



# ASSOCIATION OF THE UNITED STATES ARMY

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## **THINKING ABOUT THE ARMY'S FUTURE: CONTINUITY, CHANGE AND GROWTH**

Addresses by

General Gordon R. Sullivan, Chief of Staff, Army  
at AUSA-sponsored Symposia, January, February and May 1993



**Remarks at the  
AUSA INSTITUTE OF LAND WARFARE  
BREAKFAST MEETING**

Washington, DC  
January 7, 1993

Happy New Year. It is a pleasure to be here this morning at the Institute of Land Warfare Breakfast, 1993. As you know, this is the first of three AUSA-sponsored sessions that I will address. The next two will be in Orlando in February and May. I would hope to see many of you there, so that we can get deeper into the details of modernization and simulators and simulations with Generals Jimmy Ross and Freddie Franks and their people. I encourage all of you to turn out for those two very important sessions in Florida in the late winter and early spring.

I would like to take a few moments and give you a short overview of your Army today, and let me do that by telling you about a trip I took just last week. We left the United States on the 30th of December, and we made a loop of 21,000 miles. 21,000 miles! Through Belgium, Croatia, Italy, the Sinai, Saudi Arabia, and Somalia.

Everywhere I went, I saw constant reminders of just how great an Army we have! Soldiers of all branches and backgrounds, serving our nation, at home and abroad. These young men and women are doing everything asked of them and more. They are trained and ready.

The trip started off with a great session with John Shalikashvili and Dave Maddox in Brussels, talking about the future in Central Europe. Of course, there was a lot to talk about with the sweeping changes in Central Europe. Along with all of the political upheaval, force reduction, and shifting priorities, we had time to discuss the Marshall Center in Garmisch which will offer us some great opportunities for strategic and security discussions in the future. I also received a briefing on REFORGER 1993, which will take place in Italy, the first time a REFORGER has taken place outside the Central Region of NATO.

I visited our MASH task force in Zagreb. Originally based in Europe, this hospital brought 350 medical personnel to Zagreb under the auspices of the United Nations. It is an active hospital. The MASH has treated over 900 patients from 27 countries around the world serving with the United Nations in the former Yugoslavia. I talked briefly with a 19-year-old Russian soldier, a double amputee, in that hospital. That was an experience I never dreamed I would have when I became Chief of Staff.

The doctors, nurses, and soldiers of the facility displayed an inspiring sense of purpose—you simply can't beat them down. They had their Christmas tree up, and they had decorated it with anything they could get their hands on, anything remotely decorative that one might find in an Army MASH. This is the spirit of the American soldier, men and women, far from home, still positive, optimistic.

In typical fashion, as those of you who have served around the world know, many people shoot off fireworks on New Year's Eve. In Zagreb, they were firing AK-47s and other automatic weapons that evening. A stray bullet came through one of the MASH tents and creased one of our kids on the side of his face. It turned out to be a minor wound. Despite this incident, the hospital personnel feel relatively secure because they are located inside an air base.

Then it came time to move on to the Sinai and South Camp, temporary home of the 2nd of the 502nd. This task force is the 23rd rotation of U.S. Army soldiers to the Sinai on this mission. They are about ready to come out, to be replaced by another battalion.

The Dutch commander of the multinational force, a three-star general, told me that if it weren't for "his" American soldiers, he could not accomplish his mission. That is compelling testimony from a foreign general officer about the quality of the American soldier. He loves them—you've got to love them. I visited one of the OPs and saw a sign in the sand made of rocks: "Welcome to OP Eagle's Nest. Population 6." They possess an indomitable spirit. Everytime the patrol changes, if it is one soldier less or more, they change the rocks. You can't beat them. They are a long way from home, but they remain trained and ready.

Our next stop was in Saudi Arabia where I visited the Patriot batteries stretched around the airfields in Riyadh and up at KKMC. I had a chance to talk with most of the soldiers who are there, some of them back for the third time. They are great.

From Saudi to Mogadishu is an incredible journey. If you want to know where the end of the world is, I think I found it—Mogadishu, Somalia. There is nothing there. When the Chief of Staff of the United States Army is standing in Somalia talking about the Delong piers, and sea-state and port-throughput, and what is standing off a port, I will tell you, ladies and gentlemen, this is a different army.

I was briefed by General Bob Johnston, the Combined Joint Task Force Commander. His headquarters, the former American Embassy, is a pretty-well-destroyed building. Everything has been ripped out—the wires and all the plumbing—and sold for whatever the black market will bear. Anarchy reigns. Until now . . . .

I visited with the 10th Mountain Division, flying out to their positions in UH-60 Blackhawks. The Blackhawk I flew in was in Germany on the 13th of December. Two years ago, these very same aircraft were in the deserts of Saudi Arabia gearing up for Operation Desert Storm. On 3 January 1993, I was in that helicopter flying 80 miles due west of Mogadishu with a crew from Wiesbaden.

We overflew a destroyed and abandoned Russian air base at Baledogel. They had just walked away, pulled everything up and left. Once a center of technology and order, it now resembles the rest of the country—a shambles. If you remember what Pleiku was like before there was anything at Pleiku, that's what you have there.

The challenges facing us in Somalia are unique. It is not a glamorous mission, not one that Leavenworth taught me about. But our soldiers are there—and elsewhere—doing what has to be done.

On any given day, the United States Army is in about 50 to 55 countries with somewhere around 12,000 to 13,000 people. We are a versatile force with global

focus. We are a strategic force, capable of sending people and equipment to Saudi Arabia, Somalia, Panama, Honduras.

We are JOTC trained and ready. We work out at JRTC and NTC, maintaining our focus. We live and train abroad, providing forward presence. The 350 U.S. soldiers in Yugoslavia, those in Turkey, Saudi Arabia, and many other places, are just the tip of the iceberg. We have big units, and we have little units—individuals like Major General Tom Needham in Vietnam serving his country.

