Battlefield Development Plan
Letter to Lieutenant General E. C. Meyer
Deputy Chief of Staff for Operations and Plans
15 December 1978

This responds to your . . . letter regarding the BDP [Battlefield Development Plan]. Some observations about my intent as we move ahead with BDP II.

While I started BDP with [the] idea that it would provide a way of setting out our combat developments strategy, I now believe it has broader applicability, and that we should stretch it so that it sets forth our training strategy and strategy for sustaining the Army—logistically, administratively, and perhaps even “mobilizationally,” although I have reservations about being able to do the latter with a vehicle like the BDP. In the end, then, three or four years from now, it would provide a single source of reference with regard to how the Army intends to do its primary business as we move ahead in time. It would take the place of all those weighty tomes once used by the combat developments community to look at the Army of the future. If we can keep it short, pithy, and to the point, it could be very useful. We should feed it with studies like Division 86, COEAs for weapons systems, and training studies like ARTS. The BDP would become then the cause for a study or evaluation to be done, and the vehicle in which we use study and/or evaluation outcomes to further refine the BDP strategy.

With regard to your specific concerns, may I offer the following:

We will never be able to filter out school and center parochialism, nor should we. My intent would be for us to use that parochialism to bring to the fore the essential issues requiring analysis—especially trade-off analysis. Because it is a document produced at Monroe, vice CAC or somewhere else, we should be able to keep such parochialism as there may be in context, under control, and at work for us. In this wise I would intend that we could surface for the Army Staff and the Chief the real tough issues facing the Army in a number of areas. Clearly these issues could become, and indeed are at the moment, the product of the mind set which create(s)(d) each new edition of BDP. And that’s not all bad, either. It seems to me someone who is apart from the Army Staff mill should be tossing into that mill the tough grist that must be ground if we are to face up to our challenges directly and honestly. BDP tries to do that.

We have not now, nor is it likely that we will have, in the near future at least, the ability to establish analytically the best mix of weapons systems. Ideally, I suppose that’s a useful goal. Practically it’s an impossibility. We haven’t a calculus that’s powerful enough to cope with that problem, especially for the air/land battle. Nor are we likely to have such a calculus very soon. What we should strive for, therefore, is analysis that’s good enough to inform our professional judgment, and develop the willingness to make that kind of judgment as well as to challenge the extant tribal wisdom—about almost anything.

The Air Force contribution to the air/land battle is indeed being taken into account. You’re aware already of what TAC and TRADOC have done. Bill Creech and I are ready to move on now into the tougher problems. . . . My own view of this is that we can’t just consider it an Air Force “contribution” to the air/land battle. Indeed, we’ve reached the point at which we can’t fight the air/land battle without the Air Force. Therefore it must be a team effort. The TAC/TRADOC teamwork is inhibited a good bit by the tendency of Pentagon staffs to try and make
of everything we do a roles and missions fight. We really ought to be big enough boys to cut that out. The problem we’re addressing ourselves to is far too important for our country for us to waste our time polevauling around over mouse dung.

Finally, the MACOMs will participate in the BDP process. To this end I’ve sent personally to each major commander a copy of BDP I soliciting his advice and counsel thereon. We worked with FORSCOM and USAREUR in producing BDP I, so it’s not a new idea to them. This will get us started. I’m not at all certain that in the long term it’s the best way to achieve MACOM participation in BDP. I really believe we need to have periodic strategy sessions with the major commanders—at least semiannually. These would be smaller, shorter, pithier meetings than the current annual fall commanders’ conference meetings at which we would deal only with the substantive issues. If for some reason they cannot be conducted centrally with the Chief and the principal Army Staff present, then I’ve got to figure out how to do that myself—taking the plan around and talking it out with each person or group in turn. For the BDP isn’t a TRADOC product. It’s for the Army. The Army needs this plan, a strategy for its future, one decided upon and agreed to by its leaders of today. Somehow we’ve got to seek the necessary consensus, even if I have to act as the executive agent.

... Long answer to some short questions. But then it’s not easy to solve tough problems, and frequently even less easy to define them.
Battlefield Development Plan
Letter to General George S. Blanchard
Commander in Chief, US Army, Europe and Seventh Army
12 January 1979

I very much appreciate the fact that you took the time to comment personally on the first edition of the Battlefield Development Plan. You quite properly fingered most of its present shortcomings, which we’ve set about to correct in the second edition, on which work has already begun. I was seized with the dilemma of printing it now, incomplete as it is, or waiting another eight months to a year for a more complete version. Finally I decided it best to get the dialogue started as soon as possible, and for that reason I issued it, knowing the while that there were lacunae which needed filling.

I would like very much to make that an Army document—not just something that old TRADOC puts together annually. As you know, when CDC [was] absorbed into TRADOC in 1973 we promptly junked all the long-range objective planning documents on which that command spent so much time. Bill DePuy decided for good reason that what the Army needed to do was to concentrate intensively on the next few years. I agreed with that judgment, and still do. We both recognized at the time that sooner or later something of a longer-term range projection would be required. I believe that time has come—hence the BDP. By next edition it should have in it an objective force for ten years hence, training, interoperability, NATO ops, and a flavor somewhat different from the materiel orientation characteristic of this first edition.
Battlefield Development Plan
Letter to General Frederick J. Kroesen
Army Vice Chief of Staff
20 April 1979

While I started the BDP with the idea it would provide a way of setting out our combat development strategy, it has developed broader applicability. In addition to setting the course for developments efforts, it can also set forth a training strategy and a strategy for sustaining the Army. If it is to be useful as an Army strategy for the future, however, it must be decided upon and agreed to by its leaders today.
For the next few minutes, I will trace the evolution of what we call the Battlefield Development Plan, or BDP, and how it contributes to the development of current Army 86 concepts and studies. I’ll not dwell on the details or organizations. Rather, I’ll try to give you a broader perspective of these efforts.

