers, and briefings. . . . We have . . . conducted some experiments which give us a view of what could be, but we don't *have a coherent picture of Force XXI. We have pieces of the puzzle but no coherent whole.*

I want to have a meeting as soon as our new team is on board. My purpose in having this meeting is to force us to *come to grips with Force XXI*. To prepare ourselves for this meeting I want you to bring together *a small group of our best minds from each of our major commands for the sole purpose of providing me a design of Force XXI*—what could be. I expect a *picture*, a *design*. Something tangible.

My role in this difficult period is to provide leadership and define success given reality as we know it. I am compelled to *show our people what could be in 2010*. I think we have constructed a process which will enable us to coherently transform the institution, writ large, now we must *create a design our subordinates can touch*—a Grecian urn.

If Force XXI is a thing what does it look like?[31]

To the extent possible, much of what Sullivan sought was sorted out in the remaining months of 1994, but, as GEN Tilelli, LTG Blackwell, and COL LeCuyer have noted, fleshing out the design of Force XXI as Sullivan's vision evolved was one of their most challenging tasks.[32]

The LAM Task Force, in addition to synchronizing the Force XXI Campaign and searching for new technologies, continued its effort to market both LAM and Force XXI. The Initiatives Directorate produced several short videos over the course of 1994–1995, describing Force XXI and how LAM had helped to produce it. The same directorate also erected a Force XXI display in the Pentagon in February 1995 near the memorial honoring Medal of Honor winners; it stood for nearly a year. In addition, the Task Force published *Force XXI: America's Army of the 21st Century, Meeting the 21st Century Challenge* on 15 January 1995. This pamphlet described in considerable detail the origins of the campaign, the threads that it wove together, and how those components interacted. It was both an advertisement for Force XXI and the Task Force and a useful informational tool. [33]

The entire Task Force worked with the AUSA to publicize the Force XXI Campaign to the Army, to DOD, to Congress, and to industry with at least some success. Even before 1995, industry had realized the benefits of working more closely and cooperatively with the Army in designing and developing the equipment the force needed. By 1995, much of the defense industry had succeeded in helping the Army to streamline and speed the glacial research, development, and acquisition processes that had energized Sullivan in the beginning.[34] Such programs as the Warfighter Rapid Acquisition Program (WRAP), which produced the "Linebacker" Bradley Stinger Fighting Vehicle Enhanced, and the Advanced Concepts Technology II Program, which speeded concept development and prototyping, were widely acclaimed.[35]

What Future for LAM?

As 1994 turned into 1995, BG Ohle and much of the rest of the Task Force sensed the marginalization of both the original LAM process and many of the missions the Task Force was then performing. In addition, GEN Sullivan was in the last year of his tenure as Chief of Staff. Even if he were not consumed by the Army's commitments and Force XXI, he was unlikely to start new initiatives that his successor would have to carry through. He did not want to limit the new Chief's freedom of action.[36]

Also, by spring of 1995, the ODCSOPS had supplanted the Task Force as the primary synchronizer of the Force XXI Campaign and was the primary Army Staff agency overseeing the ADO axis, representing HQDA in the Joint Venture, and coordinating and synchronizing the Institutional/TDA

axis. In addition, ODCSOPS controlled and set priorities for the funds needed to make Force XXI work. LTG Blackwell made no secret of his feeling that the Task Force had become redundant and should be disbanded, and its people reassigned within DCSOPS. The Task Force, however, continued to seek out and synthesize information resulting from the numerous activities surrounding the Force XXI Campaign and from GEN Sullivan's taskings, while maintaining limited responsibility for generation of LAM issues. Despite its considerable service to the Army in the LAM process and in the first stages of the Force XXI Campaign, the Task Force was without an overarching mission aside from that of responding to the Chief of Staff's latest tasking. Sullivan himself characterized the members of the Task Force this way: "They're out there; they're my scouts. They're my cavalry. They're all over the place. I had TRADOC and Forces Command and all of that working within that context."[37]

This sense of marginalization and redundancy, combined with the prospect of a new Chief of Staff's arrival in June 1995, led BG Ohle to seek ways to preserve the Task Force's important functions within the Army and, if possible, to find other ways in which the Task Force itself could continue to serve. He ultimately contracted with the Science Applications International Corporation (SAIC) in March 1995 to study both LAM and the future status and subordination of the Task Force. The SAIC research team, led, ironically, by the now-retired COL David Blodgett, completed its study in May 1995 and delivered its final report on 1 June. The report concluded that "without the LAM process the current institutional mechanisms lack the agility to cope with the breadth and pace of change facing the Army." It also concluded that the Task Force should continue as an extension of the Chief of Staff's office and "should apply Information Age technologies and approaches to synthesize information to inform the [Board of Directors'] deliberations and stimulate issue generation." The report observed that it was time for the Task Force to disengage itself from the Force XXI synchronization process, of which the DCSOPS had taken control, and to assist the three axes in an advisory way as they moved forward. Ohle forwarded this report to GEN Reimer's transition team, which was meeting as the research team completed its work.[38]

Although he had expected to remain with the Task Force at least through GEN Reimer's transition into the Chief of Staff's office, Ohle was advised in early June that he would depart and that BG Mark Hamilton would be the next Task Force Director. Hamilton was scheduled to report to the Task Force on the Sunday preceding GEN Reimer's first day as Chief of Staff of the Army, and the Task Force briefed him and prepared to welcome him.

Conclusions

BG Ohle's year-long tenure as Director of the LAM Task Force was a period of continuous change for the Army, the Louisiana Maneuvers, and the Task Force. Mounting the Force XXI Campaign led GEN Sullivan to change the Task Force's mission, to reorganize it to accomplish the new mission, and to relocate significant parts of the organization to the Washington area. Perhaps more important, because of the reorientation of the LAM process to facilitate the Force XXI Campaign, the Louisiana Maneuvers receded quickly into the background, and existing agencies like the ODCSOPS gradually acquired control of and responsibility for larger parts of the Force XXI process. The members of the LAM Board of Directors thus found themselves confronted with processes that proceeded more and more within existing ARSTAF-MACOM channels. The functioning of these processes did not provide the Board members the opportunities to contribute and to provide strategic direction that their earlier involvement in the LAM process had afforded. These senior leaders felt themselves, in some cases, to be less connected to the overall process—less able, in their minds, to make contributions to the

overall corporate welfare of the Army than they formerly had been.

The reorganized, relocated Task Force, with its primary mission of synchronizing the Force XXI Campaign, quickly found itself at odds with much of the Army Staff, particularly the ODCSOPS, which was seeking to integrate Force XXI synchronization functions into its processes and saw the Task Force as redundant. The Task Force thus was in an increasingly difficult situation as it sought to perform the mission that Sullivan initially had assigned it. The Task Force had neither the status to compel cooperation nor the ability to compete with other agencies in HQDA in the synchronization arena. Nor did it ever receive clear direction about handing off the synchronization and other missions to those agencies.

After 1994 no viable institutional way, like the LAM process, existed in which good new ideas could quickly rise to the level of the Army's senior leadership for investigation and decision. The strategic agility that the LAM process had provided the Army's leaders was, for the most part, lost. In addition, the LAM Task Force, having become an increasingly personal instrument of the Chief of Staff, seemed to many to have outlived its usefulness in its existing form.

Notes

[1] Memorandum for See Distribution from GEN Tilelli, VCSA, 26 July 1994, sub: 12-14 July 1994 Force XXI Board of Directors Meeting, Carlisle, PA; in LAM TF Files, Box 7, File 4-11. Sullivan's decision to move the Task Force to the DC area was not universally popular. Although he is said to have discussed the move with GEN Franks (see Interview, Frank J. Henry with Yarrison, 7 August 1996, pp. 18-19, for an account of a late May 1994 meeting at which the timing of the move was discussed), Franks claimed that he was not part of the decision and objected strenuously to it (see Interview, Franks with Yarrison, 18 February 1997, pp. 35-36). Franks commented later (23 February 1998) that he: "opposed the move because he felt LAM would be compromised in the Washington environment, losing their experimental focus, and eventually be neutralized by forces on the DA Staff who still saw LAM as unnecessary and a threat." See also Interview, MG David Ohle with Yarrison, 8 August 1996, pp. 3-6. Interesting also is a draft memorandum to Ohle from Sullivan dated 24 May 1994, sub: Letter of Instruction for the Louisiana Maneuvers (LAM); in LAM TF Files, Box 1, File 3-1. This letter, which was initially drafted by the LAM TF but which was reviewed by the CSA's Staff Group (and, presumably, Sullivan) lays out the way in which Sullivan envisioned the LAM process serving as the catalyst to focus the leadership's intellectual energies and to help them synchronize execution of the campaign plan. The letter also requires Ohle to provide a recommendation to the CSA on how the Task Force should be organized to support the charter, including options for relocating selected staff elements to the Washington, DC, area. The content of the letter became Ohle's marching orders.

[2] Draft Memorandum for Brigadier General David H. Ohle from Sullivan, DACS-ZAA, 24 May 1994, sub: Letter of Instruction for Louisiana Maneuvers (LAM), para. 2c(1). See LAM Task Force Roundtable, Morning Session, 15 May 1996, pp. 5-16. The use of "economy of force" is not the classic one, but implies Sullivan's use of an instrument in being already fully under his control to which he could easily assign the task. As it happened, bureaucratic struggles over space in the Pentagon precluded making the sim center operational before the Task Force was disbanded in 1996. See Memorandum from LTC (P) Michael R. Thompson, DACS-LM, to Mr. Joe Sacco, Management Division, Pentagon Renovation and Planning Office, OSD, 19 May 1995, sub: Force XXI Simulation Center; in LAM TF Files, Box 3, File 3-7a. In truth, Sullivan might well have asked whether or not, given the campaign's scope and inclusiveness, he should better assign its coordination immediately to an existing agency within the ARSTAF. He rejected this alternative, probably so that this small group, over which he exercised personal control, could quickly begin moving the campaign forward—one of the same reasons that he had decided to form the Task Force in the first place.

[3] Letter, Sullivan to Blackwell, 15 June 1994, no subject. Copy in historian's files.

[4] Briefing, LAM Task Force, 29 September 1994, sub: Louisiana Maneuvers in Transition . . . Status Report as of 29 September 1994, shows all of the Monroe contingent except a seven-man Monroe Directorate relocating to the Washington area. In LAM TF Files, Box 3, File 3-7b.

[5] Dave Blodgett et al., *Future Status and Command and Control of the Louisiana Maneuvers Task Force* (McLean, VA: SAIC, 1995), pp. 10-11. In LAM TF Files, Box 4, File 3-7e.

[6] LAM Task Force Roundtable, Morning Session, 15 May 1996, pp. 49-52. The LAM Task Force Significant Activities Report 31 Oct-6 Nov 1994, 7 November 1994, is the first to list the Directorates by their new designations; in LAM TF Files, Box 3, File 3-5g. Ohle finally approved the assignments of new duties to each task force member at a Task Force Director's meeting, 3-4 January 1995, at the Leavenworth Directorate. See Memorandum for Record, DACS-LM, 8 January 1995, sub: Director's Meeting, 3-4 January 1995. Obviously, many of these individuals had been performing these duties since at least late July 1994. In LAM TF Records, Box 1, File 3-3a.

[7] LAM TF Memorandum for Vice Chief of Staff, Army, probable date 20-25 July 1994, sub: Force XXI Campaign Synchronization—INFORMATION BRIEFING, discusses the subject briefing, scheduled for 27 July, and outlines the synchronization methodology; in LAM TF Files, Box 13, File 7-2. LAM TF Message, 201500Z July 1994, sub: Force XXI Synchronization Working Group (Synch WG), announced this first meeting; in LAM TF Files, Box 3, File 3-6i. See also Leavenworth Directorate Memorandum for Synchronization Working Group Attendees, 9 August 1994, sub: Force XXI Synchronization Working Group, 27-28 Jul 94, which describes step-by-step the course that discussions took, including areas of unresolved disagreement. In LAM TF Files, Box 7, File 4-12. LeCuyer, while a major, had been then-MG Vuono's Force Integration Cell chief, managing the simultaneous reorganization, restationing, and reequipping of the 8th ID in Germany, 1982-1983, while still maintaining the division's readiness to execute its GDP mission. Thus, he had considerable experience of just this sort of deconfliction. See Interview, LeCuyer with Yarrison, 23 October 1996, pp. 20-21, 46-53. See also Interview, Blackwell with Yarrison, 16 October 1996,

pp. 12-13, 22, on the development of the "bubble chart." Historian's files.

[8] See LAM Task Force Roundtable, Afternoon Session, 15 May 1996, pp. 4-20, on the evolution of the synchronization process.

[9] FRAGO #1 to Force XXI Campaign Plan, 9 September 1994, as of 1 March 1995, resulted from the 15-16 February 1995 GOWG; in LAM TF Files, Box 13, File 7-1. It establishes ten new lanes, lays out the way the lanes were to function, how they were to be included in the synchronization matrix, and how their activities had to be synchronized with those in the axes. The lanes included in FRAGO #1 were doctrine and TTP, training and training development, simulations, STOW, leader development, personnel, acquisition reform, modernization, PPBES planning, and PPBES programming.

[10] LAM Task Force Roundtable, Morning Session, 15 May 1996, pp. 33-36.

[11] Memorandum, Ohle to Edward E. Pavlick, Director, Space and Building Management Services, DA, 3 May 1995, sub: Request for Space, OCSA Louisiana Maneuvers Task Force (LAM TF) Forward Element, rehearses the steps the Task Force had gone through in its efforts to find adequate spaces. In LAM TF Files, Box 3, File 3-7a.

[12] Letter, Sullivan to Blackwell, 15 June 1994, no subject. Historian's files.

[13] Interview, MG David Ohle with Yarrison, 12 August 1996, pp. 45-46, on his previous close relationship with GEN Hartzog. See also LAM Task Force Roundtable, Morning Session, 15 May 1996, pp. 110-111.

[14] Welcoming Letter, Sullivan to Blackwell, 15 June 1994, no subject. Copy in historian's files. See also Interview, Blackwell with Yarrison, 16 October 1996, pp. 7-10. The quotation is from Blackwell's memorandum for Sullivan, 30 September 1994, sub: DCSOPS Vision and Execution Strategies to Achieve Force XXI Vision for America's Army, p. 9, historian's files.

[15] Briefing, 18 Oct 94, DAMO-FDT to the 20-21 October 1994 Fall Army Commanders Conference, sub: ARSTAF Synchronization, describes the division's functioning; in LAM TF Files, Box 8, File 4-16. Memorandum, DAMO-ZA to MG Garner, DAMO-FD; MG Rigby, ADO; BG(P) Anderson, ADCSOPS; BG Burnette, DAMO-ODO; BG Oder, DAMO-FDR (HTI); BG Ohle, LAM TF; COL LeCuyer, AIG, 8 August 1994, sub: Force XXI Update Meeting on 12 August 1994. Blackwell announced the first of his monthly meetings to "sync the syncs," directing Ohle's attendance much as he had the other addressees'. In LAM TF Files, Box 10, File 4-26. See also Interview, Blackwell with Yarrison, 16 October 1996, pp. 13-18.

[16] LAM TF Roundtable, Afternoon Session, 14 May 1996, pp. 93-94.

[17] LAM Task Force Roundtable, Afternoon Session, 15 May 1996, pp. 18-20. See also e-mail from Cowell to Yarrison, 19 August 1997, sub: LAM History, historian's files.

[18] LAM Task Force Memo for the Vice Chief of Staff, Army, sub: Force XXI Campaign Synchronization, cited in n. 7 above. The two Ohle-era GOWGs met on 24-25 August 1994 and 15-16 February 1995. The Ohle-era Board of Directors meetings were 13-14 July 1994, 20-21 October 1994, and 1-3 March 1995. Files are in LAM TF Files, Boxes 7-8, Files 4-11 through 4-20.

[19] The GOWG considered 31 continuing issues consisting of 53 hypotheses and 20 decision packages along with 21 new ideas. Of these, 2 new ideas were tasked to different agencies for analysis; 20 decision packages, 32 hypotheses, and 23 new ideas were archived; 9 hypotheses were tasked directly to axis meisters; and 12 hypotheses retained BoD visibility. LAM TF briefing, 20 October 1994, sub: Louisiana Maneuvers, presented to the BoD; in LAM TF Files, Box 8, File 4-16.

[20] On delinking four-stars, see Interview, Henry with Yarrison, 7 August 1996, pp. 13-15, Interview, Smith with Yarrison, 28 June 1996, pp. 33-35, 41-43, 46-47.

[21] Interview, Harper with Yarrison, 2 October 1996, pp. 35-37. Under the rubric of Changing the Way We Change, Harper had asked Sullivan in a memorandum of 22 December 1993, sub: Thoughts While Christmas Shopping, that he wrote while Togo West and his civilian team were settling into the Secretariat, "Do we keep LAM; or, rather, how do we keep LAM? How do we formalize and integrate Battle Labs? What should the TRADOC look like? How should TRADOC and AMC relate to each other? How does all of that relate to the PEO structure?" Sullivan wrote back, presumably after the Adams briefing at the 22 December RRC: "Yes—I think in the digitization piece we find a look at LAM." In Sullivan Papers, Harper Papers, Box 22 of 28, Memorandums, January 1993-December 1994, folder 12, January 1994, file 5.

[22] LAM Task Force Roundtable, Morning Session, 15 May 1996, pp. 31-33; Interview, Cowell with Yarrison, 2 July 1996, pp. 19-24.

[23] When initially articulated in March 1994, Force XXI was the 21st century Army. By the end of Sullivan's tenure, Force XXI had become a concept and a process for achieving the future Army, now Army XXI. Compare Sullivan, Letter to the Army's General Officers, 5 March 1994, sub: Force XXI, with Sullivan, Letter to the Army's General Officers, 2 June 1995, sub: Force XXI—America's 21st Century Army; both in Sullivan, *Collected Works*, pp. 316-317 and 441-444, respectively. Under GEN Reimer, the product of the Force XXI process became Army XXI. For the results of one period of such searching, see Memorandum for BG Ohle from COL Richard Cowell, 22 December 1994, sub: 18-22 December 1994 Results, which describes some of the technologies and companies Cowell had turned up that could provide use-

ful enhancements to the operational Army. In LAM TF Files, Box 1, File 3-3d.

[24] LAM Task Force Significant Activities Report files for 1994 and 1995 in the LAM TF Files, Box 3, Files 3-5g and h. See also Interview, Blackwell with Yarrison, 16 October 1996, pp. 10, 13-14.

[25] See the Chronology of Army Digitization Efforts, Appendix G.

[26] The game plan for much of the work that the Joint Venture axis undertook can be glimpsed in Message, GEN Franks to his subordinate commanders, info to the CSA and the rest of the Army, 281429Z April 1994, sub: The Way Ahead—Post AWE 94-07. Historian's files. See also TRADOC Pamphlet 525-5, 1 August 1994, *Force XXI Operations*, particularly p. 2-6. See also HQDA, Congressional Activities Division, *Army Focus 94: Force XXI: America's Army in The 21st Century*, September 1994, pp. 38-42. Other publications are: Lee Smith, "New Ideas from the Army (Really)," *Fortune*, 19 September 1994, 203-212; and "Tomorrow's Wireless Warriors: Digitizing the Battlefield," *Wireless* 4 (January-February 1995), 18-24, 26, 28. The *Wireless* article is particularly useful to potential contractors because it describes (26, 28) exactly those technologies the ARL was seeking to investigate.

[27] Message, GEN Franks personal for Sullivan, 281448Z April 1994, sub: AWE 94-07 Hot Wash. Franks discusses how emerging insights from the AWE point the way ahead. Historian's files. Speech, Armor Conference, Fort Knox, KY, 5 May 1994, in Sullivan, *Collected Works*, pp. 258-262. See Message, from CG TRADOC personal for multiple addressees, 091649Z May 94, sub: Force XXI Joint Venture Initiation. Action addressees were primarily those who would be part of the Joint Venture. In Chapter 2, n. 55 above. See also Message, GEN Franks personal for Sullivan, Army MACOM commanders and TRADOC commanders and commandants, 232049Z May 1994, sub: AWE Integration Conference Agenda, concerning a 6-7 June 1994 conference at Fort Leavenworth on AWEs to that point and the direction of future experimentation. On TRADOC Pamphlet 525-5, 1 August 1994, see n. 26 above. It is interesting to note that the pamphlet contains undated introductory letters from both GEN Franks and GEN Hartzog on Commanding General, TRADOC, stationery, demonstrating the timeframe in which it was actually published (October 1994).

[28] The Memorandum of Agreement Between United States Army Forces Command (FORSCOM) and United States Army Training and Doctrine Command (TRADOC), sub: Force XXI Experimental Force, was signed by GEN Reimer on 17 April 1995 and by GEN Hartzog on 1 May 1995. Historian's files.

[29] Message from Blackwell, DAMO-ZA, faxed 1052, 13 Dec 94, to Cdrs of FORSCOM and TRADOC, and the Army Staff, sub: Experimental Force (EXFOR). Sullivan had initially thought to designate the 1st ID, his old command, as the EXFOR, and had sent a handwritten note to GEN Peay, the VCSA, on 6 November 1993, tasking Peay to: "Develop a strategy we can use which taps [1st ID] to be the 11th Air Assault of future. I want to see it laid out before making a move." In Sullivan Papers, CSA Historical Files, Box 8A of 10, November-December 1993, Correspondence/Flag Letters/Messages/General Office Files, Folder-Flag Letters, November 1993, file 33. Sullivan and Franks had discussed formation of an Experimental Force in sufficient detail by mid-1993 that Franks, on 14 September 1993, forwarded a TRADOC Concept for an Experimental Unit to Sullivan. In Sullivan Papers, CSA Historical Files, Box 7B of 10, September 1993, Correspondence/Flag Letters/Messages/General Office Files, Folder 2 of 2, Correspondence Files, September 1993, file 13. He wrote in his sketchbook (Sullivan Papers, Personal Papers, Sketch Books, December 1989-February 1995, Box 1 of 5, Sketchbook #8, April-December 1994) on 29 November 1994: "Told Butch Funk [2AD] was XFOR '. . . Get on with It . . .' Told him my scheme is to get beyond 10 divisions—10 divisions is a move we must make but it is really not the important shift—the real concept is to redesign the Army." On the 3 February offsite that preceded the announcement, see Memorandum for Record from LTG Blackwell, 10 February 1995, sub: CSA EXFOR Offsite Meeting, 3 February 1995. See also Memorandum from Sullivan to See Distribution, 14 February 1995, sub: Force XXI Experimental Force Prime Directive. See also Interview, Hubbard with Yarrison, 16 July 1996, pp. 44-49, on development of the initial EXFOR concept in BLITCD at TRADOC.