This is our Vision: A Total Force, trained and ready to fight; serving the Nation at home and abroad . . . a strategic force, capable of decisive victory.

The soldiers I have told you about today live this vision. We aren't waiting to execute the vision in 1997, we are executing it today. You can go almost anywhere in the world to see how our Army is fulfilling its destiny and maintaining its focus, despite the distractions and changes. We must control the pace of change, things were more than a bit hectic last year.

Balance is, and always will be, the key. The six imperatives—quality people, leader development, training, modern equipment, doctrine and force mix must be kept in balance. We had the best recruiting year ever, and that's important, because we cannot do what we are doing today without quality people. The brigade commanders and the battalion commanders have been developed over these past few years as solid, competent leaders. They have been trained.

The training centers and the Battle Command Training Program are going strong. We have taken care of the backlog with the noncommissioned officers in our NCO schools. Training is the glue that holds it all together, and our training is realistic; cost-effective, and challenging.

We have the finest equipment in the world, modern equipment like the Apache and the M1A2 Abrams tank. We need to continue to improve and improvise in order to get into the 21st century as the best Army in the world.

We are working on our doctrine, updating it for the world in which we live.

And, of course, we are constantly searching and researching to arrive at the best possible force mix of Active, Guard, and Reserve.

We must keep ourselves in balance, but remain trained and ready. I often wonder when I reflect on the tumultuous changes in the past three years, and more to the point, since the end of Desert Storm—What Army could do the things we have been asked to do?

What could the United States Army have done in 1922? 1948? 1956? 1976? Could we have deployed the way we are deploying to Somalia? Could we have projected power? Could we do this and all of the other things our nation has asked of us in these past 12 months? I think you know the answer.

The real question is: "Can we maintain this capability?" We are dealing in volatile, unpredictable situations, with a lot of people running around with weapons. And we are also dealing with the potential proliferation of weapons across a wide spectrum of capabilities.

To meet these threats head on, the strategy has changed. It changed from a known threat to unpredictability. There are major crises everywhere requiring peacekeeping, forward presence, and the protection of basic human rights.

The United States Army is a proud member of the joint team. We fight together as part of a joint team. We are the land component, providing sustained combat power—land battle is the centerpiece of joint warfare. Joint warfare, properly performed, is the simultaneous application of complementary capabilities. When everything comes together, we achieve an effect that is beyond the capability of anyone else in the world.

The U.S. Army fights at the Ph.D. level of warfare. I'm not arguing, by the way, that all wars are fought that way. What I am telling you is that the Army trains to fight at that level, and to control all of the dimensions of the battle. By doing that we achieve an unprecedented degree of flexibility. Decisive victory is our standard. We want to get in there and control the enemy's heartland. We want to dominate the enemy on the ground.

Panama was a classic example. If you want to see what simultaneous application of complementary combat power is, then study Operation Just Cause: 26 objectives, midnight to daylight. We simply took their breath away. The United States Air Force, Marines, Navy, and Army shut them down.

The United States of America may not have all of the manpower it wants. So we must leverage the capabilities of each of the Services, by putting them together, taking the enemy down, and fighting at levels that they can't handle.

Modernization is a very important challenge for us. We stand head and shoulders above our adversaries, but modernization is tomorrow's edge. We will talk in greater detail about the modernization vision in Orlando. Simply put, its five elements are: win the information war; dominate maneuver; protect the force; execute precision strikes; project and sustain combat power. Think about that. Not five things, not even five programs—five capabilities to spread across the Army spectrum.

Strategic mobility is vital to any future missions. Look at our deployment to Somalia. We are not standing around waiting to get the assets we will need. It is funded and we are sharing the cost burden for power projection.

We will have the capability to close three divisions within less than 30 days, and five divisions with all of their equipment within 75 days. That is a reality. It will be a reality because it is funded. But we still need your continuing support in this area.

It takes a while to build a world-class Army. It took us nearly 20 years to turn the post-Vietnam Army into the Army of Desert Storm—a whole generation. Look at what you worked on, what you made. High-quality equipment. High-quality soldiers. You might get sick and tired of me telling you that, but that is why it happened. We persevered.

Can we project ourselves forward? Digitize battlefields? Take down the war reserves, bringing 40 years of building up war reserves and World War III structure back under control? Can we limit the hot spots around the world through deterrence and the ability to respond quickly, with overmatching combat

power? Can we ship equipment that we need into Diego Garcia, or wherever, so that it will be where we need it when we need it there?

We will reduce our forward presence. Obviously, that is ongoing and will continue to happen. One of the things that means is that coalition operations will be more and more important to us. Look at the nations we are involved in today, and the ones we were involved with ten years ago. There are some constants: France, Canada, Australia, England, and other European nations that we've been with a lot—Saudi Arabia now for the second time, Egypt for the second time. But there are some new nations coming in, in some cases nations which did not exist or that existed only under the yoke of Soviet Communism. We have to learn how to accommodate them.

But we have some very challenging issues.

One is declining dollars. In 1993, the Army will have \$63 billion to spend. I thought, when I was the DCSOPS, when I spoke to you in 1989, that we were going to have 93 billion. We were programmed to have 93, but we are going to have 63. We didn't take a time out from readiness. Nobody asked me, "Gee, Chief can you go?" Forget it. All they said was, "Move out."

There are a host of other issues.

We are inactivating units. We are working this hard. There are shifting national priorities, and we are still focused here. There is the AC/RC mix, and of course, we have social issues to be concerned with, and we are doing that as well.

We will see how Louisiana Maneuvers, battle labs, modernization, horizontal and vertical integration can take us higher, better, faster, more lethal. Can you take scarce resources and put them together on the battlefield with our sister Services, leverage their capabilities and our own, and win decisively with limited capabilities? If the doctrine is right, how big or how small should the organizations be?

The American people have a world-class army. It didn't happen by mistake. We intend to keep it that way. We are proud of ourselves. We are good.



What do the soldiers tell me? You know what they tell me? Everywhere I go, inevitably one of them will say to me, "Hooah." I say to him, "Could you spell that?" I'll tell you, if I ask three of them, I get all kinds of different spellings: O-O-H-A, W-O-H-A, H-O-O-A-H.

But you know what? Maybe none of them can spell it, but they all know what it means. We all know what it means. God love them. At Baledogel, the most god-forsaken place you ever saw in your life, we have men and women who came from Wiesbaden before Christmas and deployed themselves out there. When I asked a couple of them, "How are you doing?" They immediately replied, "Great, sir."

We have got to keep that. I need your help to do that. You need to tell this story. We have a modernization strategy. We have a doctrine that works. We are not standing around waiting for somebody to tell us what to do. I told you three years ago, we would put on our ruck sacks and we would move out. We are smaller, but we are the best army in the world. We are, because we are a combination of men and women, Guard and Reserve and civilians, and corporate America. The team of teams.

Ladies and gentlemen, I know those helicopters don't fly because they were built by amateurs. Or that electronic equipment doesn't work because it was built by amateurs. They were built by world-class people, some of whom are in this room. I need your help to tell this story. This is a great story, and I need your help. And I need the commitment and support of the American people.

If you want to serve in a great Army, or if you know anyone that wants to serve in a world-class organization, you just tell them to call me up. Because that's what you've got. We can't spell it, but we know what it means. Thanks.

**Address at the  
AUSA WINTER SYMPOSIUM**

Orlando, Florida  
February 9, 1993

**INTRODUCTION**

Thank-you Fred (GEN Franks) for that kind introduction and the warm welcome. It's really a pleasure for me to be back down here speaking to you at your Winter Symposium. I also want to thank Jack Merritt—and the leaders and staff of AUSA who make all this possible. I apologize for the interruption to the agenda. I appreciate your forbearance and schedule adjustments to be here at this time. I can't overstate the importance of this convention to the Army. This is a great forum for pursuing our dialogue and staying in touch with each other's worlds.

You all are important to the Army. You are as much a part of the Army as the soldiers at Fort Hood—I really mean that. We risk a great deal if we lose sight of that fact, if we fail to communicate with each other, and go our own separate ways. Now, more than ever, we need to combine forces, leverage our resources, and make the best decisions for the welfare of our Army and our nation. Teamwork: each of you, me, the Army, all of us—America's Army is America's Team.

I'm going to talk about balance and teamwork; about the power of technology—the microprocessor; and about both the possibilities and the limitations of technology as I see the world. I will not back away from the fact that our resource base is very austere—and smaller now than we thought it would be when we met in October. I believe, however, that we are in an environment that will reward experimentation, innovation, and prudent risk-taking, not gambling.

We must come together as a team to balance the requirements of today's crises with tomorrow's conflicts. We cannot afford everything we might want. We

must be willing to strike a balance between today and tomorrow. I believe we have the tools and the processes to accomplish this formidable task.

But, before I elaborate further on that theme, let me share my view of the planning environment we are in today. The world is turned totally inside out when compared to the world most of us have spent our professional careers thinking about. We are seeing and preparing for the future, but at the same time, we are confronted with the past. It is like the Fifth Century in the former Yugoslavia, in Somalia, and other areas around the world where we may be called upon to serve.

How do we accommodate the demands of the Fifth century and the 21st century at the same time? Our operations in pre-industrialized areas require vastly different resources than the high tech warfare we demonstrated in Panama and DESERT STORM.

Missions such as peacekeeping and peace making are labor-intensive, soldier-intensive—and we can only leverage the microprocessor so far to alleviate the need for soldier power. We have to keep these requirements in mind at the same time we are trying to realize the full potential of post-industrial technology. That's a dilemma for us. Fifth century—21st century; point—counterpoint. Where do we strike the balance?

As I think about that, I am reminded of what Michael Howard said in his acceptance speech for the Chesney Memorial Gold Medal in 1973. To paraphrase him, he said: It is the task of military science in an age of peace to prevent the doctrine *and the technology* from being too badly wrong. Think about that. A few years ago, the paradigm of the Fulda Gap gave us a means to evaluate how we would optimize each piece of this complex organism we call the Army. In a sense, we are now faced with just the opposite.

Soldiers don't pick their fight. We know we cannot predict the future or model the next fight with any precision, so the challenge is to not get it so wrong that we take ourselves out of the fight before it even begins. We are trained and ready today. Can we be trained and ready tomorrow? For whatever the crisis?

Modern today; modernize tomorrow—to remain ready. That's our ultimate challenge.

Teamwork . . . balance . . . technological leverage . . . those will be the keys to our success. Can we adapt? Can you adapt? I think we can.

We've faced tough times before and hard decisions. The past twenty years of diligent work, dedication, and incredible vision led to resounding victories around the globe. Victories made possible by many of you here in this room and by our predecessors who created a balance between soldiers, doctrine, training, and equipment. Those who have gone before us took bold steps and experimented with new ideas—not all of them completely agreed upon or rationalized. They took chances, and in doing so, they created a force with a synergism greater than the sum of the parts.

We can do the same. We face tough challenges. Domestic priorities demand attention, and resulting budget cuts mean fewer soldiers and fewer dollars for needed equipment. Neither of these phenomena is unique in our national experience. This is a time to adjust and to accommodate other national needs. We must respond, as the United States Army has always responded.

There are some unique things about this team assembled here today that are worth reflecting upon for a moment. From 1939 to 1993 we, the Army and American industry, have developed a close working relationship that served us well through World War II and beyond. We built the great Army we have today, emerged victorious from the Cold War, Panama, and DESERT STORM, and—along the way, we launched America's space program. We even developed countless "dual use" technologies from computer chips and data links to freeze dried coffee.