[30] Briefing, ODCSOPS for the ASA(RDA), 6 October 1994, sub: Institutional/TDA Army Redesign, lays out how the process would proceed. Message, DAMO-FDZ, to MACOM Commanders, 182235Z Nov 94, sub: Force XXI, TDA Redesign Axis. Message, DAMO-FDZ, to MACOM commanders, 191955Z December 1994, sub: Force XXI, TDA Redesign GOSC, announced the subject meeting for 12 January 1995. Memorandum from BG Thomas N. Burnette, Director of Force Programs, DAMO-FDZ, for Force XXI General Officer Work Group, 15 February 1995, sub: Institutional/TDA Army Redesign Axis Campaign Plan, with enclosures, assigned a suspense for comments of 22 February 1995. All documents are in LAM TF Files, Box 14, File 7-8.

[31] Letter from Sullivan to Tilelli, 28 August 1994, no subject; emphasis is Sullivan's. In LAM TF Files, Box 2, File 3-4c.

[32] Interview, Blackwell with Yarrison, 16 October 1996, pp. 5, 6-11; Interview, LeCuyer with Yarrison, 23 October 1996, pp. 17-24; Interview, Tilelli with Yarrison, 23 June 1997, pp. 3-4, 6-10, 15-18.

[33] Office of the Chief of Staff, Army, Louisiana Maneuvers Task Force, *Force XXI: America's Army of the 21st Century, Meeting the 21st Century Challenge*, Fort Monroe, VA, 15 January 1995.

[34] See Robert T. Dail, "Army Acquisition Success:

No Brag . . . Just Fact," in Office of the Chief of Staff, United States Army, Weekly Summary (U), XLIV: 32 (12 August 1994), 19-24, for a good summary of successes to that point.

[35] Interview, Hubbard with Yarrison, 9 July 1996, pp. 19-21.

[36] Interview, Harper with Yarrison, 2 October 1996, pp. 41-42. Harper stated, in the context of discussing the end of Sullivan's term and whether he could have pushed LAM and Force XXI harder (p. 42), "I didn't do any serious creative work at all after Christmas of '94. [GEN Sullivan] and I sat down and had a meeting and decided we weren't going to have any more good ideas. It's the nature of the Army. GEN Reimer will find that out in two more years."

[37] Sullivan interview with GEN (Ret.) Jack N. Merritt conducted over several days in mid-February 1995. Interview published as "A Talk with the Chief," *Army* 45:6 (June 1995), 20.

[38] Dave Blodgett et al. *Future Status and Command and Control of the Louisiana Maneuvers Task Force*. McLean, VA: SAIC, 1 June 1995, p. 33.

Chapter 4

INSTITUTIONALIZING LAM AND DISBANDING THE LAM TASK FORCE

Following GEN Sullivan's retirement on 20 June 1995, GEN Dennis J. Reimer became Chief of Staff of the United States Army. The unplanned commitment of Army forces to trouble spots around the world that had engaged the attentions of his predecessor continued unabated, with the most notable being the initial deployment of Task Force Eagle to Bosnia in late 1995. Elsewhere in the Army, force reductions and base realignments and closures combined with continuing funding restrictions to further limit the new Chief's options. Among these many commitments and concerns, GEN Reimer inherited the burgeoning Force XXI Campaign, the moribund Louisiana Maneuvers, and the LAM Task Force. He was committed to continuing the total force redesign and reengineering projected in the Force XXI Campaign, but his views on LAM itself were less firm. Clearly, GEN Reimer wanted to find ways for the Army to update its structure, technologies, and methods so that it would still be able to do its job with many fewer resources.

GEN Dennis J. Reimer

As Vice Chief of Staff and as FORSCOM Commander under Sullivan, Reimer had supported the Chief of Staff's efforts to mount the Louisiana Maneuvers and to make the kinds of changes Sullivan believed the Army needed.[1] His personal loyalty to Sullivan and to Sullivan's programs and his diligence in pushing forward those programs are beyond doubt. Left to his own devices, however, it seems unlikely that he would have settled upon the Louisiana Maneuvers, as Sullivan conceived them, as his own means for making changes in the Army.[2]

Regardless of GEN Reimer's own earlier support of Sullivan's efforts and his appreciation of the results from the Force XXI Campaign, he found himself confronted by

a range of views about LAM and the LAM Task Force, many of which were negative. His own transition team's view was characteristic. The team had recommended—without noted objection—that, since LAM had done its job and Force XXI was on track, GEN Reimer should keep the Task Force in existence for a year and then disband it. That would avoid the appearance of an outright rejection of Sullivan's program. The team ignored the question of the possible future utility of the LAM process separate from Force XXI or even separate from the Task Force. In the team members' minds, as in the minds of many others, the Louisiana Maneuvers and the LAM process were inextricably bound to the Task Force and to the redesign of the force; the purpose of the Task Force thus had been fulfilled by the production and implementation of the Force XXI Campaign.[3] LTG Blackwell, the DCSOPS, also pressed his case with the new Chief for the disbandment of an organization that he saw as redundant, and for the reassignment of at least some of its personnel to the ODCSOPS.[4]

COL Cowell and a few other members of the Task Force were aware of the transition team's recommendations but uncertain of GEN Reimer's reaction beyond his initial statement that he would continue the Task Force for another year. Reimer's decision on the Task Force's fate was a long time coming and evidently was an open question for the first several months of his tenure.[5] The first apparent indication members of the Task Force had of the organization's standing with the new Chief, however, came when they received notification at the last minute that BG Ohle's scheduled replacement, BG Mark Hamilton, would not be coming to the Task Force after all. The Vice Chairman of the Joint Chiefs of Staff had requested the immediate assignment of an Army brigadier general for a Joint Staff assignment, and Hamilton was the only officer immediately available. He was not replaced at the Task Force because of the simple unavailability, at that point, of another general officer. Cowell, the head of the Synchronization Directorate and Ohle's de facto deputy in Washington, became the Acting Director of the LAM Task Force. When Cowell asked Reimer who the next Task Force Director would be, the Chief advised Cowell that he was his man to continue leading the Task Force.[6]

GEN Reimer was more forthcoming on Force XXI. Although he continued to push forward Force XXI, he reoriented the campaign somewhat, blessing each of the axes' continuing efforts while designating TRADOC as the overall architect of the Army's future. This new emphasis on TRADOC's leadership role in defining the Army's future led GEN Hartzog in February 1996 to create within the staff of his Deputy Chief of Staff for Doctrine an organization that focused on the "Army After Next"—that is, the Army after Army XXI had been fielded.[7] The intense efforts of GEN Hartzog, TRADOC, and the partners in the Joint Venture axis would produce a new heavy division design by mid-1998. After discussion with other senior Army leaders, Reimer also announced, on 11 July 1995, at his first Force XXI Board of Directors meeting that those gatherings henceforth would be called commanders conferences. Although the ODCSOPS presented the results of GHQx–95 at this meeting, no further GHQ exercises were proposed or scheduled.[8]

GEN Reimer and his staff concentrated on Force XXI and bringing the 21st century Army into existence. As a result, they dealt mostly with the several elements of the Force XXI Campaign and with the Experimental Force and the AWEs associated with its evolution. Little remained of the former LAM process, and the LAM Task Force itself became less and less a substantive participant in these deliberations.

The Task Force and LAM Under Cowell

The LAM Task Force continued LAM-related activities well into late 1995, partly

because it had no orders to stop and partly because the products from the issues that remained under investigation promised useful returns to the Army. The Task Force held its last two SWG meetings on 26–27 June and 9 August 1995 and the last GOWG on 3 and 4 October 1995. It also requested allocation of $7.0 million for investigation of six FY 96 LAM issues, in an attempt to continue the seeding process employed in previous years.[9] This LAM-process activity, however, produced little result.

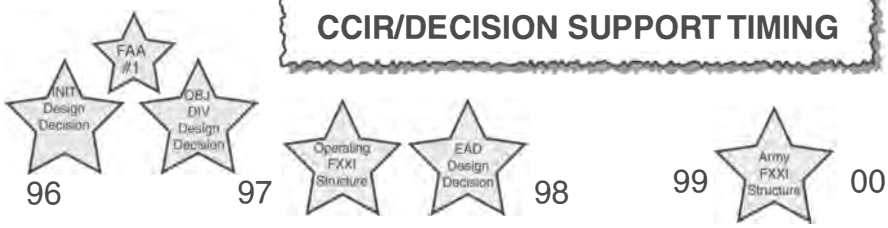
As the new Chief of Staff became accustomed to his office and turned to deal with the many urgent matters that faced him, he came to appreciate, as had Sullivan, the usefulness of a dedicated special task force that could quickly accomplish missions for him in isolation from the routine of the Army Staff. In this role, the LAM Task Force appears to have performed the kinds of tasks for GEN Reimer during his first six months or so that it had for Sullivan ("They're my cavalry.") during his last six. The missions that Reimer personally directed the Task Force to accomplish often involved exploiting the organization's ties to the modeling and simulations community, academia, or industry to assist the rest of the Army in filling operational needs.[10]

By the fall of 1995, the Task Force had informally reorganized to respond better to GEN Reimer's taskings and the Army's needs. The new organization included an Executive Office, split between Washington and Fort Monroe, as well as an Information Synthesis Directorate at Monroe, a Support and Communications Directorate at Monroe, the Leavenworth Directorate, and an Initiatives Directorate that melded together the efforts of personnel at the Pentagon, Monroe, Carlisle Barracks, and Moffett Field in Sunnyvale, California. In late January 1996, most of the Task Force contingent stationed in the Pentagon relocated to offices at the Hoffman Building in Alexandria, Virginia. Until personnel began leaving en masse after GEN Reimer's disbandment announcement of March 1996, this organization was the one the Task Force employed.[11]

The dispersion of the Task Force, particularly under GEN Reimer, meant that its several parts no longer interacted as closely and continuously as they had during the two years when the bulk of the organization was at Fort Monroe. COL Cowell and the portion of the Task Force remaining in Washington responded as required to the Chief of Staff's needs, represented the Task Force and its projects, and coordinated with the other directorates as necessary. They also sought to define those Task Force and LAM functions that should be preserved in the Army. Mr. Valliant and the contingent at Fort Monroe—the Support and Communications Directorate and the Monroe Directorate, which had become essentially the Information Synthesis Directorate—continued to seek useful new technologies and information and to synthesize these findings for the use of the Chief of Staff and the Force XXI Campaign, much as the SAIC report had recommended. During this period, COL Moldenhauer and others involved in information synthesis made some of their greatest contributions to the Army's continuing work on digitized battlefield visualization and mission planning and rehearsal capabilities. These capabilities served the Army well in Bosnia and in its preparation of the forces of other nations for employment in operations other than war and peacekeeping situations.

The Leavenworth Directorate under Mr. Henry supported the Task Force's simulations-oriented research projects and responded to the simulations and modeling needs of the Chief of Staff. With LTC Kirby Brown as project leader, this directorate retained responsibility for the future-oriented, simulations-based Army Experiment displays at the 1995 and 1996 AUSA annual meetings, the second of which took place after the LAM Task Force had disbanded.[12] In addition, Henry worked with his analysts and with Cowell on a concept they called the Commander's Critical Information Re-

STRAWMAN COMMANDERS CCIR/DECISION SUPPORT TIMING



▲ ★ INTERIM DESIGN:

- What is the Forecasted Threat Analysis & Risk Assessment?
- What is the Forecasted National Security and Military Strategy?
- What are the Required Force XXI Division Capabilities?
- What is the range of Forecasted Political–Economic Requirements and Constraints?
- What is the Communications Infrastructure Required to Support Seamless Communications between Advanced Simulations (Training Mission Rehearsal/Mission Planning) and Information Management Systems? Can these Systems be made Compatible between the Operational and Institutional Army?
- At what Echelon within the Force Structure will Combined Arms, CS, and CSS be Placed in order to Provide the Greatest Flexibility for Deployment and Mission Accomplishment?
- To what Degree will Technology Provide a C4I System which Provides Common Situational Awareness, Integrates Command Structure to Speed the Decision Making Process and Improves our Capability to Apply the Elements of Combat Power?
- Will Division Redesign Impact the AC/RC mix and the AC/RC Force Alignment; if so, how? To what Degree will Division Redesign and subsequent Force Structure changes Impact Dependence on a Civilian Force which includes Contractor Support?
- What New Collective and Individual Skills will be Required based on New Capabilities within the Interim Designed division? How long will it take RC Units and the IRR to become Operationally Capable to Support Force XXI? How Dependent will the Future Force Structure be on the IRR?

▲ ★ ECHELONS ABOVE DIVISION DESIGN:

- What is the Capability to Support Assigned Divisions on Independent Missions in and from outside its Area of Operations?
- What is the Deployability of the EAD Structure?
- What are the Sustainment Requirements for the EAD Structure?
- What are the Trade Offs with Reserve Components to achieve Affordability with the New Structure?
- At what Echelon will Information Dominance be Maintained?
- How will Sustainment (Factory to Foxhole) be Accomplished for FXXI?
- What are the Critical Technology Requirements of EAD Units and Compatability with the Total Force?

LEGEND

☆☆☆☆☆ CDRS

▲ DESIGN

★ DECISION

▲ ★ INSTITUTIONAL DESIGN:

- What are the Statutory JCS Requirements of the 21st Century Institutional Army?
- What are the Functional Similarities between the Operational and Institutional Army that should Require Common Technology?
- What are the Trade Offs to achieve Affordability within Predicted End Strength and Fiscal Levels for the 21st Century?
- What is the Training Strategy to Support FXXI Deployment to various Missions?
- Will all Installations be Capable of Fielding New Equipment to Sub-Organization and Tenants?
- Does a Logistics Planning and Operational Capability exist in the New Organization to Issue Critical Supplies for Deploying Units?
- Will the New Organization be Able to Mobilize Reserve Component Forces?
- What are the Institutional support Requirements for 21st Century Conflict Resolution, Demobilization, and Force Reconstitution across the Spectrum of Conflict?
- How can Technology Assist in Redesigning the Institutional Army to produce Organizations with Greater Efficiency and Capability for Greater Responsibility?
- Does the Redesigned Institutional Army have the Capability to Support Total Force Projection Doctrine?
- What Functions, Currently Performed in the Operational Army, can be Transferred to the Institutional Army to Better Enable Execution of Total Force Projection Doctrine?
- How will Information Technology make the Army's Force Generation and Materiel Acquisition Process more Efficient?
- What are the Forecasted Industrial Requirements for the XXI Century? How will these be Linked to the Operational Army?
- What is the Minimum Institutional Army End Strength Required to Support Force XXI?

▲ ★ DIVISION DESIGN:

- What is the Functional Ability and Utility of the New Organization to meet its Primary Mission and other Forecasted Missions? How well does the Division meet the capabilities required/identified?
- What is the Capability of the New Organization to win against various Forecasted Threats to U.S. Interests?
- What is the Deployability of the New Organization?
- What is the Sustainability of the New Organization?
- What are the Special Training Requirements for the New Organization?
- What are the Reasonable Trade Offs to achieve Affordability within Predicted End Strength and Fiscal Levels for the 21st Century?
- What are the Critical Technology Elements of the New Organization?
- Does the FXXI Division have a Sufficient Intelligence Capability to see the enemy within its battle space and the Fusion Capability to Sustain the Requirements of Information Dominance/Advantage? If not, does the FXXI Division have Adequate Intelligence Command and Control Capability to Manage its Planned Organizational and Attached assets?
- Does the FXXI Division have a Balanced Capability to see the Enemy Deep, Close and Rear?
- Does the FXXI Division require Special Support? What will be the Capability of the FXXI Division to Employ these assets When/If attached?

Figure 11

quirements (CCIR) (see *Figure 11*). The CCIR concept was designed primarily to support the Senior Leader Seminar Program, a biennial exercise that was to bring together senior Army leaders to consider actions along the entire continuum of war. This seminar program, which Cowell proposed to GEN Reimer and LTG Jay M. Garner, the Assistant VCSA, was intended to resurrect at least a part of the former GHQx's so that Army leaders could address questions about what the Army would do in phases of war other than combat, in particular. Interestingly, this was very much the concept of the GHQx that then-LTG Peay had thought initially Sullivan wanted for the Louisiana Maneuvers and the approach that Peay personally had favored.[13]

With regard to Force XXI, the CCIR concept sought to identify requirements for otherwise unavailable information that was needed to support the force design decisions identified on the campaign synchronization matrix. The Task Force formulated umbrella questions and issues to be addressed by each axis that would generate the information necessary for the best possible design decisions. The CCIR questions covered four force design-related subjects for which information was required: interim design (those decisions needed before the next categories could be usefully addressed), division design, echelon-above-division design, and institutional design. While the information requirements identified in the CCIR questions may have influenced the ways in which action officers gathered information, the program appeared to have little impact beyond the life of the Task Force. The Senior Leader Seminar Program, per se, was never implemented, though elements of it found their way into the Army After Next wargames.[14]

What To Do with the Task Force?

The fact remained, however, that the Task Force, with the essential demise of the LAM process, was still in search of a more permanent mission. Discussions about the Task Force and its future proceeded along several tracks during the first six months or so of GEN Reimer's tenure, often reflecting the tone of the original recommendation of his transition team to disband it. Nearly all those involved in these deliberations, however, realized that even if the LAM Task Force as it then existed no longer seemed necessary, at least some of its functions and ongoing projects somehow should be preserved elsewhere in the Army.

COL Cowell made several efforts during those first months to interest GEN Reimer and the Vice Chief of Staff, GEN Ronald H. Griffith, in a new mission for the Task Force as the Chief's "strategic scouts." Under a draft charter that he forwarded to GEN Reimer in mid-October 1995, Cowell proposed that the Task Force focus on contributing to the Joint Warfighting Capabilities Assessment (JWCA) and Joint Requirements Oversight Council (JROC) processes (which resulted in the integration of Joint warfighting requirements with acquisition programs), analyzing the results of Joint and combined exercises, and exploiting concepts and technology to develop dominant battlespace awareness. The Vice Chief's response to Cowell's 17 October briefing on the proposal appeared to encourage the tack Cowell was taking.[15]

GEN Reimer's Staff Group, meanwhile, continued to recommend the Task Force's elimination.[16] On 15 November, COL Richard Dunn, Chief of the Staff Group, succinctly summarized Reimer's options for him. Dunn wrote that, "When all is said and done, the future of the LAM TF is really a question of management styles." He pointed out that keeping the Task Force in existence and using it as Cowell had proposed would both continue the Task Force as the Chief's personal instrument for guiding change and send the message that he would involve himself personally and directly in that change. If this was Reimer's intent, Dunn continued, the Chief of Staff should be prepared to continue the Task Force, provide it with a BG who shared his own philosophy, and devote the required amount of time and energy to those issues.

Alternatively, Dunn stated, if the Chief wanted TRADOC to be his instrument for

change, then the Task Force should "gracefully case its colors." Reassigning the Task Force to TRADOC would impinge on GEN Hartzog's prerogatives, as he would feel obliged to continue the Task Force with its current mission. Giving the "vehicle of change" mission to TRADOC while keeping the Task Force in another capacity, Dunn felt, would confuse everyone as to who really had the mission. Dunn also pointed out that several unique Task Force functions would need to be assigned elsewhere. Foremost among these was the strategic communications mission for Force XXI and the future Army, demonstrated in the Army Experiment exhibit at the AUSA annual meeting. He urged the Chief to reassign this task and other functions to other organizations, along with appropriate personnel and dollar resources.[17]

Into the Future: the AVCSA/ A–8 Discussions

In both Cowell's proposed charter and later briefings and Dunn's memo, one can find wording that foreshadows the Army's subsequent reactivation of the Office of the Assistant Vice Chief of Staff (OAVCSA). Many in the Army's leadership realized that the Joint Staff's Joint Requirements Oversight Council (JROC) and the Joint Warfighting Capabilities Assessment (JWCA) process that supported deliberations of the JROC, as recently enhanced, had become increasingly complex and increasingly important to the Army. The JROC and the JWCA played crucial roles in integrating warfighting requirements and acquisition programs across the services and, thus, in allocating funding to the different services. Those leaders believed that the Army needed to organize its staff better so that it could participate more responsively in the process and compete more effectively with the other services for funds. The Joint Staff's J–8, the Director for Force Structure, Resources, and Assessment, was responsible for the JWCA, which supported the Vice Chairman and the service Vice Chiefs who comprised the JROC.[18] Since the Navy had already established an N–8 organization of its own mirroring the J–8's organization and functions, an Army organizational response clearly was required. The reconstitution of the OAVCSA with an emphasis on resource management and prioritization appeared to fill that need. In fact, one of Cowell's last briefings proposed reassigning the Task Force to the AVCSA or the A–8, whichever organization ultimately was established, as well as reassigning the Task Force's functions and projects.[19]

One of the main issues discussed by those debating the Task Force's future, which dovetailed into proposals for A–8/AVCSA organizations, was the assignment of strategic resource planning. The Task Force had never really performed this function, as LTG Blackwell cogently argued. One early draft of Reimer's message announcing disbandment of the LAM Task Force had indicated "Strategic Planning: ARSTAF TBD." Responding to the draft, Blackwell pointed out the Task Force's original noninvolvement in this arena and contended that bridging any strategic resource planning gap between the POM and the Army Plan was clearly a function of the ODCSOPS. Strictly speaking, Blackwell's position was correct, so far as it went, but given the Army's need for greater organizational emphasis on rigorous resource planning and participation in the Joint processes, his argument was moot. Reimer had already decided to reestablish the AVCSA for that purpose.[20]

Cowell retired from the Army in February 1996, following plans he had first discussed with the Chief of Staff as early as the preceding September. His successor was COL Wayne W. Boy, an engineer officer, who had had no previous connection with LAM or the Task Force. Boy did not officially join the organization until May 1996, and his mission was to preside over its disbandment and transition into the OAVCSA.[21]

Reimer's Message and the Demise of the Task Force

In the end, GEN Reimer decided that the LAM Task Force had succeeded in its task. After more than a month of staff preparation,

Reimer announced in mid-March that, since the Army had institutionalized the process of "changing the way the Army changes," he would terminate the LAM Task Force, "as we know it." Strategic resource planning would go to the AVCSA, "once the position is approved." In a memorandum to the Vice Chief of Staff and several other addressees, the Director of the Army Staff confirmed the realignment of the Task Force's functions as contained in the Chief of Staff's earlier message and provided additional guidance on handling existing contracts and other relationships and on integrating the realigned functions into the addressees' organizations.[22]

COL Boy's function as the new LAM Task Force Director was now to disband the Task Force and oversee the transition of some of its Washington elements into the Center for Land Warfare under the new AVCSA. As the Task Force wound down its activities, COL Boy, at the end of May, laid out for the Director of Management the ways in which the LAM Task Force's budget for FY 96 should be reallocated. Part of it, he stated, should go to internal requirements, part to the new Center for Land Warfare, part to organizations assuming Task Force missions, and part to the Chief of Staff for his own strategic agility purposes. The total budget amounted to $6.28 million. COL Boy, Mr. Valliant, and Mr. John Rogers presented the Task Force's final close-out plan to the Director of the Army Staff on 13 June 1996 and received his approval.[23]

With the LAM Task Force on its way to dissolution, ODCSOPS seems, rather belatedly, to have realized the value of some of its functions. Following LTG Blackwell's retirement, but before the confirmation of his successor, the Assistant DCSOPS for Force Development, MG Edward Anderson, chaired the DCSOPS Force XXI Synchronization Meeting on 17 May 1996. In his closing remarks, MG Anderson commented that, with the coming disbandment of the LAM Task Force, no organization would exist to oversee the parts of the LAM process that had proven useful to the Army. He asked all present, in light of the disbandment and the assignment of a new DCSOPS, to think about the format of the DCSOPS synchronization meetings and about whether some of the former LAM Task Force functions should be included. This led to a poll of the participants and, ultimately, to an expansion of the meeting purview and format to include Force XXI strategic communications, post-AWE requirements, Army XXI fielding, and Joint/OSD issues.[24]

The Task Force ceased operations on 1 July and MSG Joan Ziehlke closed the Pentagon office. COL Boy and a few others had turned over their Hoffman Building spaces and some equipment to the OPMS XXI Task Force, which became operational under MG Ohle in June 1996. Boy, with others, transitioned into the emerging Center for Land Warfare. Mr. Valliant and Mr. Rogers closed the Fort Monroe operation, but Rogers and a budget assistant remained in Building 83 at Monroe to close out the Task Force's books there in September. LTC David Tyner had already closed the Carlisle Directorate. At Leavenworth, LTC Kirby Brown ceased his association with LAM on the effective date but continued work on the 1996 Army Experiment with a small staff, the last remnant of the Task Force.