We owe much of our success to the relationships developed through AUSA. AUSA is the association that brings us together professionally. We know each other. We must continuously strengthen our relationship through sessions such as this, where—together—we can focus our efforts to maintain the land force dominance of the United States Army. I expect this series of AUSA meetings to yield a stronger, more focused team and an even greater degree of teamwork.

Maintaining an effective Army while accommodating shifting national priorities will require the very best of every member of the team—active duty soldiers, Guardsmen, Reservists, civilians, contractors, corporate America, the Department, the Congress—all of us. This is not a trivial challenge or one which I make light of—do not brush it off as simply populism or a banal suggestion for conference atmospherics. We are a team.

A team? A team to do what? I want us to forge a team designed to leverage technology. The challenge is great, but the rewards are greater. I don't expect that we'll get it all right the first time, but I don't want to get it completely wrong.

I'm looking forward to the future. But I can't ignore the lessons of the past. History is a great source of strength for me, but it can also be a source of disquiet.

During World War I, the great military powers of the world began investigating the possibilities of sound-ranging equipment. Originally developed to assist Field Artillery units in detecting enemy batteries, and the Coastal Artillery to locate and track distant ships, the benefits of sound location devices were later explored for use in anti-aircraft batteries.

Let me show you what I'm talking about.

SLIDE 1: Exponential Sound Locator

This was an American version, called the T-1 Exponential Sound Locator. The horns were connected by pairs to the ears of the operators and enabled them to hear a plane up to 25 miles away.

SLIDE 2: World War II Sound Locator

At the beginning of WWII, more modern types of sound locators were developed. This one was popularly known as "Ears." It took three men to operate—the elevation man, the azimuth man, and the acoustic operator.

Now look, we may laugh at these today, but they were developed and fielded by well-meaning men just like you and me. This was advanced technology that was going to keep enemy aircraft from the sky. As cumbersome as they were, these systems actually worked, but at night, they were operated with an 800 million-candle power searchlight that exposed the units to enemy fire. Our predecessors did not have the tools to help them think through the theory to practice.

The history of the sound ranging equipment worries me. It demonstrates that technological solutions must be well thought out before use—That "all good ideas are not good ideas."

What they were doing in WWI and WWII was trying to leverage existing technology across the force. They put a lot of effort and resources into sound ranging equipment only to find out that the theory to practice left a lot to be desired. Ultimately, the leap-ahead technology of radar put the sound rangers out of business. Some would say that pushing the wrong technology was better than doing nothing at all, but I'm not sure I would agree. The lesson seems to be that you have to pick the right horse. This is easier said than done.

The question that plagues me is this: Where do we focus our efforts? How do we decide where to spend the bucks? How do we cover the spectrum from deep strike to peacekeeping in Cambodia? I don't expect that we will get everything completely right, but, we cannot afford to get it completely wrong. Can we avoid having some future audience poke fun at the choices poor old Sullivan and the AUSA crowd made way back in the Clinton years?

## MODERNIZATION VISION

Well, I can't be sure that they won't laugh at us; but I do know that the first step to success is to know where we are going. In the future, as in the past, we will be asked to fight our nation's battles. I believe we have the doctrinal framework for thinking about the future just about right. This doctrinal framework and our modernization objectives provide the direction for our journey. Our modernization objectives:

- Win the Information War
- Project and Sustain Combat Power
- Protect the Force
- Execute Precision Strikes
- Dominate Maneuver.

These objectives embody our commitment to a set of capabilities, not a "big five" of end items, but an array of capabilities linked in a program of continuous modernization. We must avoid stop-gap measures, or committing limited resources to sub-optimal solutions. We must continue to develop technologies, integrate the most beneficial of these technologies across the force, and maintain the ability to overmatch our enemies. But, to have any hope of doing that with today's dollars, we have to take calculated risks.

I believe we diminish the risks by using our doctrine as a foundation for our modernization objectives, and then exercise—experiment with the tools at our disposal: CCTT; JANUS; BCTP; Louisiana Maneuvers; Battle Labs.

## BATTLEFIELD OF THE FUTURE

I've looked at history as a means of preparing to go forward into the future. Our actions in DESERT STORM have been carefully studied by many of our potential adversaries; state-of-the-art weapons systems are available to anyone with the funds; and the technology to produce weapons of mass-destruction is becoming more readily available.

We meet these challenges through the simultaneous application of complementary capabilities—complementary capabilities that will offset quantitative and even qualitative differences by our selective application of technology. JUST CAUSE was only the first example of the power generated from the simultaneous application of force at the tactical, operational, and strategic levels. We must build upon this groundwork for our future.

The battlefield of the future calls for America's Army to continue to win decisively and with minimum casualties. Vast improvements can be made to our already considerable strengths through integration of technology across the force.

This is where you come in. This is how, ultimately, we will break the mold, that we will stop the historical pattern and reverse the roller coaster sine curve that has seen our Army atrophy after every war.

We must explore programs for horizontal technology insertions and the integration of technology across families of systems. The challenge is to integrate and balance total force capabilities—we cannot pursue improvements to one battlefield system that cause our other systems to lag behind. We are using horizontal technology insertions in programs such as Advanced FLIR, Command and Control-on-the-Move, and Combat Identification.

We must develop new prototype technologies, examine their benefits, and select the "right" technologies to place on existing platforms. Right? What we think based on doctrinally focused experimentation is right. I don't know Truth—Truth with a capital T. I don't know what I don't know about the future.

I do know we have some very effective tools to focus our efforts and lessen some of the risks we face in modernization. The first tool is the TRADOC Battle Lab program. This is where a lot of our experimentation will take place. The Battle Labs—Early Entry, Mounted and Dismounted Battle Space, Command and Control, Depth and Simultaneous Attack, and Combat Service Support—are part of a networked effort to control change; to direct it and guide it for our benefit. These Battle Labs link the science and technology community with combat developers to define, test, and analyze ideas. They allow us to experiment with concepts and equipment across a range of threats by using simulators and simulations to explore hardware and software payoffs.

One of the major benefits of the Battle Labs is that we can do field work—let our soldiers test new methods and equipment in the field and on ranges before we mass produce. We are experimenting—exploring possibilities—in some very sophisticated and exciting ways. Incorporating horizontal technology insertions in Battle Labs will ensure we develop capabilities across our power projection Army for maximum benefit at minimum cost.

Michael Howard describes the problem we face as "how constants can be applied in an environment in which all the phenomena are always changing, how



they are relevant to new situations, how to retain the essentials firmly in one's mind and not be confused by inevitable, bewildering change." Battle Labs is the program that will help us, not to predict change, but rather to mitigate the impact of change upon us. This program is one of the tools we will use to prevent the modernization mistakes of the past.

The other tool, I'll mention here briefly, is the Louisiana Maneuvers. This program is so powerful and so critical to our efforts that we will dedicate the entire AUSA symposium in May to exploring its possibilities. The concept is for LAM to facilitate the rapid development of simulation and to exercise techniques that will enable us to experience what power projection means to the Army.

The Army senior leadership—all of the four stars; the Commander, USARPAC; the Commander, SOCOM; the Commandant of the Army War College; the DCSOPS; the special LAM Task Force under direction of BG Tommy Franks; and the TRADOC Commander as my Deputy Director for LAM—working together to identify specific policy and warfighting issues to be tested in LAM. Every level of warfighting and every departmental function will be open for examination.

In the LAM process, we are linking CINC exercises, simulations, and off-line experiments to demonstrate solutions to complex tactical and operational issues at every level. LAM is up and running; I expect it to mature even more this year. LAM complements the Battle Labs and other processes and is a major vehicle to control change at the service level. Through LAM, we can continue to streamline the development and acquisition processes that currently occupy too much of our resources and talent—and yours, too.

## MODERNIZING THE LOGISTICS BASE AND SUSTAINING INDUSTRY

As an integral part of our reshaping of the Army, we are implementing programs to modernize and reduce the logistics tail. These initiatives will allow us to reduce our investment in inventory and realize vast savings in our daily business. In today's Army, prudent just-in-time management and total asset visibility must replace just-in-case stockpiling and warehousing the "iron mountain."

We are looking at Security Assistance programs as a means of helping preserve our industrial base, recognizing economic benefits for the Army, and supporting our national security interests. Security Assistance programs are Big Business for the Army. We hit our sales peak in FY91 with \$11 billion in sales, and we expect to do at least half of that amount in FY93. Our backlog is nearly \$40 billion and I am not embarrassed to report to you that it is those dollars that are keeping some of our most important plants open.

You've been reading the reports about our new guidance to identify further cuts in our budget. I can tell you that these directions were not wholly unanticipated. I can also assure you that although we will make some changes, that the Army—and your part of the Army—is not going out of business.

You know very well that it would be premature of me to comment on specific changes, but let me assure you that the Army staff is studying all available options, and the commanders are involved. We will stay focused and remain trained and ready. We will continue to provide a credible and effective national defense based upon the national strategy, our doctrine, and our modernization objectives.

General Ross, General Franks, and others share with you a vision of working together that is almost unprecedented. Using networked simulations and innovative management teams, we will be able to develop organizations, software, and hardware that we can put in the field in months, rather than years.

Now, look, I don't have all the answers; these are some very tough issues. In precision strike, for example, we are learning how to do better with less in a DESERT STORM type of environment. But what about Somalia? How do we leverage technology to make peacekeeping less labor intensive? What is the precision strike analogue for Somalia, or the MFO in the Sinai, or the MASH in Zagreb? How do I balance investment decisions on that continuum?

I'm counting on each of you to participate fully in our continuing modernization of America's Army. I ask you to think about what I've said here today. Think about the responsibility we share for providing what America

expects of us—a trained and ready Army, serving the Nation at home and abroad; a strategic force capable of decisive victory.

We must learn how to apply scarce resources effectively. This is both a challenge and an opportunity.

I believe strongly that, through hard work and solid execution of our plan, we have in fact broken the historical trend of diminished readiness.

Balance and prudently rationalized modernization is our key to future force effectiveness. We must do everything within our power to maintain a trained—ready—modernized Army.

I am asking for your help.

**Keynote Address for the AUSA  
Louisiana Maneuvers Symposium  
Orlando, Florida  
May 25, 1993**

**Continuity -- Change -- Growth**

I. Introduction.

Hooah. It's great to be in Orlando. More to the point, it's great to be in Orlando with you -- the leaders of the defense industry and the leaders of the United States Army. One team. One team moving into the 21st century.

We have worked hard in the last few years to try to see into the 21st century, and I believe that we will come to look back on these three days in Orlando as a watershed event.

Remember this symposium two years ago? In 1991, I spoke to about 200 of you at the Embers Hotel in Carlisle, Pennsylvania. I remember speaking about the future then, and I remember that the set-up for the symposium was pretty stark -- no displays or equipment mock-ups. We talked about the future, but we did not see the future, we did not feel it. In remembering that meeting and looking around me now, I am struck by the significant difference between that session and this one.

This meeting is alive with enthusiasm, and believe it or not, some optimism. Think of the displays you saw last night -- the video wall behind me. This is a manifestation of an ARMY--AUSA--CORPORATE AMERICA TEAM approaching the tasks at hand with confidence and imagination and a willingness to work together to achieve a common end -- an Army trained, ready and equipped to win today and tomorrow.