Conclusions

The period from 20 June 1995 through 1 July 1996 was a turbulent one for the LAM Task Force. It confirmed for those on the Task Force that the LAM process, as they had known it, was clearly dead, and any ongoing remnants, like the last SWGs and the last GOWG, functioned mostly as a result of institutional inertia. Efforts by the Task Force's leaders to develop and acquire a new mission proved unavailing, as the thrust of opinion and action within the Army Staff moved inexorably toward GEN Reimer's final decision to eliminate the organization. The distinction between the LAM process and the Force XXI process, one of LAM's products, was one that most staff officers did not make, nor did most

on the Army Staff believe that the LAM process might have some utility for the Army outside of Force XXI.

Many who served on the Task Force during its last year, as well as others, believed that the LAM process and the LAM Task Force had served the Army well. They also believed that LAM and the Task Force provided a capability for continuing to serve the Army's leadership and for handling change that many Army leaders did not understand, appreciate, or use very effectively. They were particularly frustrated by the leadership's apparent indecision about what they should be doing next and did not understand why the Army should reject the support for agile strategic decisionmaking that the process provided a Chief of Staff.[25] Most realized only later that LAM and the Task Force seem to have represented a management style more appropriate to the former Chief of Staff than his successor. GEN Reimer would manage change by other means.

Notes

[1] Interview, Sullivan with Yarrison, 29 April 1997, pp. 14-15; Interview, Blodgett with Yarrison, 15 August 1996, pp. 30-31; Interview, Rodgers with Yarrison, 28 June 1996, pp. 47-49.

[2] See remarks ascribed to Reimer in Interview, Blodgett with Yarrison, 15 August 1996, pp. 30-31.

[3] Report to GEN Dennis J. Reimer, June 1995, from his Transition Team. See also Interview, Rodgers with Yarrison, 28 June 1996, pp. 47-48.

[4] Interview, Blackwell with Yarrison, 16 October 1996, pp. 16-19; Interview, Cowell with Yarrison, 2 July 1996, pp. 25-26.

[5] Memorandum, COL Richard Dunn, Chief of the CSA's Staff Group, to Reimer, 15 November 1995, sub: RE: LAM TF, lays out Reimer's options for dealing with the Task Force's future. Historian's files.

[6] Interview, Cowell with Yarrison, 2 July 1996, pp. 30-32; Interview, Ohle with Yarrison, 12 August 1996, pp. 53-54.

[7] Sullivan and Harper (*Hope Is Not a Method*, pp. 83-87) describe their use of the "after next" technique of visualizing the future. Their thinking was influenced by a paper by Paul Bracken of Yale University, "The Military After Next," June 23, 1993, in Sullivan Papers, CSA Papers, Box 5B of 8, Folder 1, July 1993, file 8; copy in historian's files. See also Robert B. Killebrew, "The Army After Next," *Armed Forces Journal International*, October 1996, pp. 36, 38, 43-45; and Robert H. Scales, "Cycles of War," *Armed Forces Journal International*, July 1997, pp. 38, 40-42.

[8] See e-mail message, from Reimer to Board of Directors attendees, 13 July 1995, sub: Force XXI. See also *Force XXI Board of Directors Presentation Book*, 11 July 1995, Tab D, GHQx95—Wrap-up. Both in LAM TF Files, Box 9, File 4-23. GEN Sullivan pointed out (Interview, Sullivan with Yarrison, 29 April 1997, pp. 10-11) that despite his having done away with Force XXI Board of Directors meetings, GEN Reimer continued to convene Boards of Directors to address specific topics, whether the new Officer Personnel Management System or doctrine. He also pointed out (pp. 33-34) that the winter and summer wargames being conducted at Carlisle bore a remarkable resemblance to GHQ exercises. In actuality, Reimer conducted quarterly Board of Directors meetings of his Title 10 commanders, the VCSA, the DCSOPS, and other Army senior commanders available almost throughout his tenure. These meetings usually were focused on a single topic and were conducted on weekends, away from the Pentagon.

[9] Memorandum from COL Cowell, DACS-LM, for Vice Chief of Staff, Army, 10 October 1995, sub: Distribution of FY 96 LAM Issue Investigation Support Funds—ACTION MEMORANDUM, with enclosures; in LAM TF Files, Box 10, File 5-2a. See also LAM Task Force Roundtable, Afternoon Session, 15 May 1996, pp. 83-85.

[10] Comments ascribed to Reimer in Interview, Cowell with Yarrison, 2 July 1996, pp. 34-36. See also e-mail from Cowell to Yarrison, 19 August 1997, sub: LAM History Questions. Immediately after the 11 July BoD meeting, Cowell called a LAM TF directors' meeting for 27 July at Fort Leavenworth. The agenda included discussion of the draft LOI that had been prepared for the CSA to give to BG Hamilton and the specified and implied tasks that the TF would seek to accomplish in the near future, including a greater emphasis on information synthesis. In LAM TF Files, Box 1, File 3-3a.

[11] Louisiana Maneuvers Task Force Internal Phone & E-Mail Directory, 12 February 1996. Historian's files.

[12] Memorandum Thru Director, LAM Task Force, to Director of the Army Staff, from LTC Brown, 30 November 1995, sub: After Action Report (AAR) of the 1995 Army Experiment (LAM TF Files, Box 16, File 8-10c1) and AUSA Annual Convention (w/enclosures), and Cubic Applications, Inc., 31 March 1997, sub: Consolidated After Action Report of Army Experiments 1, 2, & 3, approved by LTC Brown, in LAM TF Files, Box 15, File 8-10a. Interview, Brown with Yarrison, 6 August 1996, passim.

[13] Interview, Peay with Hunt and Sherry, 18 July 1994, pp. 11-16; e-mail, Cowell to Yarrison, 27 October 1997; Peay's 12 February 1992 memorandum for Sullivan and Reimer, sub: Louisiana Maneuvers—1994, which responded to Sullivan's 10 January tasking to him, same subject. LAM TF Records, Box 1, File 3-2c.

[14] Message, from LAM TF (DACS-LM) to Army MACOMs and unified commands, 271800Z Oct 95, sub: Commander's Critical Information Requirement (CCIR) for Force XXI Army Redesign Decisions. References A-C describe the several meetings in which the CCIR was presented. In LAM TF Files, Box 3, File 3-6l. E-mail, Cowell to Yarrison, 27 October 1997. Historian's files.

[15] Draft charter and Memorandum for Record by LTC Michael Barbero, sub: 170900 Oct Briefing to VCSA on LAM TF, with a Task Force briefing slide, all covered by a 24 Oct note from Barbero, Cowell's XO, to LTC James ("Spider") Marks, the LAM/Futures POC in Reimer's Staff Group, forwarding them to Marks. The draft charter lists several functions the Task Force might serve for the Chief and the Vice Chief, most of them extensions of functions they performed for Sullivan. In LAM TF Files, Box 1, File 3-1.

[16] Memorandum from Marks, DACS-ZAA, thru COL Dunn for GEN Reimer, 19 October 1995, sub: Future of the LAM TF, which recommends the Task Force's elimination. Historian's files.

[17] Memorandum, COL Richard Dunn, Chief of the CSA's Staff Group, to Reimer, 15 November 1995, sub: RE: LAM TF. Historian's files.

[18] Glenn W. Goodman, "JROC Guru: An Interview with Admiral William A. Owens," *Armed Forces Journal International*, February 1995, 36, 38.

[19] See the CSA Staff Group Memorandum from LTCs Marks and Dunwoody through COL Dunn to GEN Reimer, 1 December 1995, sub: A-8 Organization, in Historian's Files. The authors lay out a discussion of the need for such an organization. They opine that the option of an A-VICE is "a nonstarter." Undated briefing packet, LAM Task Force, lists the several courses of action Cowell proposed and lists as COA #1: "The TF works for the A8 or Asst. VCSA; revamps mission IAW AVCSA/A8 charter." The J-8 included modeling and simulations within its purview in addition to requirements and capabilities. The Navy's N-8 organization, the Deputy Chief of Naval Operations (Resources, Warfare Requirements, and Assessments), was headed by a vice admiral and staffed with several other flag-rank officers. The most recent incarnation of an AVCSA had a stormy history in the period 1967-1974, so stormy, in fact, that it was disestablished because of the prevailing view that it overly centralized and bottlenecked decisionmaking and that many A-Vice decisions seemed arbitrary. See Yarrison, "The Vuono Years" (unpublished CMH manuscript, 1994), chapter 2, pp. 21-23. See also LAM Task Force Roundtable, Morning Session, 15 May 1996, pp. 37-42.

[20] Memorandum for Chief of Staff, Army, from LTG Blackwell, DAMO-ZA, 24 February 1996, sub: LAM Task Force–Institutionalizing Functions. In this memorandum Blackwell also requested allocation of LAM Task Force spaces to make up shortages in two ODCSOPS divisions, one dealing with JROC/JWCA issues (DAMO-FDJ) and the other with Force XXI integration (DAMO-FDT). LAM TF Files, Box 4, File 3-7e.

[21] Even before COL Boy officially joined the Task Force, he knew that he had been identified to do so. The author met him at a conference in the early spring of 1996, after Cowell's departure from the TF, and ultimately provided him information on the history of the A-Vice office and on some reasons it had not been reactivated earlier.

[22]Appendix J for Message, from the Chief of Staff, DACS-ZA, to the Army, 141700Z Mar 96, sub: LAM Task Force—Institutionalizing Functions; Memorandum from the Director of the Army Staff for the Vice Chief of Staff, CG TRADOC, CG AMC, and the DCSOPS, 1 April 1997, sub: Institutionalizing LAM Task Force Functions.

[23] Memorandum from COL Wayne W. Boy for COL (P) Dennis D. Cavin, the ARSTAF Director of Management, 29 May 1996, sub: Louisiana Maneuvers Task Force (LAM TF) FY 97 Budget (MDEP TLAM), w/enclosure. The enclosure breaks out the budget as described. In LAM TF Files, Box 4, File 3-7c. See also e-mail from Valliant to Yarrison, 2 September 1997, sub: LAM History Questions.

[24] Memorandum for Record, DAMH-RAM, from Yarrison, 29 May 1996, sub: DCSOPS Force XXI Synchronization Meeting, 17 May 96. See also Memorandum for See Distribution from COL Billings, DAMO-FDT, 9 September 1996, sub: DCSOPS Force XXI "Sync" Meeting, 28 August 1996.

[25] LAM Task Force Roundtable, Morning Session, 15 May 1996, pp. 47-49.

Chapter 5

PRELIMINARY ASSESSMENT AND CONCLUSIONS

Even a preliminary assessment of the modern Louisiana Maneuvers' impact on the Army must begin with a clear definition of what is being assessed, simply to avoid confusion. For example, the LAM process' focus on the Louisiana Maneuvers alone lasted only through about August 1994, when that month's GOWG essentially cast aside most of the extant issues and hypotheses to focus on the Force XXI Campaign. The expanded LAM process, which addressed primarily Force XXI matters thereafter, continued to operate through the last GOWG in October 1995. The LAM Task Force, GEN Sullivan's instrument for making the different versions of the process work, did not cease operations until July 1996. One also must avoid the persistent confusion of the Louisiana Maneuvers, writ large, with the Task Force itself—they were not the same things. There was also a contemporaneous confusion of the Louisiana Maneuvers with Force XXI. The Force XXI Campaign was one of LAM's many products, bringing together as it did a number of other actions ongoing in the Army.

To clarify the subject, it seems most fruitful first to discuss the role and goals of the architect of the Louisiana Maneuvers. Important elements of the discussion that follows thereafter must include the value that LAM added to the Army in the period 1992–1995, LAM's achievements, and the extent to which the Army has institutionalized any modifications in the way it changes.

Sullivan

Key to this assessment of the Louisiana Maneuvers and of the activities of the LAM Task Force during its four-year life is a discussion of the goals and leadership of LAM's architect, GEN Gordon R. Sullivan. In the post–Cold War, post–DESERT STORM era—a time of fluidity in terms of operational requirements and deployments and of constrained finances for America's armed forces—Sullivan saw that the Army desperately needed to change, yet he was dissatisfied with its ability either to absorb innovation or to change itself. The LAM process was Sullivan's means of leading, encouraging, and facilitating innovation throughout the Army. Through LAM, he sent the message to the Army that it could no longer tolerate the inflexible, often glacial, Cold War–based institutions and practices exemplified in the fifteen years that it had taken to produce the Abrams tank. The Army was transforming itself from a forward-deployed, Cold War force into a CONUS-based, force-projection instrument. If the Army was to maintain its superiority on the battlefield, it would have to be able to change its doctrine, organizations, training, and equipment at a more rapid pace.

LAM's effectiveness and ultimate fate de-

pended largely on Sullivan's leadership style.

Sullivan's introduction and establishment of the process demanded his considerable, ongoing personal involvement. Although initially he was able to give it such attention, the Chief of Staff simply faced too many other demands on his energies to continue devoting as much time to nurturing LAM as it required. While he was mounting LAM, and then the Force XXI Campaign, he was also leading the Army as it redeployed from Southwest Asia, operated in Somalia, Rwanda, and Haiti, and responded to various requirements in the United States and around the world. He and his subordinates had to run the Army, including his own stint as Acting Secretary, respond to Congress and the Executive, and carry out a radical downsizing that left the Army over one-third smaller than the one he had inherited. LAM, though very important, was by no means Sullivan's only, or even primary, concern. As a result, Sullivan managed LAM in a less hands-on way than he otherwise might have. "Since we were faced with significant challenges," he explained toward the end of his tenure,

> it seemed to me the best way to handle them was as a leader in combat would. Accordingly, it was my task to articulate the concept and my intent and then to be present so that I could influence the process as it unfolded to relate seemingly disparate events to my concept/vision. My biggest challenge, I felt then, and now, was to create a framework which would enable me to convince my troops we had a way to maintain our standing as the best army in the world.[1]

This mode of operation evidenced itself throughout his tenure as Chief of Staff and his involvement with both the Louisiana Maneuvers and the Force XXI Campaign.

In nearly every situation possible , GEN Sullivan led by example. He set the example for his subordinates—in this case, the rest of the Army—in the arena of change by being open to innovation and thinking "outside the box," that is, outside the confines of existing processes, procedures, and comfort zones. He found himself intellectually ahead of much of the Army in his use of a corporate Board of Directors for LAM and his willingness to explore new technologies and ways for the Army to accomplish more through increased reliance on computerization and simulation. His use of simulations outside the training arena, for fly-before-buy experiments and decisionmaking concerning organizations and equipment, caused many of his colleagues particular discomfort. And, while he was not averse to being ahead of the institutional Army on his intellectual journeys, he recognized that if he traveled too far too fast he risked the institution's not knowing how to follow him. These innovative thrusts, however, to which LAM gave a formalized structure, responded well to the Army's constrained finances and the vastly changed circumstances of the post–Cold War world and of the Army in that world—and many in the Army came to recognize that.

Sullivan was also a consensus seeker. His several Board of Directors meetings and commanders conferences and his lengthy discussions on military topics with myriad contemporaries, peers, and former subordinates afforded him opportunities not only to gather information and sound out opinion but also to plant the seeds of consensus for his evolving ideas. He encouraged his senior colleagues to air their differences over his programs because he believed that the resultant tensions were creative and produced both better solutions and stronger consensus. Moreover, he derived great personal comfort from his conviction that all of those who differed with his ideas sought the best course for the Army. In addition, his willingness to adopt from others better ideas than his own assisted this process of consensus-building. As a result of this method of operation, he was able to convince his fellow senior generals to share at least some responsibility for his approach to potential solutions to the Army's problems.

Sullivan knew that some members of his Boards of Directors had not wholly agreed with the LAM process or even the concept of a Board of Directors. As a result, he sought to use his position as first among equals in that circle to stimulate their cooperation and participation. The availability of LAM seed money for issue investigation was a significant incentive for most proponents and produced enough dramatic results that many senior generals became supporters.[2] Of course, money—or, more often, the lack of it—was a crucial element in the course that many programs followed during Sullivan's tenure. The sharp decreases in the Army's budget meant that the size of the force had to be reduced significantly, with units inactivated or restationed and programs curtailed or canceled. These circumstances rendered Sullivan's leadership task as Chief continuously challenging, particularly since operational commitments and stresses on the remaining soldiers and units increased at the same time as funds were being reduced. The same fiscal circumstances made his efforts to effect change immensely more difficult as well. For many, however, the challenges did serve to emphasize the need for change.

Sometimes, Sullivan avoided confrontation and did not hold peers and immediate subordinates accountable for delivering the support he had directed for LAM and the LAM Task Force. He announced his concept and intent and, reasonably, expected either compliance or a good explanation as to why a directive could not be carried out. BG Tommy Franks had to intimate on several occasions that he would have to take disagreements to Sullivan before they could be resolved.[3] In at least one case, the Task Force did not push an issue of noncompliance with Sullivan's directive to provide funding in order to avoid an ugly confrontation.

It can be argued that with all the demands on his attention Sullivan could not remedy problems about which he was uninformed and that the Task Force should have advised him when his wishes were not being carried out. The fact is that he seems not always to have been so advised and so could not take action. As a result of such disconnects, LAM probably accomplished less than it otherwise might have if the Chief of Staff had intervened. The Task Force had to execute its mission of making the process work, sometimes despite resistance from various quarters, without the attention and intervention from Sullivan it might have expected or engendered. Perhaps the Task Force should have pushed harder, but perhaps it could not. When they led the Task Force, Tommy Franks and David Ohle were brigadier generals. Neither had the rank or authority to confront three- or four-star generals whose opinions about priorities for the Army might have differed from their own.[4]

LAM also was not the only change game in town. The CBRS—and then the ECBRS—and the normal modernization process, although revised and streamlined, still were the means by which the POM was built and major programs funded; LAM operated beyond the leading edge of that process. The TRADOC Battle Labs, although complementing LAM efforts in many respects, also performed much of TRADOC's combat developments–related experimentation and responded to both LAM issues and priorities and the initiatives of commanders throughout the Army. Sullivan saw a place for all these developmental thrusts or axes of advance.

Perhaps a partial explanation of this attitude lies in Sullivan's background. As an Armor officer and commander, Sullivan was accustomed to conducting high-speed maneuvers along multiple axes and to using speed and violence to accomplish the mission at hand. Often, this form of warfare included bypassing obstacles and pockets of resistance rather than being overly careful about cleaning up the battlefield immediately or about the niceties of established procedures and processes. This manner of operating seems clear in his employment of the Task Force after most of its involvement with the LAM process and Force XXI synchronization had ceased.[5]

In truth, much of the way in which Sullivan conducted the Louisiana Maneuvers resided in his expectations for LAM. He initiated LAM wanting to change the way the Army changes. He can be said to have accomplished that, at least temporarily. He can also be said to have reinforced for a large cadre of Army leaders at all levels an understanding that a willingness to seek change in order to become better—to grow into the future—is a necessary state of mind for armies as much as it is for people. As he pointed out in *Hope Is Not a Method*: "In this process [of LAM and mounting the Army Experiment demonstration at the 1994 AUSA annual meeting], we gained momentum. We grew a critical mass of change agents, at every level, and in a number of different parts of the Army. Over time, they came to see the success of the organization as dependent on growing into the future and not simply as accommodating change or perfecting the processes they had been part of all their lives."[6] A significant part of his effort to create an institutional propensity for change resided in his push for the Army to streamline and accelerate acquisition processes and to develop and implement concept-to-production simulations as part of that acceleration. This effort, mounted through the ASA(RD&A), the DCSLOG, and AMC, produced a number of lasting successes.

As a realist, if a visionary one, Sullivan knew well that he could not accomplish all of the changes in the Army that he might have wanted to bring about during his four years as Chief of Staff. Perhaps the most useful perspective on his expectations appears in his own assessment of the pace of change, made on 29 November 1994.

> "I am personally comfortable," he noted, with the pace of change during my watch. Others will have an opinion of the subject. My view is we did it about right in that we laid a solid foundation upon which to base our redesign efforts, which will ultimately lead to reorganization on a large scale. What I did not want to happen, and do not want to happen, are events . . . which suggest to me that a large organization took its eyes off the ball. I am not kidding myself, however, as only time will tell any of us whether the pace was proper—change, continuity, and growth—remember, Katy [*sic*] Couric will always ask, ". . . Did you win?" [7]

LAM's Achievements and Value Added to the Army

One's assessment of the Louisiana Maneuvers' achievements and the value LAM added to the Army depends very much on one's view of the Army in 1991, of the adequacy of the existing processes for handling the changes that were needed, and of LAM's products. Between two poles, opinions ranged widely. One view held that the Army that triumphed in DESERT STORM did not need much alteration; that the existing force development process, rooted in the Concepts Based Requirements System, worked adequately to effect any necessary change; and that many of the advances that LAM received credit for facilitating, such as digitization of the battlefield, horizontal technology integration, and acquisition streamlining, would have occurred anyway, particularly as a result of the Battle Labs' activities. Some critics went so far as to claim that LAM and the Task Force hindered and even endangered the functioning of the existing processes and that, in terms of value added, LAM, the LAM process, and the LAM Task Force produced little except for some slick booklets and videos.

But LAM also had its advocates. They saw LAM as a means—perhaps not the best means, but certainly the one the Chief of Staff chose—to change the way the Army changes in the face of circumstances that evolved more swiftly and unpredictably than existing systems could handle. In their view, LAM worked effectively outside the confines of the existing staff procedures to facilitate and produce many fruitful innovations in technology and in policies and procedures during

and shortly after Sullivan's term. LAM achieved these results through synergies generated by bringing together, integrating, and leveraging the contributions of myriad disparate elements. Army XXI, and the digitized organizations and equipment that are part of it, these advocates pointed out, is a product of that process and the synergies it created. In addition, supporters viewed the GHQ exercises that were a major aspect of LAM as taxing but ultimately very productive learning experiences in performing the Army's Title 10 functions for all those involved, particularly for an Army Staff that often saw them as yet another onerous requirement added to its already heavy load.