The times we live in are times of profound change. Dramatic and fundamental change -- political, ideological, and technological. We must adapt to that change, and we must grow. Let me tell you what I mean. We have accomplished enormous physical change:

- 18 to 12 divisions
- over one-quarter of a million people gone
- coming out of Europe

I could go on and on. Enormous tasks. Difficult tasks. But more important than process is substance. We have not simply gotten smaller, we have changed substantively -- intellectually and organizationally, and we are well on the road to increasing our capabilities on the battlefield.

Getting smaller is not the accomplishment of note. Staying trained and ready, making intellectual change through our new doctrine, evolving our combat training centers, modernizing our equipment, and changing the way we do business. That's the Army's real accomplishment -- changing while protecting the essence of the institution and growing to accommodate the demands of an ever changing and challenging world. We have been living with change for the last 4 years, and we have been growing.

This conference is about the way in which we have legitimized the process of change. We have been able to accommodate change because of continuity. The continuity of the institution -- our vision, our values, our traditions, our culture. These factors will remain constant on our journey to the future.

Our challenge is not to sit around wringing our hands about what we don't know or about crises we see on the horizon. If we can recognize change, control the pace of change, and incorporate the processes of change into the institution in a functional way, we will succeed in growing ourselves. We can grow only if we succeed in untangling ourselves from the present and dedicate some resources to thinking about the future. This is what these next two days are all about -- CONTINUITY, CHANGE, GROWTH. Thinking and talking about the future.

## II. The AUSA Series.

Back in January, we began a series of talks about our Army's future; the first was the Land Warfare Breakfast, followed by the meeting here in Orlando in February.

At the breakfast, I spoke of the combined efforts of America's industry and her Army, over the last 20 years, to build an Army based on balance and synergy. High quality people, modern equipment, realistic training, continuous leader development, the right mix of active, guard, and reserve, heavy, light, and SOF; and doctrine. These are the ingredients -- the imperatives -- that have forged the American Army into the world's premier land combat force.

The people in this room should take justifiable pride in your accomplishments. You have supported the Army, you have funded the Army, and you have built for the Army the finest equipment of any military force anywhere in the world. Believe me, I have travelled all over the globe, and I know the equipment made in the United States of America for the American soldier is the best in the world. The best equipment, the best training, the best doctrine -- this did not happen by accident.

We saw some of that world class equipment here in Orlando during the Winter Symposium where I spoke of our modernization efforts, past and present, and the importance of getting it "mostly right" during this era of peace, to be ready for the future. I described five objectives of our Modernization Vision that will define success in future battle. Win the Information War. Execute Precision Strikes. Dominate Maneuver. Project and Sustain Combat Power. Protect the Force.

In the information age, winning the information war -- whatever the mission may be -- is the key to decisive victory. Knowing where the enemy is and where he isn't. Real-time Situational Awareness, around-the-clock in any weather. Getting inside -- and staying inside -- the enemy's decision cycle to deny him the initiative. Of course, there are real challenges we need to sort out in order to meet these objectives. The integration, dissemination and ability to act on the vast amount of information we will be able to collect to focus our training and synchronize our operations. We have to think about these objectives -- particularly winning the information war -- in terms of conventional combat operations and peacekeeping operations. If we can win the information war, we can seize the initiative.

Horizontal and vertical integration of information with soldiers and weapon systems is mandatory, and digital technology makes it possible. The Army was a pioneer in the digital world -- with our field artillery fire control systems and the OH-58D. The new focus is that we are pushing armor, infantry, the entire combined arms team into the digitized world -- SINCGARS enables our progress. We already have, for the most part, the weapons platforms that will take the Army into the 21st century. These are the best weapons in the world because you made them the best. And they will get better -- the key to improvement lies within the power of the microprocessor.

The majority of improvements to our weapons will be through software revisions. When we wanted to improve the M1 tank, we added heavier armor, a new main gun, a more powerful engine -- primarily hardware improvements. When we wanted to improve the Patriot, we changed lines of code in a program that enabled the system -- originally designed to shoot down enemy aircraft -- to shoot down tactical missiles. Software capabilities, which are advancing at a rapid pace, will make possible a future of very sophisticated warfare.

The kind of warfare that Panama presaged. Joint operations conducted by the Army, Navy, Air Force and Marines, operating between the hours of midnight and dawn. Taking an entire government down, preventing it from organizing any effective counter force. This was very sophisticated stuff, even more sophisticated, I think, than the high tech warfare we demonstrated in the desert. There are many lessons from Panama that we can use to understand the direction of future warfare -- Simultaneous application of complementary capabilities.

This symposium that we are kicking off today is probably the most exciting and forward-looking of the triad -- a display of power projection possibilities as we move the Army into the 21st century.

### III. Louisiana Maneuvers -- Preparing for the Future.

Louisiana Maneuvers is about continuity, change, and growth. We've given a lot of thought to the subject of change -- the physical and intellectual aspects. We have made a conscious effort to firmly ground the change process with intellectual consideration. Any organization -- in this case, the Army -- is not

only what it says it is, but also what it does. So, we don't just talk about balancing our imperatives, we take the measures necessary to keep them in equilibrium even in the face of the vast changes mandated by our environment. Only a world class organization could make the changes we have made and still be able to do what we are doing.

Our Louisiana Maneuvers program is a structured, legitimate way for us to focus our thinking, to help us investigate possibilities and prepare for the future. Now, there are a thousand reasons NOT to think about the future -- Somalia, Bosnia, Haiti, the budget, the list goes on and on. We must think about the future in a structured way. If we did not have a way to think about tomorrow, we would allow ourselves to become bogged down by today. Our challenge is to acquire capabilities that will get us successfully through today so that we can get to tomorrow. We have a window on the future -- we can see the possibilities that future technologies will give us, and we have opened the door -- incorporated relatively inexpensive applications that provide the bridge between today and tomorrow.