In the eyes of its backers, LAM contributed to the Army at a number of levels. The LAM process—that is, the cycles of issue generation/GOWG-BoD issue investigation/new issue generation—proved a productive and strategically agile way to obtain the insights and strategic guidance of the Army's senior general officers on issues or on good ideas. The issues and good ideas, with the senior leaders' sponsorship and clout behind them, could then be guided to produce quickly a positive return for the Army. Long-term programs resulting from these investigations, of course, found their way into the normal PPBES and the POM. Participation in the process also demonstrated to many GOWG participants, as well as to some of the BoD participants, the value to the Army of such an agile process, particularly as compared with the very deliberate pace of the established change mechanisms.

A number of successes resulted from particular investigations of issues through the process. Among these were the quick development and fielding of the commercially developed package of space-related communications equipment; the higher priority, more rapid development, and horizontal integration of own-the-night technologies; the high-level attention and priority given the development of digitized equipment necessary for a common relevant battlefield picture; and the numerous logistical innovations that have promoted speed and efficiency in sustainment from factory to foxhole. All are definite evidence of value added through the LAM process.

BG Franks' belief that the proponents of issues should be the MACOMs and agencies in the Army that were affected by them was exactly the right approach to ensure proper investigation of the issues. The availability of seed money from the Task Force for issue investigation forced the proponents to develop sound plans in order to acquire the seed funds, and the process made them actually conduct the investigations, particularly since the BoD members had to brief the results of their investigations to the BoDs.

For the most part, the LAM process appears to have produced the desired results. Issues and good ideas reached the LAM Task Force and became grist for the process. The GOWGs considered these items and forwarded those deemed most important and potentially productive to the BoD, which approved them or not and prioritized the accepted ones for investigation. One criticism of the BoD mechanism has been that the Boards did not decide resource allocation, beyond distribution of seed monies, a role they might have played. Certainly, any BoD role in major resource allocation or reallocation would have received the full attention and engagement of all participants, particularly if their commands or agencies stood in danger of losing funding. How well such a role would have meshed with the funding prioritization and allocation role of the DCSOPS remains speculative.

LAM Institutionalized?

As to how much LAM actually changed the way the Army changes and, thereby, the Army, the assessment is more difficult. Again, opinions range from perceptions of a major impact to those that decry the Army's failure to achieve any sort of meaningful institutionalization of change. Nearly all can point to at least some evidence in support of their positions.

Once the Force XXI Campaign began and

consideration of Force XXI matters supplanted LAM issues as the primary concern in the revised LAM process, the original Louisiana Maneuvers withered quickly. Sullivan's use of the LAM apparatus to facilitate Force XXI may have been convenient and even vital to jump-starting the campaign. Whether the process' continued use for that purpose was a good idea over the long term depends upon Sullivan's ultimate intent for LAM. Certainly, he wanted to ensure that he started the Force XXI Campaign with every possible advantage and opportunity for success. Of LAM's broader original mission of continuously changing the Army in ways that differed from those that had existed earlier, however, there seems to have been little discussion. In the resource-constrained environment of the time, using the LAM apparatus for Force XXI matters and permitting LAM itself, as it had formerly been employed, to wither as having served its purpose, may have seemed a logical and reasonable step. If, on the other hand, Sullivan had thought to preserve the LAM process for the Army, then he probably should have removed Force XXI synchronization and coordination from the LAM apparatus once TRADOC, the ADO, and ODCSOPS had organized themselves to perform those functions and returned the process and the Task Force to LAM issue investigation. The feasibility of such a course is open to question. Surely, funding only became tighter over the last two years of the Task Force's existence, and the additional time and energy the Army leadership and the several commands would have needed to expend to engage fully in both the LAM and Force XXI processes would have been hard to muster.

Although there had been indications at various times throughout Sullivan's tenure that LAM could conceivably carry on into the next century, discussions between Sullivan and Harper as early as mid-1993 appear to indicate that they were thinking about changing and possibly ending LAM even then. Sullivan himself says that he always intended that the Task Force should cease operations after it had served its purpose. Clearly, though, he intended that at least some aspects of the Louisiana Maneuvers should be institutionalized and continue. Yet the way in which the Army's leaders permitted the LAM process to die as the Force XXI Campaign gained momentum sent at least a subliminal message to the parts of the Army previously engaged in it that the Army leadership would not have much time for good ideas that did not have something to do with Force XXI.

Throughout the mutations in the LAM process and almost until its ultimate demise, the LAM Task Force had served as Sullivan's instrument for making LAM work, and the Task Force sought to continue supporting LAM and the LAM process. The military and civilian professionals who organized the Task Force and developed its structure did a good job of aligning functions within the organization as LAM began and gained momentum over the first two years of the Task Force's existence. In addition, Sullivan's decision to make the Task Force a part of his office and to involve himself personally was vital to its initial credibility and to its protection from those who saw no reason for its existence. His decision to station the Task Force at Fort Monroe with GEN Franks as the Deputy Director of LAM was also a wise one—probably the best siting possible at the time. During his tenure, GEN Franks was able to protect both the process and the Task Force from those opposed to them simply by reminding the staff member that he was the LAM Deputy Director. Certainly, if the Task Force had been stationed in the Washington area without a high-ranking Director or patron, the Task Force and the process would have been whipsawed, much as BG Ohle was later, by the day-to-day activities of the Army Staff—as Sullivan had foreseen. Ultimately, the Task Force's continued involvement in missions that the Army Staff had already assumed, such as Force XXI synchronization, only served to engender additional resentment and tension. Here is a case where

clearer direction from the Chief for a mission hand-off would have proven beneficial to all involved.

Given the missions he assigned the Task Force during his last several months as Chief, Sullivan ultimately wanted to maintain its ability to explore and exploit the world of high technology and models and simulations both to respond to current operational needs and to assist the Force XXI Campaign. The Task Force had definitely evolved a capability to accomplish such missions. But Sullivan made no effort to reinvigorate the LAM process apart from Force XXI, perhaps because it was impossible, given the other demands on his and the Army's time and energies. Critics could argue that if Sullivan needed a group of his own to investigate strategic technology in the fashion that COL Cowell later articulated and proposed for the Task Force, he might better have disbanded the LAM Task Force and established a different group within his office for that purpose, thereby removing the target of a great deal of Army Staff animosity. Given the demise of the original LAM process that had served him as the FORSCOM Commander, the absence of a unique mission for the Task Force, and the Army's absorption with Force XXI and the EXFOR, GEN Reimer's decision to disband the Task Force is not surprising. The progress of the Force XXI Campaign and, particularly, that the Joint Venture and the EXFOR were making under GEN Hartzog's leadership, could only have encouraged the Chief in making that decision.

Those who suggest that many aspects of LAM did lastingly change the way the Army changes point to a variety of evidence: the cadre of leaders with experience as agents of change at the GOWG level and below still runs the Army; the Army's streamlining of the acquisition process and the closer relationship the Army has developed with industry has changed that aspect of modernization dramatically; and the use of interactive simulations for all sorts of iterative design, testing, training, planning, and mission rehearsal functions is now widespread. All these alterations to "business as usual" have proven invaluable to today's Army and are unlikely to suffer from a reversion to former methods of operation. LAM's legacy seems clear.

Conclusions

New change processes like LAM gain acceptance if they produce the desired outcomes in the expected time. They gain long-term currency only if they continue to demonstrate a long-term utility to those who employ them. Such processes are more likely to be institutionalized if they work and if a receptivity to changing *the way the processes work* exists or is created within the institution and in the minds of those who have to employ them. There were already people, including many very senior people, throughout the Army in the early 1990s who were willing to change it, but many were really comfortable effecting change only within the existing processes. For many, LAM was too different.

One can judge success with respect to institutionalization of LAM less by whether particular mechanisms, like the Board of Directors, have achieved wider use in the Army than by whether the institution has moved *enduringly* in the direction of becoming the kind of farsighted, innovative, learning organization that Sullivan sought to create. Some would argue that armies, by definition, are conservative institutions that generally resist changing—and that, in order to be continuously ready and effective, they have to be. There is some truth in this view; however, the current rapid evolution and unpredictability of both world events and technology require that an army consider almost daily the utility of possible changes to its doctrine, organizations, or equipment. Such an army must be able to employ an agile and responsive process that vets possible changes, often in the simulations environments that are increasingly available, or risk falling behind. Thus, a lasting willingness to learn, grow, and change is crucial to future success.[8]

In view of the Army's current high operational tempo and its accompanying lack of funds, it is difficult to evaluate just how much of LAM and the LAM process truly have been institutionalized. Certainly, the lifespan of changes and of a noted propensity for change can sometimes be very short, lasting only as long as is necessary to overcome the current set of problems. Such may be the case with LAM. It probably will not be possible to assess the endurance of LAM's effects until the attitudes toward change that Sullivan's "generation of change agents" have instilled in the leaders rising behind them can be measured. One worrisome current that might hinder growth in the direction of a culture of learning and innovation is a perception abroad in today's Army that a "Zero Defects" mentality pervades its leadership and that it is dangerous to one's career to take risks and make even honest mistakes. This perception has grown despite the honest efforts of GEN Reimer and the rest of the Army's senior leaders to allay the underlying concerns and despite the very real innovation within the Army that has taken place.

Thus, while Gordon Sullivan's Louisiana Maneuvers clearly produced changes in the way the Army changed on his watch and, as a result, set in motion a process—Force XXI—that promises to vastly change the entire Army just as it has changed the operating force, the long-term life of those changes seems less certain. Did Sullivan, through the Louisiana Maneuvers, foster an enduring propensity for and receptivity to change within the Army so that the institution will continue to seek better, innovative solutions, or will it reach a point at which it is intellectually satisfied with a future status quo? Although many signs are encouraging, only time and a longer historical perspective will permit a clearer judgment.

Notes

[1] Sullivan in Sullivan Papers, Personal Papers, Sketch Books, December 1989-February 1995, Box 1 of 5, Sketchbook #8, April-December 1994, 12 February 1995, first of three pages from that date.

[2] Interview, Sullivan with Yarrison, 29 April 1997, p. 11.

[3] See, for example, Briefing presented by BG(P) Franks, 24 June 1993, on Manpower Status, presumably to DCSOPS and USAFISA, the obstructions addressed in the briefing. In LAM TF Files, Box 4, File 3-7d.

[4] LAM Task Force Roundtable, Afternoon Session, 14 May 1996, pp. 114-117.

[5] Sullivan interview with GEN (Ret.) Jack N. Merritt in mid-February 1995. Interview published as "A Talk with the Chief," *Army* 45:6 (June 1995), 20.

[6] Sullivan and Harper, *Hope Is Not a Method,* p. 171.

[7] Sullivan Papers, Personal Papers, Sketch Books, December 1989-February 1995, Box 1 of 5, Sketchbook #8, April-December 1994, entry for 29 November 1994.

[8] For more in this vein, see particularly, Barry Watts and Williamson Murray, "Military Innovation in Peacetime," in Murry and Allan R. Millett, eds., *Military Innovation in the Interwar Period* (Cambridge: Cambridge University Press, 1996), pp. 369-415.

Appendix A

LIST OF ACRONYMS

ACT II	Advanced Concept Technology II program
ACTD	Advanced Concept Technology Demonstration
ADEA	Army Development and Employment Agency
ADO	Army Digitization Office
AMC	Army Materiel Command
ATD	Advanced Technology Demonstration
AWD	Advanced Warfighting Demonstration
AWE	Advanced Warfighting Experimentation
BoD	Board of Directors
CAC	Combined Arms Center, Fort Leavenworth, Kansas
CBRS	Concepts Based Requirements System
CTC	Combat Training Center
DIS	Distributed Interactive Simulations
DSI	Defense Simulations Internet
DTLOMS (also DOTMLS)	GEN Carl E. Vuono's six imperatives for a trained and ready Army: Doctrine, Training, Leader development, Organizations/force structure, Modernization, and Soldiers
ECBRS	Enhanced Concepts Based Requirements System
FORSCOM	U.S. and U.S. Army Forces Command
GOWG	General Officer Working Group
GPS	Global Positioning System
HTI	Horizontal Technology Integration
IVIS	InterVehicular Information System
JROC	Joint Requirements Oversight Council
JWCA	Joint Warfighting Capabilities Assessment
LAM	Louisiana Maneuvers
MDEP	Management Decision Package
MSF	Mobile Strike Force
NTC	National Training Center, Fort Irwin, California
POM	Program Objective Memorandum
POMCUS	Pre-positioned Overseas Materiel Configured to Unit Sets
ROBUST	Redistribution of BASOPS/Unit Structure
STOW	Synthetic Theater of War

STOW-E	Synthetic Theater of War–Europe
SWG	Synchronization Working Group
Synch	Synchronization
TAV	Total Asset Visibility
TDA	Table of Distribution and Allowances
TOE	Table of Organization and Equipment
TRADOC	U.S. Army Training and Doctrine Command
TTP	Tactics, Techniques, and Procedures
WRAP	Warfighting Rapid Acquisition Program

Appendix B

GLOSSARY OF TECHNICAL TERMS

A

Advanced Concepts and Technology II (ACT II)—Technology program designed by the Army to demonstrate proof of principle, high-risk/high-return concepts proposed by industry and academia to support Battle Lab experiments and AWEs. Successful technology can move directly to production or become part of Army research and development programs. The performance period was intended to be twelve months.

Advanced Concept Technology Demonstration (ACTD)—Mechanism for intense involvement of users in technology assessment and insertion into warfighting systems. The performance period may be multiphased and extend beyond five years.

Advanced Technology Demonstration (ATD)—A Science and Technology–funded, risk-reducing, proof of principle demonstration conducted in an operational environment rather than in a laboratory. Technology developers, systems managers, and Army users develop criteria that allow successful technology to transfer directly into system improvements or become part of Army research and development programs. The performance period may be three to five years.

Advanced Warfighting Demonstration (AWD)—Demonstration of potentially major advances in warfighting capabilities; less broad and integrated than AWE.

Advanced Warfighting Experiment (AWE)—Center-of-gravity, culminating experimentation efforts focused on a major increase in warfighting capability. They cross many or all of the TRADOC domains of DTLOMS. Moreover, they have an impact on most, if not all, of the battlefield dynamics and battlefield operating systems.

ANTAEUS—Capabilities-based analytical study conducted (1988–early 1990) during the tenure of CSA GEN Carl E. Vuono that sought to map out options for reducing the size of the Army's warfighting force structure in ways that would best maintain its readiness. Named for a mythical opponent of Hercules, who drew his strength from contact with the earth.

Army Digitization Office (ADO)—Office within the Office of the Chief of Staff, Army, established in June 1994 to concentrate on development and acquisition of information-age technologies, particularly digital communications hardware and related software needed for information-age battle command; supports the Joint Venture and Institutional/TDA axes of the Force XXI Campaign.

Army Materiel Command (AMC)—MACOM responsible for most aspects of sustainment and support to Army research, development, and acquisition programs.

Axis Meister—Designated leader of a Force XXI Campaign axis. CG, TRADOC, was axis meister of the Joint Venture axis; Vice Chief of Staff, Army, of the Institutional/TDA axis; and Director, ADO, of the Army digitization axis.

B

Battle Labs—System of labs instituted by GEN Franks to experiment with changes in the field Army in the areas of the five battle dynamics: Battle Command (at Fort Leavenworth); Battle Space (Mounted Battle Space at Fort Knox, Dismounted Battle Space at Fort Benning); Depth and Simultaneous Attack (at Fort Sill); Early Entry/Lethality/Survivability (at Fort Monroe); and Combat Service Support (at Fort Lee). Their operations were coordinated and integrated by the Battle Lab Integration, Technology, and Concepts Directorate, DCS-CD, TRADOC.

Battlefield Digitization—Army modernization effort using high-speed streams of information packets moving across electronic grids, rapidly processing these packets into high-resolution graphical displays with assistance from expert systems, and using automated decision-support systems to solve complex battle command problems at all levels.

Battlefield Visualization—Use of digital information technologies integrated horizontally across the force—including global positioning system receivers—to provide a common awareness of the battlefield situation to all components of the force, enabling commanders to make decisions based on timely information of friendly and enemy locations and actions.

Board of Directors (BoD)—LAM process meeting of the Army's corporate leadership, its four-star generals and selected three-stars, to address issues affecting the Army in the context of the good of the entire institution.

C

Combined Arms Center—TRADOC center for integrating operational art and combined arms, Fort Leavenworth, Kansas.

Combat Training Centers—System of three training centers—the NTC at Fort Irwin, California, for heavy forces; the JRTC at Fort Polk, Louisiana, for light forces; and the Combat Maneuver Training Center at Hohenfels, Germany—for training battalion and brigade task forces in a simulated, instrumented combat environment designed to replicate actual warfare as closely as possible. The program is capped for division and corps staffs by the Battle Command Training Program, conducted at Fort Leavenworth, Kansas.

Concepts Based Requirements System—System developed during the Cold War to enable the Army to respond to changes in the Soviet/Warsaw Pact threat and to conceptualize and develop force modernization requirements on the basis of those changes.

D

Defense Simulations Internet (DSI)—Computer network designed to link disparate simulations and models in dispersed locations; evolutionary simulation network that permits customers to take advantage of advances in wide-area communications and to interconnect with geographically dispersed models, simulations, and simulators.

Desert Storm—Multinational operation led by U.S. forces in January–February 1991 to liberate Kuwait from Iraqi conquest.

Desert Hammer—Name given to the AWE conducted during NTC rotation 94–07. In Desert Hammer, a digitized tank battalion task force from the 194th Armored Brigade at Fort Knox operated as part of a brigade task force from the 24th Infantry Division.

Digitization—Provision of digital information technologies to collect, process, and disseminate more rapidly data on friendly and enemy locations and actions to provide a common, relevant awareness of the battlefield situation.

Distributed Interactive Simulations (DIS)—Simulations employed in and accessed from a variety of locations, linked through a form of internet, like DSI, and a series of protocols that permit them to interact and their users to interact with them for training, modeling, issue investigation, RD&A, or mission planning and rehearsal purposes. Key to development and use of STOW.

E

Enhanced Concepts Based Requirements System—Streamlined version of CBRS emplaced in FY 94, which responded to the disappearance of the Soviet threat and shifted to the development of modernization requirements on the basis of capabilities believed necessary for the future force. Shortened various parts of the requirements development cycle.

F

Force XXI—Title given to GEN Sullivan's campaign to develop the 21st century Army and used to describe the process through which that Army will be achieved.

G

General Officer Working Group (GOWG)—The LAM process working meeting that brought together one- and two-star generals representing members of the LAM BoD to evaluate, discuss, and prioritize proposed LAM issues for consideration by a subsequent BoD.

Global Positioning System (GPS)—Satellite-based system providing exact location information to those able to query and receive signals from the system; vital to operations during DESERT STORM.

H

Horizontal Technology Integration (HTI)—Concept of integrating technological advances across the force, mostly through synchronized technology insertions into existing equipment, to enhance the overall capability of the entire force.

I

Information Warfare—Actions taken to preserve the integrity of one's own information system, to corrupt or destroy an adversary's information system, and, in the process, to achieve an information advantage in the application of force.

InterVehicular Information System (IVIS)—Digitized information system first deployed in the M1A2 Abrams tank that permitted the crew to be aware of the friendly and enemy battlefield situation beyond their own visual range. Interacted with IVIS displays in similarly equipped vehicles.

J

Joint Requirements Oversight Council (JROC)—Joint council composed of the Vice Chiefs of the several services chaired by the Vice Chairman of the JCS. Responsible for integrating warfighting requirements and acquisition programs across the services and, thus, in allocating funding to the different services.

Joint Warfighting Capabilities Assessment (JWCA)—Process conducted within the Joint Staff J–8, Directorate for Force Structure, Resources, and Assessment, which supports the deliberations of the JROC.

JUST CAUSE—U.S. joint operation conducted in December 1989 to depose Panamanian dictator Manuel Noriega and restore democracy to Panama.

L

LAM Task Force—The temporary organization established by GEN Gordon R. Sullivan within the Office of the Chief of

Staff, Army, to execute the Louisiana Maneuvers.

Louisiana Maneuvers (LAM)—The process established by GEN Gordon R. Sullivan in 1992 to change the way the Army changes.

M

Management Decision Package (MDEP)—A POM-related document that aggregates all funding sources related to a particular project.

Mobile Strike Force (MSF)—Notional, information-based, division-size task force exercised through simulations during GHQ exercises as part of the CGSC's PRAIRIE WARRIOR exercise.

N

National Training Center (NTC)—The first of the Army's Combat Training Centers, located at Fort Irwin, California. Designed to rigorously train and evaluate mostly Army armored and mechanized brigade task forces.

P

Proponent—Within the Louisiana Maneuvers process, the command or agency responsible for investigating an issue and for briefing the results of the investigation to the Board of Directors.

R

Redistribution of BASOPS/Unit Structure (ROBUST)—Study chartered March 1988 by CSA GEN Carl E. Vuono to review comprehensively all AC and RC TDA organizations in an effort to configure and fund the Total Army's TDA structure to support the warfighting CINCs and accomplish critical mobilization missions.

S

Synchronization—As it pertained to Force XXI, the process by which the known actions and decision points affecting each axis and lane were aligned chronologically on the Synchronization Matrix to ensure their proper sequencing and to permit resolution of timing and resource conflicts before they could affect the progress of the campaign.

Synchronization Lanes—Different functional areas shown on the Force XXI Synchronization Matrix. The lanes permitted display of Force XXI–related actions and decision points particular to those functional areas that ordinarily would not have appeared within the three campaign axes.

Synchronization Matrix—Graphic display used to show chronological list of known actions and decision points to enable synchronizers to ensure proper cueing and to avoid timing and resource conflicts within the Force XXI Campaign.

Synchronization Working Group (SWG)—Force XXI process forum conducted by the LAM Task Force at which representatives of Force XXI axes and lanes briefed activities within their purview and at which outstanding conflicts in sequencing, timing, and resourcing were resolved.

Synthetic Theater of War (STOW)—Experiment between the Army and the Defense Advanced Research Projects Agency to demonstrate the dynamic environment created through the sharing of distributed interactive simulations. Creates a fully integrated Joint theater of war through interactive communication between virtual, live, and constructive simulations in real time. Soldiers in all three training environments share a common, relevant picture of the battlefield, and they interact seamlessly.

T

Table of Distribution and Allowances (TDA)—Document allocating personnel and equipment to a headquarters, school, ad hoc task force, or other non-TOE organization within the Army; normally a combat service support organization. More easily amended than a TOE.

Table of Organization and Equipment (TOE)—Document describing the organizational structure of an operational Army unit, allocating personnel, by rank and MOS, and equipment.

Total Asset Visibility (TAV)—Ready computer access to information on locations and stockage levels of supply items.

V

VANGUARD—Study chartered in May 1990 by CSA GEN Carl E. Vuono and Secretary of the Army Michael P. W. Stone to conduct a functional review of the Army TDA structure in order to shape that structure to support a smaller future force based mostly in CONUS.

W

Warfighter Rapid Acquisition Program (WRAP)—Experimental program designed to employ new mechanisms for rapid acquisition. Initial successes were Advanced Precision Airborne Delivery System and the Bradley Stinger Fighting Vehicle–Enhanced.

Appendix C

MODERN LOUISIANA MANEUVERS CHRONOLOGY

DATE	*EVENT*
	1991
Oct	Publication of Christopher Gabel's *The U.S. Army GHQ Maneuvers of 1941* by CMH
3–4 Dec	Sullivan visit to Ft. Leavenworth, KS, and the National Simulations Center
16 Dec	Franks msg to Sullivan, drafted by COL Blodgett, 161316Z Dec 91, sub: Louisiana Maneuvers—A Fifty Year Stride
	1992
Feb	Initial LAM TF cadre assembled at Ft. Monroe, mostly from TRADOC DCSA; COL David Blodgett appointed acting TF Director
2 Mar	Sullivan speech to TRADOC DESERT STORM Conference, Ft. Monroe, VA, describing his concept for the Louisiana Maneuvers
9 Mar	Sullivan msg, "Personal For" to senior commanders, announcing LAM concept and objectives and soliciting comment
22 May	CSA LOI for LAM published to BG Franks and the Army
Jul	BG Tommy R. Franks reports as Director, LAM TF
15–16 Sep	1st GOWG held at Ft. Monroe
14 Oct	1st BOD meeting held at Institute for Defense Analyses Simulation Center, Alexandria, VA
7–8 Dec	2d GOWG held at Ft. Monroe
	1993
3–5 Mar	2d BoD meeting held at AWC, Carlisle Barracks
24–26 May	AUSA-AMC LAM Symposium, Orlando, FL
27–28 Jul	3d GOWG, held at Hampton, VA

DATE	EVENT
27–26 Aug	GHQX–93 held in conjunction with exercises FUERTES DEFENSAS and ULCHI/ FOCUS LENS; Startex 17 Aug 93; AAR 26 Aug 93
2O–22 Oct	AUSA Annual Convention, Washington, DC
21 Oct	3d BoD meeting held, Washington, DC
	1994
15–16 Feb	4th GOWG, held at Hampton, VA
8 Mar	CSA announces Force XXI campaign
10–23 Apr	AWE 94–07, DESERT HAMMER VI, at NTC; first test of a digitized task force
Apr	MG Tommy Franks departs TF
May	BG David Ohle reports as new TF Director
13–14 Jul	BOD/CSA Sr. Leaders Seminar, AWC, Carlisle Barracks; Force XXI campaign plan approved for implementation; CSA decides to relocate LAM TF HQ to NCR; LAM TF begins reorganization to oversee Force XXI campaign
8 Aug	DCSOPS begins monthly Force XXI Synchronization Meetings, Washington, DC
24–25 Aug	5th GOWG, held at Washington, DC
17–19 Oct	AUSA Annual Convention, Washington, DC; Army Experiment I presentation by LAM TF
20–21 Oct	BoD held at Washington, DC
	1995
11–12 Jan	SWG 5, AWC, Carlisle Barracks
14 Feb	CSA issues Force XXI EXFOR Prime Directive
15–16 Feb	GOWG VI, AWC
28–29 Mar	SWG 6, Alexandria, VA
31 May–2 Jun	Army 2010 Conference, Cantigny Center, Wheaton, IL
20 Jun	BG Ohle departs as LAM TF Director; BG Mark Hamilton, Director-designee, diverted to Jt. Staff; COL Cowell becomes Acting Director, serves through his retirement in Feb 96
20 Jun	GEN Dennis J. Reimer replaces GEN Sullivan as CSA; transition team recommends keeping LAM TF for 1–2 years and disbanding it
26–27 Jun	SWG 7, ARNGRC, Arlington, VA
11 Jul	BoD/Commanders Conference, Washington, DC; CSA announces future senior leadership meetings on Force XXI will be commanders conferences
9 Aug	SWG 8, ARNGRC, Arlington, VA

DATE	*EVENT*
3–4 Oct	GOWG VII, AWC, Carlisle Barracks—last GOWG
16–18 Oct	AUSA Annual Convention, Washington, DC; Army Experiment II presentation by LAM TF
	1996
Late Jan–early Feb	Bulk of Pentagon office moves to Hoffman Building, Alexandria, VA
12–14 Feb	AUSA-AMC Symposium: America's Army, Orlando, FL
14 Mar	CSA announces institutionalization of LAM process and sets disbandment of LAM TF for I Jul 96
1 May	COL Wayne W. Boy becomes last LAM TF Director
21–23 May 96	AUSA-TRADOC Symposium, San Jose, CA
13 Jun	COL Boy, Mr. Valliant, Mr. Rogers brief TF close-out plan to DAS
1 Jul 96	LAM TF officially ceases operations

Appendix D

CHIEF OF STAFF MESSAGE
LOUISIANA MANEUVERS 1994
9 MARCH 1992

As I think you all know, for several weeks I have been thinking and talking about a concept I call Louisiana Maneuvers. At the AUSA meeting in Orlando, I spoke at some length about my concept and intent; I also noted it in my prepared remarks for this year's congressional budget hearings. The purpose of this message is to play out, in some detail, what I am thinking and to solicit your views.

Overall, Louisiana Maneuvers will be a process that will focus discrete but linked exercises and DOTML activities; that will enable us to assess that Army's abilities to perform its roles and missions in the context of our new strategy—both warfighting and "Title 10" responsibilities; and that will help us plot our course into the 21st century. My intent is to create a focal point for our activities—to give us a hands-on grasp for the post–Cold War Army and an understanding of change that will be more intellectual construct. What I want to do is to capitalize institutionally on already scheduled exercises complemented by exercises and other activities we develop—all of which will be structured to enhance our understanding of America's Army in the 21st century. I expect and will encourage you to develop exercises that will cover the full range of the operational continuum and that will incorporate the full planning range from force generation through force employment, war termination, and redeployment. It goes without saying that I see this process as a Total Army effort; I believe it will inform us on the 21st century role (capability and expectation) of reserve forces. Some exercises will be sponsored by HQDA, others by joint commands or Army MACOM—but we will embed linked objectives.

My intellectual debt is to George Marshall and Lesley J. McNair's GHQ Maneuvers of 1940 and 1941, the "Louisiana Maneuvers." In a very different world, Marshall used Louisiana Maneuvers to focus the Army: to shake out emerging doctrine, to experiment with organizational design, to train the mobilizing force, to provide insights on material requirements, and to develop leaders. It did some other things also; and it did not do all things well—but the major objectives went right down the line of DOTML and provided an integrating mechanism for Marshall's rapidly expanding Army. Marshall, however, focused the Army on a war that he knew was coming; my goal is to posture our Army to protect the nation's enduring interests in an uncertain future.

I believe we can accomplish our objectives by harnessing the power of the microprocessor. These exercises will use computer supported simulation to an unprecedented degree, whether it be a sophisticated counterdrug campaign simulation, a large scale theater power projection campaign, a small scale strike operation, special opera-

tions, or mobilization and deployment. I would also like you to consider these exercises as "skunk works"—now playing software "games within games" with leap-ahead combat equipment, C3I, TTP, and so forth. Modern computing and communications technologies will enable us not only to execute these (from distributed locations), but also to understand them and to integrate what we learn. I want to be able to try out ideas—and to be free to decide whether or not they are good ideas. Louisiana Maneuvers will be the laboratory in which we learn about the Army of the 21st century.

I believe that activities such as this will help us think and grow, so we can lead our organizations and the Army more effectively through the process of change. This concept is about leaders—driving and thinking about our Army in the 21st century in a very positive way. Louisiana Maneuvers will inform our decisions concerning the full range of doctrine, organization, training, material requirements, and leader development. I realize that this approach may blur the distinction between training and combat development—but I believe that we should do it not simply because it will be less costly, but because I see it as a deliberate strategy to adapt the Army more quickly.

I want to work toward some type of major conference in 1994—structured to bring together specific policy issues I will define so that we can discuss where we are and where we want to go. By 1994 we will have accomplished enough to make a major assessment, but I want to begin as soon as possible to bring together exercises such as Reforger 92 and the 1992 CGSOC BCTP exercise as learning and experimental tools to teach us how to use this kind of process and to guide work in progress. Louisiana Maneuvers is a process; at AUSA I said "think of it as a verb and not as a noun." There will be those who will be unable to understand that it is more than a collection of exercises. There will be still others for whom it is but a single exercise. But from our level, I want it to be the process within which we hypothesize, experiment, and assess both policy issues that shape the force as well as DOTML. I envision applying some of our commanders' conference time to assessing just these issues as we go through the months ahead. It will be through the structured exchange of ideas and findings that we shall learn and grow. Leaders of the best organizations talk with each other.

I have talked Fred Franks into being my Deputy Exercise Director and pulling this together. I will organize an executive secretariat to do the coordination and each of you will be asked to contribute general officers to a general officer steering group that will represent us in providing policy direction and advice. In essence, we will create an organization somewhat like the leader development decision network to keep this pulled together. DA Staff responsibility will reside with the DCSOPS.

In summary, I believe this process will help us focus as an institution; that it will be a vehicle for change; that it will inform our assessment of DOTML; and that it will structure our thinking about the Army in the new military strategy. Our role is not to critique, but to assess and decide—to use Louisiana Maneuvers to move the Army forward. I do not expect to end 1994 with truth with a capital "T," but I do expect to gain sufficient insight to give us policy options to meet our Title 10 responsibilities and to shape the Army of the 21st century. Let me emphasize that at this point my ideas are still forming and, frankly, we have yet to define the limits of feasibility for some aspects. I need you to think about this concept very broadly. Fred will lead a discussion of these issues at our meeting at the end of March. My intention at that time will be to get a sufficiently common understanding of our objectives and procedures to begin work. I will be grateful for your thoughts in the interim.

Regards—Sullivan.

Appendix E

RESUME OF SERVICE CAREER
GENERAL GORDON RUSSELL SULLIVAN

DATE AND PLACE OF BIRTH
25 September 1937, Boston, Massachusetts

YEARS OF ACTIVE COMMISSIONED SERVICE
36

SOURCE OF COMMISSION
ROTC

LATEST ASSIGNMENT
Chief of Staff, United States Army, Washington, DC,
since June 1991

MILITARY SCHOOLS ATTENDED
The Armor School, Basic and Advanced Courses
United States Army Command and General Staff College
United States Army War College

EDUCATIONAL DEGREES
Norwich University—BA Degree—History
University of New Hampshire—MA Degree—Political Science

HONORARY DEGREES
Norwich University—Doctor of Military Science
Quincy College—Associate of Public Service
Boston University—Doctor of Laws
Lincoln College—Doctor of Political Science

MAJOR DUTY ASSIGNMENTS

Nov 59–Feb 60	Student, Armor Officer Basic Course, United States Army Armor School, Fort Knox, Kentucky
Feb 60–Jun 60	Platoon Leader, Company B, 1st Medium Tank Battalion, 66th Armor, 2d Armored Division, Fort Hood, Texas
Jul 60–Sep 60	Student, Armor Communication Class, United States Army Armor School, Fort Knox, Kentucky
Oct 60–Feb 61	Communications Officer, 1st Medium Tank Battalion, 66th Armor, 2d Armored Division, Fort Hood, Texas
Feb 61–Jun 61	Commander, Company A, 1st Medium Tank Battalion, 66th Armor, 2d Armored Division, Fort Hood, Texas
Jun 61–Jan 62	Battalion Communications Officer, 3d Medium Tank Battalion (Patton), 40th Armor, United States Army, Pacific, Korea
Jan 62–Jul 62	Platoon Leader, Company A, 3d Medium Tank Battalion (Patton), 40th Armor, United States Army, Pacific, Korea
Sep 62–May 63	Assistant Civil Guard/Self Defense Corps Advisor, 21st Infantry Division, Military Assistance Advisory Group, Vietnam
May 63–Jul 64	Administrative Officer, Office of the Assistant Chief of Staff, and Executive Assistant to the Assistant Chief of Staff, J–2 Division, Military Assistance Command, Vietnam
Jul 64–Jun 65	Student, Armor Officer Advanced Course, United States Army Armor School, Fort Knox, Kentucky
Jul 65–Jan 66	S–4 (Logistics), 3d Battalion, 32d Armor, 3d Armored Division, United States Army, Europe
Jan 66–Oct 66	Commander, Company A, 3d Battalion, 32d Armor, 3d Armored Division, United States Army, Europe
Oct 66–Jun 68	Assignment Officer, later Staff Officer, Combat Arms Section, Military Personnel Division, Office of the Deputy Chief of Staff for Personnel, United States Army, Europe
Jun 68–Jun 69	Student, United States Army Command and General Staff College, Fort Leavenworth, Kansas
Jun 69–May 70	Personnel Services Officer, Plans and Operations Division, G–1, Headquarters, I Field Force, Vietnam
May 70–Jul 73	Personnel Management Officer, Personnel Actions Section, Armor Branch, Office of Personnel Operations, Washington, DC
Aug 73–Dec 74	Student, International Relations, University of New Hampshire, Durham, New Hampshire
Jan 75–Aug 76	Commander, 4th Battalion, 73d Armor, 1st Infantry Division (Forward), United States Army, Europe
Aug 76–Jun 77	Chief of Staff, 1st Infantry Division (Forward), United States Army, Europe
Aug 77–Jun 78	Student, United States Army War College, Carlisle Barracks, Pennsylvania
Jun 78–Dec 79	Assistant Chief of Staff, G–3 (Operations)/Director of Plans and Training, 1st Infantry Division and Fort Riley, Fort Riley, Kansas
Jan 80–May 81	Assistant Chief of Staff, G–3 (Operations), VII Corps, United States Army, Europe
May 81–Jun 83	Commander, 1st Brigade, 3d Armored Division, United States Army, Europe

Jun 83–Oct 83	Chief of Staff, 3d Armored Division, United States Army, Europe
Nov 83–Jul 85	Assistant Commandant, United States Army Armor School, Fort Knox, Kentucky
Jul 85–Mar 87	Deputy Chief of Staff for Support, Central Army Group, Allied Command Europe
Mar 87–Jun 88	Deputy Commandant, United States Army Command and General Staff College, Fort Leavenworth, Kansas
Jun 88–Jul 89	Commanding General, 1st Infantry Division (Mechanized), Fort Riley, Kansas
Jul 89–Jun 90	Deputy Chief of Staff for Operations and Plans, United States Army/Army Senior Member, Military Staff Committee, United Nations, Washington, DC
Jun 90–Jun 91	Vice Chief of Staff, Office of the Chief of Staff, United States Army, Washington, DC
Jun 91–Jun 95	Chief of Staff, United States Army, Washington, DC

PROMOTIONS	DATES OF APPOINTMENT	
	Temporary	*Permanent*
2LT		21 Nov 59
1LT	21 May 61	21 Nov 62
CPT	6 Nov 63	21 Nov 66
MAJ	28 Sep 67	21 Nov 73
LTC	12 May 74	21 Nov 80
COL	1 Jul 80	15 Mar 82
BG		1 Oct 84
MG		1 Oct 87
LTG		21 Jul 89
GEN		4 Jun 90

U.S. DECORATIONS AND BADGES

Defense Distinguished Service Medal
Army Distinguished Service Medal (with Oak Leaf Cluster)
Navy Distinguished Service Medal
Air Force Distinguished Service Medal
Coast Guard Distinguished Service Medal
Defense Superior Service Medal
Legion of Merit
Bronze Star Medal
Purple Heart
Meritorious Service Medal (with Oak Leaf Cluster)
Joint Service Commendation Medal
Army Commendation Medal (with Oak Leaf Cluster)
Army Achievement Medal
Combat Infantryman Badge
Office of the Secretary of Defense Identification Badge
Joint Chiefs of Staff Identification Badge
Army Staff Identification Badge

FOREIGN DECORATIONS (in chronological order)

The Canadian Meritorious Service Cross, Military Division
The Grand Cross of the Order of May for Military Merit, Republic of Argentina
Medal of Military Merit, Republic of Uruguay
The Grand Order of Merit with Star, Federal Republic of Germany
Brazilian Order of Military Merit—Grand Master
Merit and Honor Medal of the Republic of Greece
Order of National Security Merit of the Republic of Korea
Turkish Order of Merit
Republic of Mexico "First Class Military Merit" Medal
Grand Cordon of the Order of the Rising Sun, the Empire of Japan
The Republic of France National Order of the Legion of Honor
The Nishan-I-Imtiaz (Military), the Islamic Republic of Pakistan
The Republic of France National Order of Merit
Brazilian Order of Military Merit—Commended
Cross of Honor in Gold of the Armed Forces of the Federal Republic of Germany
Republic of Vietnam Campaign Medal with 60/Device

INDUSTRY AWARDS

Eisenhower Award, American Defense Preparedness Association
Mary G. Roebling Award, Association of the United States Army
Distinguished Service Medal, National Guard Association of the United States
Minuteman Award, Reserve Officers' Association

CIVIC MEMBERSHIPS

Council on Foreign Relations
Military Order of the Carabao

SUMMARY OF JOINT ASSIGNMENTS

Assignment	*Dates*	*Grade*
Administrative Officer, Office of the Assistant Chief of Staff, and later Executive Assistant to the Assistant Chief of Staff, J–2 Division, Military Assistance Command, Vietnam	May 63–Jul 64	Lieutenant/Captain (No joint credit)
Deputy Chief of Staff for Support, Central Army Group, Allied Forces Central, Allied Command Europe	Jul 85–Mar 87	Brigadier General
Deputy Chief of Staff for Operations and Plans, United States Army/Army Senior Member, Military Staff Committee, United Nations, Washington, DC	Jul 89–Jun 90	Lieutenant General
Chief of Staff, United States Army, Member, Joint Chiefs of Staff, Washington, DC	Jun 91–Jun 95	General

Appendix F

OWNING THE NIGHT
A CHRONOLOGY OF ARMY ACTIONS, 1991–1995

22 October 1991—GEN Gordon R. Sullivan, Chief of Staff, Army, asked GEN Frederick M. Franks, Commander, TRADOC, "Freddie, I keep being told "we own the night" what does that mean? Is it true? Are you comfortable with this notion? If not, what are we going to do about it? Lets discuss at some point in the future."[1]

29 October 1991—GEN Sullivan discussed with the General Staff Council his tasking to Cdr, TRADOC, to verify or comment on the statement that "we own the night." TRADOC will respond and, if appropriate, provide plans for ensuring that this statement becomes a reality. He also directed the Chief of Public Affairs to publicize Army efforts underway in the night vision are, specifically commenting on the excellent work being done at the Army Night Vision Laboratory at Ft. Belvoir, VA.[2]

November 1991—ODCS-Concepts, Doctrine, and Developments (DCS-CDD), TRADOC, began its assessment of Army night fighting capabilities.[3]

6 November 1991—DCS-CDD, TRADOC, tasked schools and MSCs to provide an evaluation of night fighting capabilities and shortfalls within their areas of responsibility. On hand are responses from the Commandant of the Field Artillery School, Ft. Sill, OK (17 December 1991), and the Commander of the Signal Center, Ft. Gordon, GA (19 December 1991). Cmdt, FA School, responded that there were many areas within the fire support BOS in which the Army did not own the night, particularly in terms of the limited capabilities of current fire support vehicles and in the numbers of night vision goggles (NVG) allocated within fire support units. Cdr, SigCen, also noted a need for more NVGs within signal units. More importantly, he discussed at length a broader topic: "To insure that maneuver commanders 'own the night,' we must provide the continuous command and control information system support necessary to fight and win on the extended battlefield. Central to the thought of 'owning the night' is a continuous near real-time command and control capability." He then goes on to list the various fielded and developmental systems that would provide those capabilities. Responses from the Infantry and Armor Schools are not available.[4]

January 1992—TRADOC DCS-CDD IPR for GEN Franks at which he directed the assessment continue with TRADOC and other agencies.[5]

12 February 1992—Briefing for DCS-CDD on status of the "owning the night"

(OTN) assessment. Key points made about the effort included: Involves participation of CG, DCS-CDD, and major portions of the ODCS-CDD staff; Answers CSA question to the CG; All TRADOC schools and MSCs participated; Task Force assembled for January 1992 assessment; assessment includes night vision, electro-optic, primary weapon systems, radar, laser, intel and EW, and satellite systems.