None of what you see here -- and are seeing throughout the Army -- happened by accident or happened overnight. We have been thinking about the future for years -- SINCGARS, AFATADS, OH-58D, MLRS. As the Cold War ended, and we contemplated the advent of digital technologies, we recognized that we needed a revolutionary process to think about the future, and to act. We implemented this program -- 18 months ago -- as a device to help us think about and structure change for the future. There is a great deal of energy regarding the 21st century -- thinking, questioning -- and action. Certainly this series of AUSA meetings is indicative of the energy being devoted to the future. Additionally, all of my conferences have included a session for my senior leaders to talk about the future -- we have amazed ourselves at our progress in the past 12 months.

That's the difference -- the progress -- you see in this symposium. Now, we can see the future, we can touch it, we can get our arms around it while we talk about it, plan for it, and take action. We can see the connectivity and begin to understand the possibilities. There's an old teaching that says, "You think because you understand *one* you must understand *two*, because one and one makes two. But you must also understand *and*." We now have greater insights into and.



The TRADOC/AMC Battle Labs have enabled us to demonstrate an impressive array of capabilities, much of it off-the-shelf, available right now -- like the Phototelesis system that lets us send real-time, secure, freeze-frame video images from cameras on board Apache helicopters in Germany -- complete with GPS coordinates -- to TRADOC Headquarters in Fort Monroe or to dispersed tactical operations centers. Situational awareness and automatic target hand-off. If you want to see the future, stick with us -- the Army is leading the way.

These processes won't solve all our problems; they are not designed to do so. It provides focus and energy. It is a concept which provides us a legitimate opportunity to think about change and growth. Without LAM, we would not have been as focussed in our discussions -- the ILW Breakfast, Orlando 1, and now Orlando 2. We have integrated the concept and incorporated the thinking in many of our other ongoing programs. The most notable of these are the Battle Labs.

There are six TRADOC/AMC Battle Lab programs, and GEN Fred Franks and GEN Jimmy Ross have great things to tell us about each of them. Early Entry, Mounted and Dismounted Battle Space, Battle Command, Depth and Simultaneous Attack, and Combat Service Support -- all part of a networked effort to control change; to direct it and guide it for our benefit.

We really have to give Fred and Jimmy a lot of credit for what they have done. They have refocused the Army's modernization efforts from a vertical, top to bottom, system-oriented process to a horizontal orientation in which parallel modernization efforts yield a degree of synergy and connectivity across the force that we've never accomplished before. And they have brought interaction among scientists, engineers, academia, and combat developers to a new level of cooperation and shared ideas. The old adage applies: tell me and I may forget; show me and I may remember; involve me and I may understand.

Involvement -- interaction -- is key to the success of Battle Labs. We can now put soldiers in the cupolas and cockpits of weapons systems and test new equipment and methods in the field and on ranges before we mass produce -- in some cases before we even develop. We can demonstrate weapons' capabilities, as we did at Fort Knox March 25th, and benefit from insights of the soldier--

truly putting the user in-the-loop as an integral part of the feedback process of weapons modernization.

#### IV. Distributed Interactive Simulation.

Today, we are better able to both accommodate change in the strategic environment and to exploit it for our benefit. Ten years ago, we took comfort from the relative certainty in the strategic planning process. With our nation's very survival at stake, we had to be risk-averse in our acquisition programs, but the stability of the Cold War allowed us to move very deliberately. Today's strategic environment gives us a little more leeway to consider and manage risk for both our warfighting and our Title 10 responsibilities. We will manage risk through the judicious use of simulation.

My Title 10 responsibilities are to organize, train, equip, and sustain the force. In this symposium, we focus on equipping the force, but we do not equip the force in isolation from the organize, sustain, and train functions. They are linked together, and the linkages are found within our doctrine. Doctrine -- the 1993 FM 100-5 -- is the start point for all of these efforts -- equipping, sustaining, training, and organizing..

One of the main issues that the Louisiana Maneuvers Board of Directors will study this year is Equipping the Force. What you need to know is that we will use simulation techniques throughout the army's acquisition process. We will determine needs in large-scale, simulation-supported exercises that allow us to consider alternative solutions that meet the needs. We will use drawings, diagrams and 3-dimensional models generated by computers, put them into constructive or virtual reality environments, and compare alternatives both technically and tactically.

The most promising technologies will be tested by real soldiers, first in reconfigurable crew stations, then in full-scale simulators. Final designs, production, and assembly steps will also be simulated in virtual factories before actual prototypes are made. Then the actual and virtual prototypes will be exercised simultaneously to discover potential problems before production

begins. Tactics, techniques, and procedures are also developed along with the system so that the system is fully ready for use when produced.

Distributed Interactive Simulations hold great promise for compressing the acquisition cycle and removing much of the frustration from our acquisition system. Simulation lets us see and touch the acquisition cycle. I believe we can collectively help change our heel--toe Cold War system to a more responsive -- and cost effective -- process.

We must be willing to cut across the stovepipes that defined the Cold War acquisition mold and bring alacrity to the process of change. Bringing alacrity to the change process is a compelling idea. We have the will and the power to change the way we change. Right now, when MG Funk has a Battle Lab meeting, he must coordinate with 22 different stovepipe organizations. We must streamline the process of change -- We must eliminate the slack in all of our processes whether it's the POM, the LRRDAP, the budget, whatever. The future is not just about improving our current paradigms; it's about embracing change as a means to adapt and grow.

Simulations are also key to 21st century training techniques. Simulators and simulations will provide the Army training opportunities unimagined by past soldiers. The soldiers that enter the Army in the next few years will probably feel like they've been transported aboard the Enterprise on Star Trek, as they train for war in a facility not unlike the "Holodeck." Live soldiers reacting to different virtual and constructive reality environments.