May 1992—MG Jerry A. White, Chief of Infantry and Cmdt, Infantry School, published "Commandant's Note: Owning the Night," in *Infantry* (May–June 1992), in which he described the need for U.S. forces to be able to operate as effectively at night as during the day. He then discussed the requirements for training and technological developments needed to ensure that our forces would continue to "own the night" into the 21st century.[6]

July 1992—MG White published "Commandant's Note: Light and Lethal," in *Infantry* (July–August 1992) in which he discussed the need for the smaller Army's first-to-fight units to be both light and lethal. He emphasized the role advanced technology must play in giving first-to-fight forces those characteristics and emphasized the importance of night vision devices, with weapons and munitions, command and control equipment, and environmental survival equipment, giving them first place in the four categories of equipment the first-to-fight forces must have. He then described projected advances in night vision devices for the force.[7]

21 August 1992—GEN Sullivan visited HQ, TRADOC, for wide-ranging discussions about the TRADOC Battle Labs. During a video teleconference (VTC) that included participants from 20 TRADOC and FORSCOM installations, MG White presented a briefing on the Dismounted Battlespace Battle Lab's (DBBL) investigations into OTN. MG White noted that OTN was an operational requirement spanning all battlefield functions. He described his battle lab's purpose in its OTN efforts as being to improve capabilities for the entire combined arms force, to extend the envelope for detection and engagements, to address current and future systems, to speed up the development and evaluation process, and to focus on high payoff solutions. He further discussed for the Chief his evaluation and experimentation plans and described, as well, the integration challenges he faced, noting that present Army efforts were not synchronized. He also laid out plans to conduct OTN-related experiments at the NTC and the JRTC. Sullivan commented that he had no conceptual problems with experimentation at the CTCs—that it could be done without turning the CTCs into testing grounds. He also commented that the power in his conversation with MG White would inhere in the integration of OTN efforts that could result.[8]

October 1992—DBBL conducted Concept Evaluation Program test of the infantry platoon nightfighting system to establish a baseline against which to evaluate advanced technologies. The experimentation involved target detection, range firing, defensive live fire, and dismounted and mounted squad and platoon exercises.[9]

3 December 1992—Senior Officer Review Conference held at Fort Benning, chaired by GEN Franks, reviewed the DBBL's organization and project planning. OTN was the first project area discussed. GEN Franks commented that "we are accustomed to working in terms of systems and not capabilities. We need to work capabilities so they can be horizontally integrated across the combined arms force and not focus on things that were branch proponency issues in the past. This is a fundamental change to the way we have done business." He also emphasized the need to integrate activities closely with the test community and that the use of simulations in lieu of field testing is a key function of the Battle Lab. Other comments called for integrated

efforts and for understanding the horizontal technology integration aspects of the A-kit/B-kit philosophy in developing the Improved Target Acquisition System (2d Gen FLIR).[10]

26 January 1993—GEN Franks signed a Certificate of Charter appointing MG White as Director, Dismounted Battlespace Battlefield Laboratory. The first special focus area identified for the Battle Lab in the charter is "optimize the night-fighting capability of the combined arms force (including CS and CSS elements) with particular emphasis on focal array planes [sic] and second generation FLIR. The Battle Lab actually had been functioning and pursuing OTN inquiries since August 1992.[11]

8 February 1993—ASA(RDA) established Special Task Force (STF) to manage development and horizontal technological integration of 2d Gen FLIR with MG White as co-director.[12]

March 1993—First sessions of the 2d Gen FLIR STF convened at Ft. Benning.[13]

—MG White published "Commandant's Note: Infantry—Centerpiece of a Force Projection Army," in *Infantry* (March–April 1993). In it he commented on the history of experimentation in the twentieth century Army and described the establishment of the DBBL and its OTN tasking. He discussed also the several OTN-related critical tasks on which the Battle Lab was working and the ways in which he envisioned that work would extend the capabilities of the whole force.[14]

22 March 1993—GEN Franks recommended to GEN Sullivan that a Special Task Force be convened at Fort Knox under MG Funk to develop horizontal integration of requirements and programmatics for digitizing the battlefield, including production of an IVIS-equipped Bradley Fighting Vehicle, similar to the STF at Benning for "Owning the Night."[15]

19 April 1993—GEN Sullivan summarized the Division Commanders and TRADOC Commandants Conference of the preceding week in a message to attendees and their superiors. He noted particularly the importance of programs like Louisiana Maneuvers and the successes they were beginning to demonstrate saying, "Jerry White's 'own the night' work is revolutionary..."[16]

3 August 1993—GEN Jimmy D. Ross, Cdr, AMC, sent a message to his subordinate commanders on the 21st-century brigade, a notional entity designed to have the firepower of the current heavy division. He tasked the addressees to provide input assessments for a briefing to the CSA on the equipment that would be available in the 1997–1998 timeframe for fielding in such a unit in 2000. He directed they include "technology to enable us to own the night and weather, digitize the battlefield, provide combat ID and situational awareness, optimize the microprocessor, and optimize weapons lethality and mobility."[17]

September 1993—MG White published "Commandant's Note: Parting the Darkness," in *Infantry* (September–October 1993), in which he described the OTN work being done at the DBBL and particularly the work and progress of the 2d Gen FLIR STF. He discussed the advantages the 2d Gen FLIR technologies would provide the fighting force and the efficiencies that were resulting from horizontally integrating requirements and equipment developments across the battlefield operating systems.[18]

23 September–28 October 1993—DBBL conducted an OTN Advanced Warfighting Demonstration (AWD) at Fort Campbell, Kentucky, using primarily a battalion of the 101st Air Assault Div. as it prepared for a March 1994 JRTC rotation. USMC aircraft and ANGLICO teams, USAF aircraft and liaison teams, and a USN SEAL team also took part, testing various night vision equipment and their own capabilities. The purpose of

the AWD, as MG White briefed GEN Franks during his 14 October visit, was not to become enamored or discouraged by the tinkering with technology, but to look beyond the challenges at the capability of the technology implied when combined with the soldier. Franks noted a number of comments from soldiers about many items of the equipment they were employing, not just the night vision equipment, which he passed on to his staff for action.[19]

2 October 1993—MG Larry G. Lehowicz, DCS-CD, TRADOC, briefed the LAM Board of Directors on the status of seven LAM issues for which TRADOC was the proponent. The first issue briefed was OTN. The briefing discussed the measures underway within the Army including work at the DBBL, the STF on 2d Gen FLIR, and the HTI approach to developing the 2d Gen FLIR capability. It noted that the OTN issue was being carried over and folded into the 1994 LAM issue of Continuous Operations.[20]

9 December 1993—DCSOPS approved the Operational Requirements Document (ORD) for the Improved FLIR Capability which resulted from the work of the STF on 2d Gen FLIR. The Program Executive Officer for Intelligence/Electronic Warfare was designated as the executive while TRADOC was designated the combat developer.[21]

March 1994—MG White published "Commandant's Note: Dismounted Battlespace Battle Lab, Putting the Ideas of the Future into Action Today," in *Infantry* (March–April 1994). In the note, he described the battle lab system and the organization and missions of his own DBBL In the same issue, CPT Lewis G. Wagner published "Owning the Night," which described in detail the evolution of the DBBL's organization and conduct of its several experiments and demonstrations from mid-1992 through the AWD at Fort Campbell. Wagner discussed the numerous equipment-related results of the Campbell experimentation and described some of the projected features of the AWE to occur at the JRTC during March 1994.[22]

9–11 May 1994—The Infantry Center conducted a Future Operational Capabilities, Infantry (FOCUS II) AWE at Fort Benning in conjunction with its Infantry Commanders' Conference. The AWE employed a light infantry company from Fort Lewis and a heavy infantry company from Fort Benning. Results of the AWE showed that objective OTN systems provided a clear advantage over existing capabilities and that these former systems provided improved command and control and increased stand-off ranges. In addition, the new technologies reduced force exposure to enemy detection and action and risks of fratricide, and enabled the force equipped with them to operate continuously at high tempos day and night.[23]

June–August 1994—During June, the DBBL conducted a Night Firing AWE at Fort Benning to compare the effectiveness and ease of use of laser aiming devices. During July and August, the Battle Lab also conducted a two-phase Concept Evaluation Program (CEP) Test of night driving technologies and procedures using various night vision devices and various vehicles.[24]

FY 1995—The Infantry Center and the DBBL conducted CEP tests on night firing, night vision device range determinations, and OTN tactics, techniques, and procedures and completed construction of a Night Fighting Training Facility. The Night Fighting Training Facility used a variety of methodologies, including a heavy reliance on simulations, to train trainers and individual soldiers in various skills necessary for fighting and operating effectively at night.[25]

Notes

[1] Message, Sullivan, Eyes Only, to Franks, 222235Z October 1991, sub: Terminology.

[2] Memorandum for Record, DAEC-CA, 29 October 1991, sub: GSC Memo #43-91.

[3] TRADOC DCSCDD briefing chart, as of 11 February 1992, for HQ, TRADOC Review and Analysis, 1st Quarter, FY 92, sub: Owning the Night.

[4] Message, TRADOC, ATCD-ZA, to Cmdts/MSC Cdrs, 061910Z November 1991, sub: Owning the Night. Message, from Comdt, FA School, personal for GEN Franks, 171930Z December 1991, sub: same. Message, from CDRSIGCEN personal for GEN Franks, 191624Z December 1991, sub: same.

[5] Ibid.

6 Jerry A. White, "Commandant's Note: Owning the Night," *Infantry*, 82:3 (May-June 1992), 1-2.

[7] Jerry A. White, "Commandant's Note: Light and Lethal," *Infantry*, 82:4 (July-August 1992), 1-2.

[8] Memorandum for Record, ATCG-P, from GEN Franks to Distribution, 26 August 1992, sub: Visit of CSA to Fort Monroe, 21 Aug 92, in Franks Papers, SG AD, COR-089, Document 1, pp. 33-36. TRADOC Briefing Package, 21 Aug 92, sub: Chief of Staff of the Army Battle Labs Video Teleconference, in Sullivan Papers, Chief of Staff of the Army Papers, Box 01A of 8, January-September 1992, Folder 3, August 1992, file 7.

[9] Lewis G. Wagner, "Owning the Night," *Infantry* 84:2 (March-April 1994), 9. Concept Evaluation Program Test of the Infantry Platoon Night Fighting System, Final Test Report, April 1993, TRADOC Project No. 92-CEP-0921, BL Project No. 0001, published by U.S. Army Infantry School, Dismounted Warfighting Battle Lab, Battlespace Board Division, Fort Benning, GA.

[10] Letter, MG White to GEN Franks, 10 December 1992, recording guidance and comments from the 3 December Senior Officer Review. Franks Papers, SG AD, COR-098, Document 1.

[11] Certificate of Charter, HQ, TRADOC, 26 January 1993, GEN Franks to MG White. Copy provided by DBBL. "Focal array planes" should read "focal plane arrays."

[12] Message, Military Deputy to the ASA(RDA), SARD-ZB, to distribution, 081545Z Feb 93, sub: Second Generation Common Module FLIR Special Task Force. Jerry A. White, "Commandant's Note: Parting the Darkness," *Infantry*, 83:5 (September-October 1993, 1-2.

[13] Jerry A. White and George T. Singley, "Horizontal Technology Integration: A New Way of Doing Business," Army, August 1994, p. 30.

[14] Jerry A. White, "Commandant's Note: Infantry — Centerpiece of a Force Projection Army," *Infantry*, 83:2 (March-April 1993), 1-2.

[15] Message, GEN Franks Personal For GEN Sullivan, 221556Z Mar 93, sub: Digitized Capability for Bradley.

[16] Message, GEN Sullivan to Distribution, 192000Z Apr 93, sub: Division Commanders and TRADOC Commandants Conference, in Franks papers, SG AD, MSG-152, Document 01, pp. 45-49.

[17] Message, GEN Ross to AMC Commanders, 031900Z Aug 93, sub: 21st Century Brigade, in Franks Papers, SG AD, COR-071, Document 01, pp. 29-31.

[18] Jerry A. White, "Commandant's Note: Parting the Darkness," *Infantry*, 83:5 (September-October 1993), 1-2.

[19] U.S. Army Infantry Center, 1994 Annual Command History, pp. 130-131. Operation Night Eagle Company/Battalion Own the Night Advanced Warfighting Experiment Final Report, June 1994, TRADOC Project No. 93-CEP-0185, DWBL Project No. 0004, published by U.S. Army Infantry School, Dismounted Battlespace Battle Lab, Battle Space Board Division. Memorandum for Record, GEN Franks to Distribution, 1 November 1993, sub: Trip Report from Change of Command Fort Knox and Advanced Warfighting Demonstration at Fort Campbell, 13-14 October 93, in Franks Papers, SG AD, OCOR-011, Document 01, pp. 231-235. Also Star Letter, LTG C.C. Krulak to GEN Franks, 27 December 1993, noted the visit of TRADOC's liaison officer to the Marine Corps Combat Developments Center to the Marine Aviation Weapons and Tactics Squadron, Yuma, Arizona, and the MAGTF/Expeditionary Training Center, 29 Palms, California, and forwards the trip report for Franks's information. Krulak noted that the trip report indicated several possibilities for Army-MC cooperation in battle lab-type endeavors and notes, as well Marine Corps participation in the OTN experiment at Fort Campbell, Kentucky, and other work with the DBBL. He ends by inviting additional visits and interchanges. In Franks Papers, SG AD, COR-037, Document 01. See also Memorandum for GEN Franks from MG White, 2 March 1994, sub: Owning the Night Update, which describes the results of the AWD. In Franks Papers, SG AD, COR-098, Document 01, pp. 20-21.

[20] Briefing Package, DCS-CD, TRADOC, 20 October 1993, sub: LAM '93 Issues, in Franks Papers, SG AD, 93OCOR-012, Document 01, pp. 71-77.

[21] U.S. Army Infantry Center, 1994 Annual Command History, pp. 130-131.

[22] Jerry A. White, "Commandant's Note: Dismounted Battlespace Battle Lab, Putting the Ideas of the Future into Action Today, *Infantry*, 84:2 (March-April 1994), 1-2, and Wagner, "Owning the Night," 9-12.

[23] Letter, MG White to GEN Franks, 23 September 1994, no subject. This letter describes the AWE's results in considerable detail while reflecting on a number of other subjects, as well. In Franks Papers, SG AD, 94ICOR-009, Document 01, pp. 114-119. Draft U.S. Army Infantry Center Annual Command History, FY 1994, pp. 132-133. Historian's files.

[24] Draft U.S. Army Infantry Center Annual Command History, FY 1994, pp. 133-134. Concept Evaluation Program Test of Night Driving Devices: Test, Experimentation, and Evaluation Report, February 1995, TRADOC Project No. 94-CEP-251, BL Project No. 0006, published by Dismounted Battlespace Battle Lab, Dismounted Forces Division, and Army Research Laboratory's USAIC HRED Field Element, Fort Benning, GA. Historian's files.

[25] Draft U.S. Army Infantry Center Annual Command History, FY 1994, p. 134. Draft DBBL input to U.S. Army Infantry Center Annual Command History, FY 1995, pp. 1-2. Historian's files.

Appendix G

CHRONOLOGY OF ARMY DIGITIZATION EFFORTS 1991–1995

1 December 1991—U.S. Army Tank-Automotive Command rolls out the first M1A2 Abrams tank at Lima, Ohio. This is the first U.S. tank equipped with the InterVehicular Information System (IVIS) that permits the automatic sharing of digitized positional and other combat-related data with commanders and similarly equipped vehicles.[1]

31 March 1992—GEN Frederick M. Franks, CG, TRADOC, directs the Commanders of CAC and the Armor, Infantry, Aviation, Field Artillery, Engineer, and Air Defense Artillery Centers, with the Armor Center in the lead, to begin working on doctrine and experimentation to validate his belief that the Army is about to experience significant improvements in its battlefield command and control at the brigade level and below. This belief flowed from the conjuncture of technologies—IVIS and the Global Positioning System (GPS)—that enhanced situational awareness and target identification.[2]

21 August 1992—MG Paul Funk, Armor Center Commander, briefs GEN Gordon R. Sullivan, CSA, and GEN Franks by VTC during Sullivan's visit to TRADOC headquarters at Ft. Monroe, VA, on battlefield digitization efforts and plans.[3]

27 August 1992—GEN Franks directs the newly formed Mounted Battlespace Battle Lab (MBBL) at Ft. Knox, KY, to: "(1) optimize situational awareness and target handoff of combined arms task force (particularly among maneuver, fire support, and aviation elements) to reduce fratricide and maximize combat power; . . . (4) in coordination with Battle Command Battle Lab, optimize horizontal integration of digitized information flow at brigade level and below."[4]

September 1992—TRADOC and the MBBL exercise an M1A2-equipped platoon from 3d Bn, 8th Cav, at the NTC with other units from the 1st Cavalry Division. The platoon demonstrates abilities to operate with increased dispersion, to anticipate events better, and to act in greater concert than M1A1-equipped platoons.[5]

14 October 1992—First LAM Board of Directors meeting approves investigation of battlefield digitization as a warfighting issue within the Louisiana Maneuvers. The meeting includes a remote demonstration for the attendees of IVIS and other battlefield digitization technologies from the Armor Center.[6]

30 November–18 December 1992—MBBL conducts a Battlefield Synchronization Demonstration at Ft. Knox to test digital communications scenarios between a tactical commander and elements of a company

team. This demonstration shows the potential inherent in horizontally integrated digital communications, but also points up, as the 25 March 1993 demonstration later confirms, the difficulties that IVIS encounters in communicating with different equipment through nonstandard message formats and protocols.[7]

16 December 1992—GEN Sullivan, at a four-star RRC meeting at Ft. Belvoir, VA, directs that the Army pursue a digital capability across the battlefield, setting a goal for the Army of having a digitized division in place by the turn of the century.[8]

17 February 1993—GEN Franks, during a Senior Officer Review at Ft. Leavenworth, KS, tasks the U.S. Army Signal Center (SigCen) to resolve the issue of standardizing protocols and message formats across battlefield functional areas.[9]

3 March 1993—Second LAM Board of Directors meeting reviews status of TRADOC's and AMC's investigation into battlefield digitization. CSA notes, "The digitized battlefield provides the greatest leverage to develop a smaller and more capable Army." Proposes plan to exercise simulated 2005 high-tech, brigade-size Mobile Strike Force as part of Command and General Staff College Exercise PRAIRIE WARRIOR in spring 1993.[10]

11 March 1993—VCSA tasks TRADOC to develop a Mission Needs Statement and requirements-level definition for the programs having high Horizontal Technological Integration (HTI) potential, to include digitization, with a suspense for completion of end of May 1993. VCSA also tasks the DCSOPS to stay closely linked with TRADOC in this effort.[11]

17 March 1993—CG, SigCen, in conjunction with MG Otto J. Guenther, Commander, U.S. Army Communications and Electronics Command (CECOM), agrees that CECOM should work with SigCen to respond to GEN Franks' directive and proposes to convene a Protocol Working Group at Ft. Gordon, GA, on 20 April 1993, to lay out issues, reach consensus on a timeline for conversion to a set of standard protocols, and establish a work plan to achieve that goal.[12]

25 March 1993—MBBL conducts a second Battlefield Synchronization Demonstration at Ft. Knox employing horizontally integrated communications among tanks, Bradley Fighting Vehicles, aircraft, and fire support elements. This demonstration reaffirms the earlier perceived potentials but also further confirms the need for standard digitized message formats and protocols.[13]

14 April 1993—MG Guenther convenes C3IEW "Home-on-Home" Protocols Working Group meeting of general officers and colonels from TRADOC and AMC (center CGs/DCGs and PEOs/PMs) at CECOM, Ft. Monmouth, NJ. The meeting proceeds against a background of an earlier ASA(RDA) tasking to develop an integrated plan for battlefield digitization; to agree upon definitions, current statuses, and projected directions; and to address digitizing the battlefield and information exchange requirements for accomplishing that. The group agrees upon definitions and establishes the Ad Hoc Working Group for Digitizing the Battlefield, to be cochaired by MG Funk and MG Guenther, which would meet within 90 days of their own meeting.[14]

29 May 1993—MG Guenther and MG Gray, Cdr, SigCen, announce their decision as heads of the Protocols Working Group to employ the Tacfire protocol and message suite as the baseline standard suite for horizontal standardization across BFAs. PM Abrams, MG McVey, had already protested this decision as requiring IVIS to take a backward step in capability to enable its reengineering for compatibility with Tacfire.[15]

9 June 1993—Representatives from ASA(RDA), ODCSOPS (DAMO-FDD), and ODISC4 meet to discuss the SigCen message

of 29 May and the decision it embodied. The group decides to rescind the SigCen message and the Tacfire decision by message from the DISC4 and to send a joint SARDA/DCSOPS/DISC4 message to TRADOC requesting a briefing during the week of 6–9 July 1993 concerning that command's progress on the 11 March 1993 tasking from the VCSA.[16]

1–24 July 1993—TRADOC and the MBBL conduct a Battlefield Synchronization Demonstration at the NTC employing a digitized, M1A2-equipped armor company from the 3d Squadron, 8th Cavalry, exercising with other 1st Cavalry Division elements.[17]

15 July 1993—Horizontal Technology Integration GOWG, cochaired by MG Garner and MG Hite, meet at the Pentagon with Mr. Singley (ASA[RDA]) and other HQDA, AMC, and TRADOC representatives attending. The group meets to achieve consensus on HTI definitions and purpose and to ensure that HQDA, AMC, and TRADOC are aligned and properly focused on HTI, IAW the VCSA's guidance from 11 March 1993. Battlefield digitization was one of three technology concepts identified early along for HTI.[18]

29 July 1993—Ad Hoc Working Group for the Digitization of the Battlefield, cochaired by MG Paul Funk, Cdr, U.S. Army Armor Center and School, and MG Guenther, proposes a convergence strategy for migrating toward a common standard for networking equipment and to the Variable Message Format (VMF) for message protocols, passing through the Tacfire suite of protocols where practical. The use of software gateways and cohosting Tacfire protocols in IVIS would enable substantive HTI much more quickly than would awaiting the development of common hardware and software. The group also proposes, using this method, digitizing a brigade by 1996 and a division by 1998.[19]

3 August 1993—MG Jay Garner, ADCSOPS–Force Development (DAMO-FD), and MG Hite review and endorse the digitization strategy outlined on 29 July by the Ad Hoc Working Group for the Digitization of the Battlefield.[20]

12 August 1993—LTG William Forster, Military Deputy to the ASA(RDA), provides a written update for the CSA on the work of the Ad Hoc Working Group in support of GEN Sullivan's vision of a digitized battlefield.[21]

28 August 1993—GEN Sullivan escorts Dr. Deutch, Under Secretary of Defense for Acquisition, to Ft. Knox for briefings and demonstrations of Army progress on digitization as well as on projected digitization experiments.[22]

22 September 1993—House Appropriations Committee (HAC) designates $25 million to the Army for the Horizontal Battlefield Integration (HBI) program. In conference (9 November 1993), the amount is reduced to $20 million and language added requiring that any plan to digitize include aviation assets.[23]

9 November 1993—MG Garner and MG Hite cochair a meeting of the HTI GOWG at which the HTI concept paper is presented and at which PEOs and other agencies involved in digitization lay out their programs and associated funding requirements. Because of the lack of integration among the various programs and because of the costs, MG Garner directs BG Ronald E. Adams to form a Special Task Force (STF) on Digitization to study digitization issues and to recommend how the Army should proceed to integrate and manage its digitization efforts. MG Garner directs BG Adams to present the results of the Staff's study to the CSA at the 22 December RC meeting.[24]

10 November 1993—Congressional Authorization Committee Conference states that the Army's plan for HTI is too "faint-hearted" and with the wrong focus and directs the Undersecretary of Defense, in co-

ordination with the Army, to develop a more comprehensive program. Authorizes an initial $8 million for HTI to continue ongoing testing but withholds further funding pending the Army's presentation of a more comprehensive plan.[25]

—MAJ Richard Hyde, DAMO-FDD, distributes concept plan for the organization and initial efforts of the Digitization STF.[26]

16 November 1993—Initial meeting of the Digitization STF in spaces provided by Coleman Research Corporation. The group initially totals nineteen and includes representatives from the Army Staff and Secretariat, the RDT&E community, and contractors.[27]

17 November 1993—Initial Digitization STF presentation to MG Garner on the evolution of digitization, describing how MG Adams envisions the STF accomplishing its mission.[28]

18 November 1993—Digitization STF settles upon standard definition of "digitization." The group recommends the definition be: "The application of digital technologies to acquire, exchange, and employ timely digital information throughout the battlespace tailored to the needs of each force element. Digitization allows deciders, shooters, and supporters at all levels to maintain clear and accurate pictures of their respective battlespace."[29]

30 November 1993—MG Adams briefs the VCSA, GEN Peay, on the progress of the STF's study, describing what has been addressed and what remains to be done. Containing costs and meeting fielding goals in the face of constrained resources remain key issues.[30]

1–19 December 1993—TF 1–70th Armor engages in battalion/brigade simulation exercises in preparation for AWE 94–07 at the NTC in April 1994.[31]

22 December 1993—MG Adams briefs the CSA at the four-star RRC on the recommendations of the Digitization STF. The recommendations concern the Army's management structure for digitization, technologies to pursue, equipping strategies and rationales, and strawman deadlines for accomplishing them. The STF also recommends a full-time STF be established to recommend the precise organization, functions, and subordination of the overall digitization management office. GEN Sullivan endorses the concept of digitizing the battlefield, and proposes an even more enthusiastic course in terms of dates, distribution of digitized equipment, and other items, including a discussion of possible experimental force (EXFOR) units.[32]

January 1994—GEN Sullivan approves formation of the Digitization Special Task Force to be led by BG Joseph E. Oder, Director of Requirements–Horizontal Technology Integration, ODCSOPS. The Army's goal is to digitize a brigade by 1996 and a division by 1997.[33]

—Army Science Board convenes on Technical Information Architecture for Army Command, Control, Communications, and Intelligence (C3I). Board concludes its study in July 1994 and publishes its final report in April 1995.[34]

8 March 1994—GEN Sullivan announces the Force XXI Campaign to redesign the Army for the 21st century.[35]

11 March 1994—BG Oder, Director, Digitization STF, publishes a White Paper entitled "Digitizing the Battlefield: The Army's First Step to Force XXI."[36]

4 April 1994—BG Oder briefs GEN Sullivan on the progress of the Digitization STF.[37]

10–23 April 1994—Task Force 1–70th Armor, 194th Separate Armored Brigade, Ft. Knox, KY, participates in the first battalion-level AWE, DESERT HAMMER VI, during the 3rd Brigade, 24th ID(M), rotation 94–07 at the NTC.[38]

14 April 1994—Digitization STF publishes Concept Plan for the Army Digitization Office.[39]

25 April 1994—BG Oder meets with GEN Sullivan to discuss concerns expressed by Mr. Emmett Paige, Assistant Secretary of Defense for C3I, during a briefing on Army digitization efforts about Joint interoperability, shedding old systems, acquisition reform. While acknowledging the concerns, the assembled group sees no way in which to respond immediately to them.[40]

5–6 May 1994—"Brigade 96" General Officer Meeting takes place to discuss planning for battlefield digitization and Brigade 96. HTI GOWG meets on 6 May and is presented a progress report from the Digitization STF. Results of the meetings include designation of responsible agents for a number of tasks associated with battlefield digitization, notably several requirements for the Digitization STF/ADO, PEO CCS, and TRADOC to articulate various aspects of applique acquisition.[41]

9 June 1994—Mr. Gilbert Decker, the ASA(RDA) and the Army Acquisition Executive (AAE), and GEN J. H. Binford Peay III, the VCSA, approve the charter for the Army Digitization Office (ADO). The ADO functions as a staff element of both the AAE and the OVCSA, with responsibility for guiding, assisting, and developing policy for digitization matters across the Army.[42]

8 July 1994—The Digitization STF publishes its final report describing its work and particularly detailing the assessments it has conducted of different technologies and digitization schemes as a "jump-start" for the ADO's activities.[43]

—The ADO is established with MG Joe W. Rigby as Director.[44]

13–14 July 1994—The Louisiana Maneuvers Board of Directors approves the Force XXI Campaign Plan, which includes Army digitization as one of its three axes.[45]

July 1994—The Army Science Board concludes its Summer Study on Technical Information Architecture for Command, Control, Communications, and Intelligence on the Digital Battlefield.[46]

1 August 1994—TRADOC publishes updated draft concept for future operations in TRADOC Pam 525–5, *Force XXI Operations*.[47]

18 August 1994—MG William H. Campbell, PEO for Command and Control Systems, briefs the HTI GOWG on the Request for Proposal (RFP) for appliques systems. The RFP is approved and released on 19 August 1994.[48]

29 August 1994—The VCSA, GEN Tilelli, publishes the Force XXI Integration Plan, which outlines how the Army Staff would integrate and support the Force XXI Campaign. [49]

1 September 1994—Results of the Army Science Board Summer Study Technical Architecture for Army C4I, briefed to the CSA. Based on the recommendations approved by the CSA, the ASA(RDA) and the VCSA issue a memorandum on 28 September 1994 outlining Army roles and responsibilities for developing and maintaining the C4I Technical Architecture.[50]

7 October 1994—MG Campbell updates Mr. Decker on the Applique RFP approved by the HTI GOWG on 18 August. The briefing is to update Mr. Decker on the RFP itself and to analyze possible proposals one week before the deadline for submission of proposals.[51]

2 December 1994—The Army announces designation of the 2d Armored Division at Ft. Hood, Texas, as the Army's Experimental Force (EXFOR) for Force XXI digitization experimentation.[52]

30 January 1995—The ADO issues the Army Digitization Master Plan, stipulating that it is to be a living document that will be updated annually.[53]

February 1995—The Army submits a report to Congress, prepared by the ADO, on Army Digitization in response to requirements specified in the FY 95 National Defense Authorization Act.[54]

31 March 1995—Mr. Decker, ASA(RDA), approves the Army Technical Information Architecture for implementation.[55]

April 1995—Army Science Board 1994 Summer Study Final Report on Technical Information Architecture for Army Command, Control, Communications and Intelligence is published.[56]

May 1995—MG Rigby publishes an article in *Army* magazine detailing the Army's efforts to digitize its experimental force for the Force XXI AWEs.[57]

19 June 1995—Mr. Decker, as AAE, issues a policy memorandum on Army Digitization standards, enjoining on all involved in acquisition adherence to the standards spelled out in his 31 March 1995 memorandum approving the Army Technical Information Architecture.[58]

29 November 1995—The General Accounting Office (GAO) issues a report criticizing the Army's plan to digitize the battlefield as expensive, containing many risks, and lacking specific, measurable goals for the series of large-scale experiments that are to be conducted for Force XXI.[58]

7 December 1995—The ADO forwards a proposed response to the GAO report to the AAE for his approval and forwarding to the Under Secretary of the Army for signature and dispatch to the GAO. The response largely rebuts the GAO's allegations that connoted sloppiness or poor design, supervision, or evaluation of the Army's digitization and experimentation plans.[60]

Notes

[1] Interview, GEN (Ret.) Frederick M. Franks with Yarrison, 18 February 1997, pp. 24-25. Copies of all unpublished references, unless otherwise noted, are in the historian's files.

[2] John L. Romjue, *American Army Doctrine for the Post-Cold War.* (Fort Monroe, VA, U.S. Army TRADOC Military History Office, 1996), pp. 73-74. Romjue cites (n. 36) and discusses Message, CG TRADOC to CAC and other commanders cited, 312240Z Mar 92, sub: Battle Space Command and Control.

[3] Interview, COL (Ret.) John Klevecz with Dr. Susan Canedy, 16 July 1996, p. 7.

[4] Message, GEN Franks to distribution, 271530Z Aug 92, sub: Commander's Intent: Battle Labs.

[5] George H. Del Carlo, "A Glimpse of the Digitized Battlefield at The National Training Center," *Landpower Essay Series*, No. 93-7 (Arlington, VA: AUSA Institute of Land Warfare, 1993), pp. 1-2. Interview, Franks with Yarrison, 18 February 1997, pp. 24-26. Franks's letter to Mountcastle, 23 February 1998, loc. cit. In all those places and in Tom Clancy with Franks, *Into the Storm: A Study in Command* (pp. 509-510), Franks particularly notes the importance of his conversations, beginning at the NTC, with the platoon sergeant of the M1A2 platoon, then-SFC Philip Johndrow, and how those discussions opened his eyes to the possibilities for nearly every aspect of future warfare inherent in an accurate, common relevant picture of the battlefield.

[6] Read-ahead packet for LAM Board of Directors, First Meeting, 14 October 1992, for the issue statement. Also, Message, Sullivan to distribution, 191223Z Oct 92, sub: Louisiana Maneuvers Board of Directors Meeting, 14 Oct 92; in LAM TF Files, Box5, File 4-2.

[7] John W. Cranston, *U.S. Army Armor Center and Fort Knox Annual Command History, 1 January 1993 to 31 December 1993*, pp. 63-64, for discussions of the experiment. See also John C. Johnston, "The Journey to Force XXI's Mounted Component," Armor, CIII:2 (March-April 1994), 14-16.

[8] Headquarters, Department of the Army Concept Paper on Horizontal Technology Integration (HTI), 8 November 1993, enclosure to Memorandum for See Distribution, from MG Garner and MG Hite, 8 November 1993, sub: Horizontal Technology Integration (HTI) Concept Paper.

[9] Message, DCG SigCen, to TRADOC Commandants and Cdrs and PEOs, 171928Z Mar 93, sub: Brigade and Below Data Distribution.

[10] CSA Notes to LAM '93 Warfighting Issues pages and other briefing slides from BoD II handouts and results, 3/5 March 1993.

[11] Memorandum from GEN Reimer to Cdr, TRADOC, 11 March 1993, sub: Horizontal Technology Integration (HTI). Memorandum from GEN Reimer to DCSOPS, 11 March 1993, same subject. SARD-SI Information Paper, 10 June 1993, sub: Interoperability of the Digital Battlefield.

[12] Message, DCG SigCen, to TRADOC Commandants and Cdrs and PEOs, 171928Z Mar 93, sub: Brigade and Below Data Distribution.

[13] Message, GEN Franks personal for GEN Sullivan, 061533Z Apr 93, sub: Advanced Warfighting Demo of Battlefield Synchronization (AWDBS). See also John W. Cranston, *U.S. Army Armor Center and Fort Knox Annual Command History, 1 January 1993 to 31 December 1993*, pp. 63-70, for discussions of the experiments.

[14] USACECOM Briefing Package presented 14 May 1993 by MG Guenther to GEN Jimmy D. Ross, Cdr, AMC, sub: Digitizing the Battlefield. The package is covered by Ross's note to GEN Franks, 14 May 1993, SAB, forwarding the slides and recommending the briefing be presented to the CSA with both generals in attendance.

[15] Message, Cdr SigCen, to distribution, 290050Z May 93, sub: CNR Protocols and Message Formats. MG McVey's letter, SFAE-ASM-AB-S, to Cdrs CECOM and SigCen, 27 May 1993, sub: Combat Net Radio (NRP) and Message Protocols, in protest responds to the results of a May meeting of the Protocol Working Group at which the Tacfire decision was reached.

[16] SARD-SI Information Paper, 10 June 1993, sub: Interoperability of the Digital Battlefield.

[17] Memorandum, GEN Sullivan for distribution, 24 July 1993, sub: Trip to Fort Lewis, Washington; San Jose and Fort Irwin, California; and Des Moines, Iowa, 22-24 July 1993, describing his observation of one exercise of the IVIS-equipped unit. Message, GEN Franks Personal for GEN Sullivan, 011705Z Sep 93, sub: Advanced Warfighting Demonstration (AWD): Battlefield Synchronization, reporting to Sullivan on the results of the July 93 exercise at the NTC with the 1st Cavalry Division. See also Del Carlo, "A Glimpse of the Digitized Battlefield at the National Training Center," passim, and John C. Johnston, "The Journey to Force XXI's Mounted Component," Armor, CIII:2 (March-April 1994), 14-16.

[18] Read-ahead package w/attachments prepared by DCSOPS, after 12 July 1993, sub: Horizontal Technology Integration (HTI) General Officer Working Group (GOWG) I.

[19] Memorandum for the Chief of Staff, Army, from LTG Forster, 13 August 1993, sub: Battlefield Digitization Update, which reflects an incorrect date (20 July) for the meeting of the Ad Hoc Working Group, with attachments.

[20] Memorandum for See Distribution, from MG Garner and MG Hite, 3 August 1993, sub: Minutes of

Meeting on Battlefield Digitization: Standards and Protocols, 3 August 1993.

[21] Memorandum for the Chief of Staff, Army, from LTG Forster, 13 August 1993, sub: Battlefield Digitization Update.

[22] Memorandum for See Distribution, from CSA , 2 September 1993, sub: Trip to Fort Knox, 28 August 1993.

[23] Fact Sheet, DAMO-FDR, mid-November 1993, sub: FY 94 Funding for Horizontal Battlefield Integration (HBI) Programs.

[24] Interview, MG Adams with Yarrison, 13 February 1998, pp. 1-3. Memorandum for Members of the Digitization Special Task Force, from MAJ Richard Hyde, DAMO-FDD, 10 November 1993, sub: Strawman.

[25] Briefing presented to MG Garner by the Digitization Special Task Force, 17 November 1993, sub: Evolution of Digitization.

[26] Memorandum for Members of the Digitization Special Task Force, from MAJ Richard Hyde, DAMO–FDD,10 November 1993, sub: Strawman.

[27] Memorandum for Members of the Digitization Special Task Force, from MAJ Richard Hyde, DAMO–FDD,10 November 1993, sub: Strawman.

[28] Briefing presented to MG Garner by the Digitization Special Task Force, 17 November 1993, sub: Evolution of Digitization. The last briefing chart is dated 17 November 1993.

[29] Information Paper, Digitization STF Integration Group, 18 November 1993, sub: Defining "Digitization."

[30] Briefing package, Digitization STF, 30 November 1993, sub: Update to the VCSA. Interview, MG Adams with Yarrison, 13 February 1998, pp. 2-3.

[31] John W. Cranston, *U.S. Army Armor Center and Fort Knox Annual Command History, 1 January 1993 to 31 December 1993*, p. 68.

[32] Interview, MG Adams with Yarrison, 13 February 1998, pp. 5-9. Briefing package, Digitization Special Task Force, 22 December 1993, sub: The Army Vision: The Digitized Battlefield. Memorandum for Vice Chief of Staff Army from MG Garner, 28 January 1994, sub: Digitization Special Task Force (STF). Enclosure includes draft message for VCSA's signature establishing the Digitization STF. This message was dispatched 151340Z Feb 93.

[33] Army Information Paper, 1 February 1994, sub: Digitization Special Task Force, prepared by MAJ Hyde, who had carried over from the initial STF. Information Paper, Digitization STF, 12 April 1994, sub: Efforts of the Digitization Special Task Force (STF) and its successor, the Army Digitization Office (ADO); Message VCSA to see Distribution, 151340Z Feb 94, sub: Digitization Special Task Force.

[34] Army Science Board, 1994 Summer Study, Final Report, *Technical Information Architecture for Command Control, Communications, and Intelligence*. April 1995.

[35] Message from GEN Sullivan Personal For See Distribution, 081145Z Mar 94, sub: Building the Force for the 21st Century - Force XXI.

[36] Joseph E. Oder, "Digitizing the Battlefield: The Army's First Step to Force XXI." Digitization Special Task Force, 11 March 1994.

[37] Briefing, Digitization STF, presented to GEN Sullivan, 4 April 1994, sub: Digitization Overview.

[38] Fax from Media Operations Branch, Office of the Chief of Public Affairs, to MAJ Rick Hyde, Digitization STF, 14 March 1994, sub: Public Affairs Guidance Digitization Rotation.

[39] Digitization Special Task Force Memorandum to See Distribution, 14 April 1994, sub: U.S. Army Digitization Office Concept Plan.

[40] Memorandum for MG Garner from BG Oder, 26 April 1994, sub: Meeting with the CSA—25 April, with attached briefing slides.

[41] Message, DAMO-FDZ/SARD-ZS, to multiple addressees, 111859Z May 1994, sub: Taskings for Battlefield Digitization - 5 and 6 May Meetings.

[42] Charter for the Army Digitization Office 9 June 1994, signed by Mr. Decker and GEN Peay.

[43] Memorandum for the ADCSOPS–FD and the DCSOPS from BG Oder, 9 July 1994, subject: Final Report of the Digitization Special Task Force.

44 Information Paper, DACS-AD, 27 September 1994, sub: Army Digitization Office Status and Future Strategy.

[45] Memorandum for See Distribution, from VCSA, GEN Tilelli, 26 July 1994, sub: 12-14 July 1994 Force XXI Board of Directors Meeting, Carlisle, PA; in LAM TF Files, Box 7, File 4-11.

[46] Army Science Board, 1994 Summer Study, Final Report, *Technical Information Architecture for Command Control, Communications, and Intelligence*. April 1995. Michael S. Frankel, 1994 Army Science Board View of the Digital Battlefield and the Required Architecture, Concepts, and Technology.

[47] TRADOC Pamphlet 525-5, *Force XXI Operations*, 1 August 1994.

[48] Memorandum for See Distribution, from MG Edward Anderson, ADCSOPS–FD, and MG Hite, Deputy ASA(RDA) for Systems Management, 4 October 1994, sub: Minutes of 18 August 1994 HTI General Officers' Working Group.

[49] Memorandum for See Distribution, from GEN Tilelli, 29 August 1994, sub: Force XXI Integration Plan.

[50] Memorandum for See Distribution, from Gilbert F. Decker, ASA(RDA), 31 March 1995, sub: Implementation of the C4I Technical Architecture.

[51] Briefing, MG Campbell to Mr. Decker, 7 October 1994, sub: Applique Request For Proposal Update.

[52] U.S. Army News Release No. 94-77, "Army Selects Experimental Force," 2 December 1994. 52 Message from Blackwell, DAMO–ZA, faxed 1052, 13 Dec 94, to Cdrs of FORSCOM and TRADOC, and

the Army Staff, sub: Experimental Force (EXFOR). Sullivan had initially thought to designate the 1st ID, his old command, as the EXFOR, and had sent a handwritten note to GEN Peay, the VCSA, on 6 November 1993, tasking Peay to: "Develop a strategy we can use which taps [1st ID] to be the 11th Air Assault of future. I want to see it laid out before making a move." (In Sullivan Papers, CSA Historical Files, Box 8A of 10, November-December 1993, Correspondence/Flag Letters/Messages/General Office Files, Folder-Flag Letters, November 1993, file 33.) Sullivan and Franks had discussed formation of an Experimental Force in sufficient detail by mid-1993 that Franks, on 14 September 1993, forwarded a TRADOC Concept for an Experimental Unit to Sullivan. In Sullivan Papers, CSA Historical Files, Box 7B of 10, September 1993, Correspondence/Flag Letters/Messages/General Office Files, Folder 2 of 2, Correspondence Files, September 1993, file 13. He wrote in his sketchbook (Sullivan Papers, Personal Papers, Sketch Books, December 1989-February 1995, Box 1 of 5, Sketchbook #8, April-December 1994) on 29 November 1994: Told Butch Funk [2AD] was XFOR '...Get on with it...' Told him my scheme is to get beyond 10 divisions—10 divisions is a move we must make but it is really not the important shift—the real concept is to redesign the Army." On the 3 February offsite that preceded the announcement, see Memorandum for Record from LTG Blackwell, 10 February 1995, sub: CSA EXFOR Offsite Meeting, 3 February 1995. See also Memorandum from Sullivan to See Distribution, 14 February 1995, sub: Force XXI Experimental Force Prime Directive. See also Interview, Hubbard with Yarrison, 16 July 1996, pp. 44-49, on development of the initial EXFOR concept in BLITCD at TRADOC.

[53] Memorandum for See Distribution, from MG Rigby, 30 January 1995, sub: The Army Digitization Master Plan.

[54] Army Digitization Office, *Report to the Congress on Army Digitization*, February 1995.

[55] Memorandum for See Distribution, from Gilbert F. Decker, ASA(RDA), 31 March 1995, sub: Implementation of the C4I Technical Architecture.

[56] Army Science Board, 1994 Summer Study, Final Report, *Technical Information Architecture for Command Control, Communications, and Intelligence*. April 1995.

[57] Joe W. Rigby, "Digitizing Force XXI: A Team Effort," *Army*, May 1995, 36-44.

[58] Memorandum for See Distribution, from Mr. Decker, AAE, 19 June 1995, sub: Army Acquisition Executive (AAE) Policy Memorandum - Army Digitization Standards.

[59] United States General Accounting Office, Report to Congressional Committees: Battlefield Automation: Army's Digital Battlefield Plan Lacks Specific Measurable Goals. Washington, DC, 29 November 1995.

[60] Memorandum for the Army Acquisition Executive from MG Rigby, 7 December 1995, sub: Response to GAO Report.

Appendix H

MEMORANDUM FOR BG TOMMY R. FRANKS, DIRECTOR, LOUISIANA MANEUVERS TASK FORCE 22 MAY 1992

SUBJECT: Letter of Instruction for Louisiana Maneuvers (LAM)

1. PURPOSE: This Letter of Instructions establishes the CSA Louisiana Maneuvers Task Force (LAM TF) and assigns you as the Director of the Task Force with responsibility to develop and execute Louisiana Maneuvers. It provides my concept, objectives, and expectations for the Louisiana Maneuvers including the command and control architecture. It provides your authority to act, under my direction as represented by the Deputy Chief of Staff for Operations and Plans and under the direction of Commander, TRADOC acting as the Deputy Director of Louisiana Maneuvers.

2. CONCEPT:

a. Louisiana Maneuvers is the Army's program to bring together and focus the forces of change and cohesion as we transition from being a Cold War Army oriented on the Soviet threat to a CONUS-based power projection Army of the 21st Century—a Total Force, trained and ready to fight, serving the nation at home and abroad, a strategic force capable of decisive victory. At the essence of our Army is its warfighting capability. LAM is a vehicle to assess progress as well as focus and facilitate change in a warfighting context through exercises, simulations, and intellectual interface.

b. I expect to use LAM as a process which will help us identify policy issues across the full range of Departmental responsibilities and the operational continuum, and encompassing the full planning range from force generation through war termination, redeployment, and demobilization. LAM includes Senior Commander Seminars, existing Departmental and joint exercises, and existing and emerging simulations to assess progress on known and emerging issues and, where appropriate, it will help us identify alternatives and provide a structured policy-making format.

c. LAM will focus initially on Army and JCS exercises and simulation activities being conducted routinely as we strive to keep the Army trained and ready. This is an "economy of force" operation as my intent is to "piggyback" on on-going exercises and simulations. Other events should be developed, however, which capitalize on our ability to simulate weapons systems and equipment and to assess alternatives or evaluate policy options to expand our horizons. These may be conducted as unique events, as "games within games," or as "skunk works" activities. This will involve close links between "training" and "combat developments." The role of LAM and the LAM TF Director will be to integrate these developments, lessons learned, and exercise or simulation results in a rational, structured way and to bring those outcomes to the senior

leadership for informed policy deliberations. You will find yourself in a creative role. I will encourage you and your people in this regard.

3. OBJECTIVES: The LAM will:

a. Explore and assess emerging policy options related to our ability to fulfill Departmental Title 10 responsibilities to man, equip, organize, train and sustain the force and generate tailored Total Army force packages to support the national military strategy.

b. Participate in joint and combined operations to support warfighting CINC's in a structural way to learn and use what we learn to:

(1) Adjust our doctrine, organizations, training, materiel, leader development, and soldiers (DOTMLS).

(2) Confirm our sea, air, and land strategic mobility, and other requirements.

c. Evaluate new weapons systems, equipment and organizations through the use of simulations in a "fly before you buy" commitment to full fledged R & D.

4. SCOPE:

The focus of this effort is on how our Army thinks and fights at the theater level of war and how best to adjust to the realities of the interface between the Department's Title 10 responsibilities and support of warfighting CINC's as we mature in the post-Cold War environment. LAM is a Total Army effort. It will incorporate HQDA, Army Major Commands, and warfighting headquarters as appropriate. Joint and combined participation will be actual or simulated as required.