As we speak, real soldiers and industry representatives at Fort Leavenworth are maneuvering through a constructive reality environment in exercise Prairie Warrior. In this exercise, we are testing a conceptual force -- the Mobile Strike Force which is equipped with systems and technologies available between now and the year 2015. Systems like Comanche, Longbow, Javelin, NLOS, LOSAT, a 45-ton tank, new logistics concepts, new information concepts, and all based in our new doctrine. This is 73 Easting with equipment. Think about it, because, **IF WE CAN THINK -- if YOU can think it, we can put it into simulation and into our requirements process.** This is very powerful stuff.

The capabilities that Distributed Interactive Simulations give us are tremendous -- the recreation of historical battles -- just think what this will do for the staff ride; the creation of conditions we may face in future battles; the capability for live crews to fight these simulated battles; and extensive replay and after action review capabilities that have played such a key role in the Army's learning process. Use of DIS will allow us to make the most of our training time and dollars, optimize our limited resources and even play a significant role in helping us to preserve the environment.

What Distributed Interactive Simulations can do for the Army, it can do for Industry. I saw some of the applications for industry in my visit to Connecticut last week where the Comanche program is pioneering the integration of process and product. By using concurrent engineering, networks linking developers, and digital mock-ups, Team Comanche has created a cooperative environment that allows users, developers, and engineers to determine solutions and even adjust specifications early in the development process -- they have already been able to compress 8 developmental cycles into 1. This networked team of teams -- Sikorsky, Boeing, the Army -- can capitalize on the collective imagination of diverse organizations. That's how we can exchange ideas, create energy, and grow. I saw this again, yesterday, at Martin Marietta. The integrated team approach.

We are in this together. You, me -- the Army, Industry. I need your participation, your involvement to bring the possibilities to fruition. I have asked George Singley to look at strengthening the Advanced Concepts and Technology (ACT) Program that Norm Augustine started in 1976. This expanded and revitalized program would provide funding for industry-proposed experiments at our Battle Labs. The Army would identify advanced concepts and technologies of interest to each of the Battle Labs, and you, in industry, would propose solutions. You know I do not have a big pot of money, but I need to know what the level of interest is out there for this program.

## V. The Future.

Within 10 to 15 years, even more advanced technologies will be available. -- Last week, I held the equivalent of a Cray computer in my hands -- in my hands.

-- It's been predicted that the battlefield of 2020 will use millions of computer systems and components ranging from tiny microprocessors, to large artificial intelligence set ups, to both stationary and mobile robotics systems. Software itself will become as much a target as the hardware systems that house it, making electronic warfare more prevalent. While the core weapon of the 20th century land warfare has been the tank, the core weapon for the 21st century will be the computer.

There is a great deal of frustration with the Cold War acquisition system. It served us well, but it is inappropriate to the current threat environment, technological environment and resource environment. It is very much a linear system -- a system of discrete little boxes -- and what we now require is a nonlinear system -- a system with connectivity, not boxes. A different way of thinking about organizations -- as conscious entities with many properties of living systems. Nerves served by muscle and bone, not vice versa. And, as such, we must collectively adapt within our environment in order to grow and succeed in the future.

**Continuity** -- our vision, our core competencies, our values. **Change** -- change is good; we must change to survive and to grow. **Growth** will come through interaction among the Army - Industry - AUSA team.

You must become a part of that, bringing your proposals and ideas into the process. In return, your involvement will yield focus, commitment and teamwork. Because you are playing with us -- getting a window on where the Army is headed and what it needs-- you will be able to make better proposals. Interactive participation -- collective imaginations.

That's why I think this symposium is such a watershed. It is not because of the show-and-tell; it is because the Army is inviting all of you to become a part of this team in a way that has never been possible before. The technological possibilities are immense, and could become overwhelming without a mechanism that allows us to assess the possibilities and control the pace of change.

Louisiana Maneuvers provides the mechanism. One of the primary reasons we have implemented a new LAM is best illustrated by the remarks of GEN

George C. Marshall, who noted, "In the past we have jeopardized our future, penalized our leaders and sacrificed our men by training untrained troops on the battlefield." The goal of our current program is much the same as that of GEN Marshall's -- to keep our soldiers trained and ready, today and tomorrow and to avoid the unnecessary loss of our most precious resource -- the soldier.

There is a lot about the future that I do not know, that I can only imagine. But, in closing, I want to tell you two things that I do know. First, I know that no amount of technology will change the enduring nature of war as a purposeful human endeavor -- a contest of wills that, ultimately, will be decided as wars have always been decided -- by putting our soldiers in the mud.

There is no 'silver bullet' solution that will change this fact. I can tell you this, when we were called to action in South Florida, or Los Angeles, or Mogadishu, we sent soldiers, not technological solutions. No amount of technological advancement will ever replace the very human requirements essential to victory -- courage, leadership, initiative, cohesion.

Secondly, I will tell you that the ultimate strength of the Army as an institution is the commitment of each of our men and women to our basic values. Some of you have heard me tell this before -- but, in Maryland, on a little rise above Antietam Creek, there is a white marble statue. Antietam -- Sharpsburg. The bloodiest day in American history. At the base of that statue it says simply this, "Not for self, but for country." That's your Army -- that is You: Not for self, but for country.

Today's Army is in the 21st century. Our vision is a clear and strong guiding light for the journey. We are -- and will remain -- a Total Force, trained and ready to fight and win, serving the nation at home and abroad; a strategic force, capable of decisive victory. Amid all the changes that we face, this will remain constant.

The story of our journey to the future is too big for the Army alone to publicize. You must tell the Army story -- the Army and Industry story -- to let America know that we are doing incredible things to provide for her defense -- today and tomorrow. Thanks a lot for being here. Welcome to the 21st century.