5. EXPECTATIONS:

a. I expect you, working under the supervision of the Deputy Director of Louisiana Maneuvers and supported by him in his capacity as Commander, TRADOC, to organize and staff the LAM TF and to develop a concept and a plan for the interface of the LAM General Officer Working Group (GOWG) and your office. No later than 25 September, I want you to brief me on the status of the project, plans, and your expectations.

b. I expect you to begin this year to develop and assess issues as pilot projects: to walk before you run using exercises like ULCHI FOCUS LENS 92, REFORGER 92, BCTP, and so forth that are presently being prepared for execution this year. I want you to bring preliminary issues and your long term plans to me prior to taking it to the LAM Board of Directors in October of this year.

c. By 1994, I expect to be able to track and assess multiple exercises at different points on the continuum to isolate, assess, and address emerging policy and develop issues to top-feed the force development and integration process.

6. ORGANIZATION:

a. The LAM Support System (LAMSS) is the administration, information, and decision network architecture supporting Louisiana Maneuvers. It includes three principal elements, the CSA LAM Task Force, the LAM General Officer Working Group, and the LAM Board of Directors.

b. CSA LAM Task Force (LAM TF): Your office, and the LAM TF are organized as an extension of the Office of the Chief of Staff, Army (CSA), to develop and execute the LAM. You will be the principal coordinator of the General Officer Working Group (GOWG) and LAM Board of Directors. You and your people will assist and support the Army-wide proponents as they develop and present issues to the GOWG and Directors. You will coordinate the integration of proponent developed issues into the exercises, synchronize exercises and information requirements, build collection: plans, coordinate subject matter experts and data collectors to extract the maximum available information from the exercises, and use the results to build decision packages for the Directors.

c. General Officer Working Group (GOWG): Each member of the LAM Board of Directors will designate a general officer as a permanent member of the GOWG. Each MACOM, Integrating Center, HQDA Staff proponent, Chief of the Army Reserve (CAR), and Director, Army National Guard

will designate a General Officer stand-by member who will serve when the GOWG addresses issues which involve his or her proponency. This will enable you to tailor the GOWG to specific issues. The GOWG will meet (and/or electronically network) to present issues for inclusion in the LAM process, to develop the agenda for the Directors and to provide guidance regarding the conduct of the LAM.

d. LAM Board of Directors: The CSA, Army Senior Commanders, the VCSA, the DCSOPS, and the Commandant, AWC will serve as the senior advisory body for LAM. During annual conferences, they will review progress in assessing the Army's critical issues, provide focus and direction for upcoming LAM exercises and recommend policy decisions for the Army based on LAM results.

7. The LAMSS operates as follows:

a. Title 10, Doctrine, Organization, Training, Materiel, Leader Development and Soldiers (DOTMLS), or policy issues are identified in the LAM process or as Army-wide input to the LAM.

b. The sponsor for an issue will present the issue to the GOWG with proposed alternatives and a concept plan for inclusion in LAM; if an issue is accepted, you will develop plans to incorporate the issue into the LAM and may coordinate with the sponsor for subject matter expertise, data collection and analysis, etc.

c. The GOWG will filter and focus issues, assess LAM results, recommend prioritization and resource trade-offs, develop an agenda for the Directors, and provide guidance to sponsors as appropriate.

d. The Board of Directors will make policy recommendations for implementation, direct the course of the LAM, and add or eliminate issues as appropriate.

e. The CSA LAM TF will provide quarterly updates to the CSA on LAM issues. This forum may be used to obtain CSA decisions, when required.

f. Two quarterly updates per year will be conducted in conjunction with the semiannual Senior Commanders' Conferences.

g. Off-quarter updates will be presented by the CSA LAM TF directly to the CSA.

h. It is anticipated that much of the work of the LAM TF and GOWG will be accomplished by electronic, video teleconference, or other communication.

8. RESPONSIBILITIES:

a. CSA:

(1) Exercise Director for the LAM.

(2) Chairman, LAM Board of Directors.

(3) Provides guidance to the Director, CSA LAM TF.

(4) Senior rates the Director, CSA LAM TF.

b. Commander, Training and Doctrine Command (TRADOC):

(1) Deputy Director of the LAM.

(2) Represents the CSA on a day-to-day basis to oversee the conduct and execution of the LAM.

(3) Organizes and supports the DOTMLS integrating process for the LAM within TRADOC.

(4) Stations and supports the CSA LAM TF.

(5) Rates the Director, CSA LAM TF.

c. Senior Commanders (Army Four Stars and Commander, USARPAC):

(1) Serve as members of the LAM Board of Directors.

(2) Review Title 10, DOTMLS, and policy initiatives, providing focus and direction.

(3) Provide general officer representation for GOWG.

(4) Sponsor the integration of LAM issues into exercises.

d. Other Major Commanders:

(1) Nominate issues as appropriate.

(2) Facilitate exercise integration as appropriate.

(3) Provide continuing LAM TF liaison (need not be on site).

(4) Provide GOWG representation as required.

e. Deputy Chief of Staff for Operations and Plans:

(1) Represent me as the ARSTAF proponent and Department integrator for the LAM process. Retains authority for all LAM task-

ing (external agencies, Army commands, and the Army Staff).

(2) Provide the single point of contact for LAM issues with the Army Staff, the Secretariat, and the Joint Staff.

(3) Serves as member of the Board of Directors.

(4) Staff responsibility for approval of recommendations by the Board of Directors.

(5) Develop resourcing strategies to support LAM.

f. Commandant, AWC: Permanent member of the Board of Directors and permanent subscriber to the GOWG.

g. Army Staff: Provide LAM TF liaison and GOWG representation as required.

h. OCAR and Director, Army National Guard: Provide LAM TF liaison and GOWG representation as required.

i. Commander, Personnel Command (PERSCOM): Identify and assign the personnel required to staff the CSA LAM TF.

j. Director, CSA LAM TF:

(1) Develop and execute Louisiana Maneuvers.

(2) Organize and staff the LAM TF.

(3) Organize the LAM GOWG.

(4) Operate the LAMSS.

(5) Establish permanent and continuous liaison with DCSOPS to facilitate HQDA support.

(6) Coordinate and integrate exercise scenarios and linkages.

(7) Develop a concept for the long-term institutionalization of the LAM.

(8) Assist sponsors to develop, package, and present issues to GO IPRs.

(9) Represent sponsors before the Board of Directors.

k. Chief, Office of Military History: Document the proceedings and decisions of the LAM.

9. EXECUTION: The provisions of this memorandum are effective for implementation upon receipt.

GORDON R. SULLIVAN
General, United States Army
Chief of Staff

Appendix I

CHIEF OF STAFF MESSAGE
BUILDING THE FORCE FOR THE 21ST CENTURY—FORCE XXI
7 MARCH 1994

Over the past four years America's Army has undertaken an enormous and very important transformation. We have not only remained trained and ready, we have also built a strong and enduring bridge to the future. We have shifted our intellectual and physical substance away from the Cold War and beyond the Industrial Age. We have aggressively sustained our commitment to leader development. We have broadened the focus of our training centers, not only to enable us to train for "traditional" missions, but also to train for those "operations other than war" to which we are more likely to be committed and which, as we saw in Somalia, can be anything but peaceful. We have made major shifts in Army and joint doctrine, shifts which better describe how we will operate. We have rescoped our modernization vision to improve our ability to acquire and assimilate post-industrial technology. Modernization is no longer about systems; it is about capabilities. We have reshaped the force structure to inactivate, so far, eight divisions, one corps, and associated infrastructure. We have completely refocused our concepts for operational planning based on force generation, adaptive planning, and innovative force packaging from resource pools. We have forged a new partnership throughout America's Army—a partnership which leverages the strength of each component at balanced resource levels. We have made the initial steps to bring the Information Age to logistics and sustainment. We have reengineered many of the MACOMs. We have initiated strategic mobility programs vital to the nation. And we have changed the way we change by means of Louisiana Maneuvers, Battle Labs, and Information Age management techniques. Most importantly, we have sustained our commitment to quality people as the keystone of excellence. We in the Army recognize that, as we are building for the 21st century, quality people are the most important element of the force.

None of this has happened by accident. It is the result of a sophisticated campaign to move us into the 21st century, a campaign incorporating every element of our Army. But the campaign is far from over. We are now entering what may very well be its most critical stage—the work of redesigning the force—the division, the corps, and echelons above corps, including the sustaining base of the Army. This work has been left undone up to this point—undone because it was necessary to allow the turbulence to abate and uncertainty to settle, to learn more about the future environment and "what could be," to set the stage by putting in place the initiatives enumerated above. It is time to redesign the force to better leverage both the power of our people and the power of our technology.

This 21st century force will be called Force

XXI. Force XXI—not simply Division XXI—will encompass the reconceptualization and redesign of the force at all echelons, from the foxhole to the industrial base. Importantly, it will focus on the connectivity at each echelon and within echelons—how we put the force together when we employ it. That is a very broad charter, and it is by no means clear that we need to make a radical shift. But it is clear that we must open our minds to the power of change and ask ourselves "what could be?"

The corps and the division are the central elements of strategic landpower. We will focus our initial efforts around the division. We will examine the division first and then derive both its subordinate elements and the echelons above it. That is deserving of emphasis: EAD, the division, and the subordinate elements. We will enter at the division but the effort will be holistic. A number of parameters guide our thinking initially.

In a general sense, the division exists for the same reason as its predecessors. In a specific sense, it may—and probably will—look and operate differently. We can expect to draw the lines, both on the map and on the wire diagram differently. But in a general sense, the division will provide the means to fight and win, to assert control, to achieve decisive victory—just as its predecessor does today.

The core competency of the division as an echelon is command and control. With some few exceptions, divisions accomplish their mission via their subordinate parts, whether they be "assigned" or "attached" for some mission. The essential added value of the division echelon is command and control, planning, and the application of power. The division is about battle command and we must be prepared to disencumber the divisional echelon of tasks that inhibit its core function. We must be prepared for our concept of the division to be altered significantly.

In turn, battle command is about decisive victory—dominating battle space—whether it be some future DESERT STORM or FUERTES CAMINOS. Speed, space, and time define battle space. We dominate speed, space, and time by achieving and sustaining a high tempo of operations, overwhelming lethality, and superior survivability—all of which we must view in terms of executing, mounting, and recovering from operations simultaneously. But battle command and battle space are evolving ideas. How must we understand them in the future?

All of this forms a very complex construct: operate in an unpredictable and changing environment, throughout the depth (and altitude) of the battle space (all the way back to the CONUS and/or forward base); simultaneously execute, mount, and recover from operations ranging from war to PKO; orchestrate all the operating systems; and do all of this very, very quickly. In the world of the 21st century, the competitive advantage—the quantum competitive advantage—will derive from the quantity, quality, and usability of information. The force of the 20th century derived its architecture from 20th century concepts, Industrial Age concepts of command and control. The architecture of Force XXI must derive from a far more robust, more versatile concept of information based battle command.

The high ground is information. Today, we organize the division around killing systems, feeding the guns. Force XXI must be organized around information—the creation and sharing of knowledge followed by unified action based on that knowledge which will allow commanders to apply power effectively. The purpose of the Force XXI must be to dominate, to control, to win; information will be the means to a more powerful end. It is information-based battle command that will give us ascendancy and freedom of action—for decisive results—in 21st century war and OOTW.

I cannot tell you what such a force will look like, but I can predict some of its characteristics:

- Battle command will be based on real-time, shared, situational awareness—not the same map sheet, but the same map—yet able to function in a less mature, less sophisticated joint or combined environment.

• Responsibility will remain hierarchical and cannot be distributed; but organizations probably will not remain hierarchical in a traditional sense.

• Design will probably be less fixed, and inherently flexible in its organization; design will derive from capabilities, not from a specific threat.

• Force XXI may well have smaller building blocks with a higher leader-to-led ratio, but we must be wary of "smaller." Smaller is not better—more lethal is better; more deployable is better; more sustainable is better; more versatile is better—more effective is better—better is better.

• In the Information Age, we may redefine functions at some echelons as we develop information based concepts for organizations, battle command, and sustainment. But the force must have congruence from top to bottom. New approaches are essential.

• Units will be resilient and very versatile in purpose—to a much greater degree than we have ever imagined. They need not be robust and redundant in the same sense as Cold War organizations with their strong bias for attrition; but we must understand that changes making the force leaner may incur more risk in some dimensions and we must accommodate that risk.

• Units will rely on electronic connectivity, vice geographic or physical connectivity.

• Force XXI will be more strategically deployable than any previous force with a full range of early entry capabilities tailorable to a full range of missions.

My intent is to operate on "two axes." The main effort must be the development of concepts and designs for the Information-Age force. The supporting operation—which cannot fail—is the acquisition and assimilation of the technology to enable those concepts and designs. These can be thought of as simultaneous processes in the development phases, iterating back and forth as we discover and learn; but the technology must be fielded in usable form to effect the design and concept changes. In a sense, the two axes must be both sequential and simultaneous. I will use the Louisiana Maneuvers to synchronize the axes.

To effect the acquisition and assimilation—the integration of digital technology across the force, the Secretary and I have directed the creation of an Army Digitization Office (ADO). Headquartered in Washington under the supervision of the Vice Chief of Staff, this ADO will be the integrating mechanism to ensure that the digital technologies we field function horizontally across the force. As an agency of the headquarters with the authority of the Vice Chief, the Director of the ADO will have both the responsibility and authority to make the decisions to bring this together.

The design of the operating forces will be done under the direction of the TRADOC Commander. He will lead a joint venture in partnership with AMC, FORSCOM, ISC, INSCOM, MEDCOM, and the Army Staff. The DCSOPS will represent me personally in the day-to-day operation of the joint venture and will be the Army Staff lead. Other MACOMs may participate as partners for particular issues that the TRADOC Commander or I may decide at some future point. Joint venture participants will dedicate personnel and resources to the task; others will maintain continuous liaison. The joint venture will develop an open architecture within which to develop and evaluate design concepts. The TRADOC Commander will develop and recommend the specific organization for this joint venture and prepare and coordinate the draft charter for my approval.

It is my intent to scope the basic organization and operations concept within the next six months. This initial O&O concept must not be binding, and in fact, the developmental structure must accommodate changes as we learn. We will use the DESERT HAMMER Advanced Warfighter Experiment (AWE) at NTC in April, Mobile Strike Force, and GHQ 94 to inform our initial steps throughout the process. I expect a close integration of live-constructive-virtual simulations. We are in an environment of relative unknown where we must hypothesize, experiment, and decide in

a tight, iterative cycle. That will lead us to make doctrinal, organizational, and materiel decisions concurrently. This is very different from our traditional approach but it is necessary and appropriate—we will use Information Age processes to create the Information Age force. This innovative design process will continually lead us to improving units, capable of assimilating technology as technology evolves.

I expect that this effort will also have an impact on the sustainment base of the Army—the MACOMs, agencies, and other organizations primarily in the TDA Army. We must be a seamless Army designed to leverage the power of information and the explicit strengths of America's Army. Therefore, within the intent of these guidelines, I expect every part of the Army to continue reengineering and redesign efforts to bring our processes into the 21st century. These efforts will be a part of the large whole—America's Army. We must be one in design and purpose. The Army Staff will be the coordinating and integrating mechanism for these actions, since I expect the impact to be broad.

I have charged the LAM TF to develop a campaign plan for me to integrate and synchronize these actions. LAM TF will coordinate this with the major participants and report out to the BoD in May. In July, at Carlisle, LAM TF will coordinate our first major AAR at which all primary participants will report out. At that meeting I expect to chart a specific course through 1995. I expect to begin organizing experimental units within calendar year 1994. Ultimately, it is my intent that timely fielding decisions be made for implementation before the turn of the century.

It is important for me to note that I do not expect this effort to impact the enduring aspects of our profession—basic soldier skills, courage, self-sacrifice, leadership, values-based cohesion. These will be the essential virtues for winning tomorrow, as they were yesterday and are today. No amount of technology will change that, nor will any operational concept or design make them less critical to our success. It is, in fact, this human dimension that will give Force XXI its ultimate value.

I want each of you in the Army Chain of Command to develop a vision for what Force XXI means to your command. I want my staff to do the same. Identify proponency, network, challenge the processes we need to change, take risks, encourage innovation. Send me your visions, your thoughts, your papers; send them to each other. Press the envelope: what could this mean? I believe that we can create a 21st century Army, capable of defending our nation, and that we can do it with the resources at hand and at acceptable strategic risk.

I am confident of our success because America's Army is a growing, learning organization that truly is operating with one foot in the future. To the extent that we have been able to control our destiny, we have maintained the post-war readiness of the force to a degree unprecedented in our history. Now our challenge must be to take the most difficult step in our growth. This is not unlike the problem Grant faced after the Wilderness. He knew that to do the expected, to pull back and regroup, would be to fail. We must go forward. Now is the time to redesign our units: "keep up the fire," "right of the line," "prepared and loyal," "brave rifles," "duty first," and all the others have fought and won our nation's wars. They are our strength. As our units have changed in the past, they must change now: the same heritage, different equipment and organizations—not necessarily smaller, but better. Ultimately, an Army is what it believes, what it says about itself, how it trains, and how it organizes itself. The power of information, superior technology in the hands of superior soldiers, gives us unprecedented battle command capability and lethality and enables much more effective and efficient power projection. Force XXI and the power of information give meaning to the seamless web of America's Army.

AMERICA'S ARMY. INTO THE 21ST CENTURY! SULLIVAN.

Appendix J

CHIEF OF STAFF MESSAGE
LAM TASK FORCE—INSTITUTIONALIZING FUNCTIONS
14 MARCH 1996

1. In the summer of 1941, General George C. Marshall, the Army Chief of Staff, conducted General Headquarters Maneuvers to prepare America's Army for the rigorous challenges of World War II. During many months of exercises and experimentation under tough field conditions in Louisiana, America's Army institutionalized important lessons in transporting, maneuvering, administering and supplying its forces in the field. These lessons learned were critical to our success in World War II.

2. In 1992, General Gordon R. Sullivan saw the need for an organization to allow the Army to energize and focus the forces of change while simultaneously maintaining a trained and ready army. Named after the 1941 Louisiana Maneuvers, the organization came to be known as the Louisiana Maneuver Task Force, or LAM TF.

3. Like the Army of the '40s and the original Louisiana Maneuvers, we have learned much about the process of change from the LAM Task Force. They provided tremendous insight and foresight, enabling us to transition from a post–Cold War Army to one that is ready to meet the challenges of the 21st century. The Task Force has served us well. It is now time to recognize that the process of change—changing the way we change—has been institutionalized in the Army today.

4. Because it has successfully accomplished its mission, I plan to terminate the LAM TF as we know it while some spaces/functions will migrate to various staff organizations, over 50% of the spaces will be returned to Army at large. To help make this transition as smooth as possible, I have asked the Director of the LAM Task Force to begin this transition immediately and complete the battle handoff of all LAM TF process functions NLT 1 July 1996. All other spaces will be returned to Army as soon as practical.

5. We are indebted to everyone, past and present, active and reserve, soldiers and civilians who helped create and develop this important organization. Their efforts helped us to develop unprecedented forward looking partnerships, to force our thinking out of day-to-day routines, to think about the future, and to focus on change while generating the momentum to make it happen. We will work hard to continue their effort throughout the Army.

6. It is my intent that the dissolution of the LAM TF be transparent to its customers, partners, and associates both internal and external to the Army. The following functions will be aligned as follows:

Force XXI Policy and Integration—Continue to be DCSOPS

Force XXI planning and execution
—Joint Venture axis—TRADOC
—Institutional Army axis—VCSA
—ADO axis—VCSA

Models and Simulations: DCSOPS-AMSO

Force XXI planning: TRADOC

Industry/Business Outreach: Army War College

Academia: Army War College–SSI

Strategic Resource Planning: AVCSA (once position is approved)

Communications Strategy: DAS

Technology Innovation: TRADOC/AMC

2 AUSA Symposium Exhibits: TRADOC/AMC

7. To ensure the transition is seamless, we have a LAM TF info line (TBD). This info line will assist/redirect all incoming inquiries to appropriate agencies/POC's.

8. I thank the great soldiers of all ranks who made the Louisiana Maneuvers Task Force so successful and all those who participated in this bold venture. The Army will profit from their efforts for years to come.

9. Soldiers are our credentials. From Gen Reimer.

Appendix K

ORAL HISTORY INTERVIEWS CITED

Interviewee	*Interviewer*	*Date*
MG Ronald E. Adams	Dr. James L. Yarrison	13 Feb 98
LTG (Ret.) Paul E. Blackwell	Yarrison	16 Oct 96
COL (Ret.) David Blodgett	Yarrison	15 Aug 96
LTC Kirby Brown	Yarrison	6 Aug 96
COL (Ret.) Richard Cowell	Yarrison	2 Jul 96
LTG (Ret.) Charles E. Dominy	Yarrison	16 Sep 96
GEN (Ret.) Frederick Franks	Dr. H. O. Malone	Jan 93
" "	"	12 Jan 93
"	Dr. Susan Canedy	28 Nov 94
" "	Dr. John L. Romjue	17 Nov 94
"	Yarrison	18 Feb 97
BG Tommy R. Franks	Dr. Anne Chapman	8 Apr 93
COL (Ret.) Michael V. Harper w/Addendum excerpted from Harper with Dr. Richard Hunt, 6 Jul 95	Yarrison	2 Oct 96
Mr. Frank J. Henry	Yarrison	7 Aug 96
COL William Hubbard	Yarrison	9, 16 Jul 96
COL (Ret.) John Klevecz	Canedy	16 Jul 96

Interviewee	*Interviewer*	*Date*
LAM Task Force Roundtable (Charles Valliant, John Rogers, COL (Ret.) Julius Coats, COL Charles Moldenhauer, LTC John Geddes, LTC Mark Hanna, Dr. James Stensvaag)	Yarrison	14, 15 May 96
COL (Ret.) Jack A. LeCuyer	Yarrison	18 Oct 96
GEN (Ret.) Jack N. Merritt	Yarrison	10 Jun 97
MG Lon E. Maggart	Yarrison	27 Sep 96
BG (Ret.) Harold Nelson	Yarrison	18 Sep 96
BG Joseph Oder	LTC James J. Carafano	23 Sep 96
MG David Ohle	Yarrison	8, 12 Aug 96
COL James Paige	Yarrison	9 Aug 96
LTG J. H. Binford Peay III	Hunt	23 Jan 93
GEN J. H. Binford Peay III	Dr. Mark Sherry	18 Jul 94
Mr. Ronald J. Radda	Yarrison	16 Aug 96
MG (Ret.) Joe W. Rigby	Carafano	17 Sep 96
COL (Ret.) Robert Rodgers	Yarrison	28 Jun 96
GEN (Ret.) Jimmy D. Ross and COL (Ret.) Larry Taylor	Yarrison	12 Nov 96, 16 Jan 97
GEN (Ret.) Leon E. Salomon	Yarrison	10 Dec 97
COL (Ret.) Gale Smith	Yarrison	28 Jun, 2 Jul 96
MG Gordon R. Sullivan	Dr. Daniel Hughes	21 Jun 88
GEN (Ret.) Gordon R. Sullivan	Yarrison	29 Apr 97
GEN John H. Tilelli "	Yarrison "	23 Jun 97 26 Jan 98
BG (Ret.) William West	Yarrison	27 Nov 97

NAME INDEX