To begin with, I should mention that the BDP stemmed from an initiative that started in 1977. It appeared then to be a good time to step back from the efforts TRADOC had been undertaking in the systems management user/developer interface business and ask, “What’s the direction? Where are we going? What’s the environment? What is it we really need to be doing if we weren’t quite so busy and could do the kind of goal setting that higher headquarters are supposed to do? Are we missing anything?” That’s what BDP I was designed to do. In fact, the process isn’t as much a plan as it is an assessment of the current environment, where we’re going, and whether we’re going to get there.

The BDP, first published in November 1978, is designed to be used as a road map for the future. It sets forth priorities and issues that require the Army’s attention. The BDP is based on an assessment of selected Army near-term force readiness and midrange force modernization programs. It lists requirements necessary for program improvement. An assessment of US and Soviet combat readiness, force modernization, personnel, weapon systems, force mixes, technology, training, and production capabilities is also included in the BDP. Effects of technology on the Army of the 1980s are described, as are problems of training, personnel acquisition, and spiraling costs.

The BDP assesses battlefield activities and capabilities in terms of 10 battlefield functions. These functions establish a terminology to permit assessments of events occurring at the forward line of troops such as the collision of battalion and brigade forces in battle. Equally important, they allow for assessing activities that contribute to and sustain the continuation of battle. They are:

- Target servicing: The acquisition, engagement, and neutralization or destruction of enemy weapon systems.
- Counterfire: The attack of enemy indirect-fire systems and their control and support elements.
- Interdiction: Disrupting, neutralizing, and/or destroying threat forces, beyond line of sight, that are not capable of firing their primary weapon systems on friendly forces and other threat forces not directly participating in the direct-fire battle.
- Air defense: Designed to nullify or reduce the effectiveness of an attack by enemy airborne weapons systems.
- Mobility, countermobility, and survivability: Altering the battlefield—terrain and atmosphere—to enhance survivability, to impede enemy movement, and to enhance friendly movement.
- Battle support: Providing to committed forces those critical supplies and services necessary to the successful conduct of combat operations.
• Reconstitution: Timely regeneration of the force in terms of people, organization, command structure, and materiel, during and in preparation for battle, and the sustainment of the force through the provision of necessary administrative and logistical services.

• Command, control, and communications: The task of timely command decisionmaking by analyzing information, assessing the situation, ensuring accurate information distribution, and directing and controlling the force during combat operations.

• Intelligence, surveillance, and target acquisition: Gathering and providing timely information regarding the disposition and capability of threat forces to the command decisionmaking process and directly to specific users.

• Force movement: Preparing for and execution of the rapid movement of troops and supplies about the battlefield to concentrate combat power at critical times and places.

These 10 battlefield tasks are used as a logical framework in which to assess battlefield activities and functions. From this analysis, we derive indices for describing deficiencies in capabilities, US versus Soviet.

We use the present capability of the US corps as the baseline, compared to the projected 1980 Soviet threat. From all that, we get a “current deficiency index” for each of the 10 tasks. That’s the gap between current capability and required 1986 capability. Some portions of each “current deficiency” will be resolved by programmed improvements in doctrine, force structure, systems modernization, and training. The gap remaining after successful implementation of programmed requirements is referred to as the “remaining deficiency index.” In other words, that tells us where we’ve got to apply more effort in order to close that gap. Now, let’s see how the BDP methodology was applied to our Division 86 studies.

First, some background. As with any study effort, we had to start with the environment. As most of you know, in recent years the Soviet Union has significantly increased its warfighting capability. Our quantitative inferiority has been evident for some time. An aggressive Soviet R&D program has now reduced the qualitative edge that we once enjoyed. The Soviets are equal to or ahead of us in the quality of most fielded ground combat systems.

Almost every potential threat mechanized army uses Soviet organizations, equipment, and operational concepts based on mass, momentum, and continuous land combat. Mass means numbers and concentration of forces. Momentum means sustaining advances of 40 to 50 kilometers a day. Continuous combat is echelonment of forces; when one unit is consumed in the battle, the next one is committed without a pause. Modern vision equipment on both sides enables the fight to continue around the clock, in smoke, and in bad weather.

Operationally, an enemy attack might find a whole tank division, more than 300 tanks, employed on a front as narrow as five kilometers, deployed in first and second echelons. Even moving to contact a motorized rifle division might be about 15 to 25 kilometers wide, divided in echelons—reconnaissance, advance guard, first and second echelon. The frontage is wider than the breakthrough, but speed is equally important.

Operational mass, a problem in itself, combines with a larger problem—our historical propensity for being outnumbered, losing the early battles, then mobilizing to outnumber our enemies and so win the war. A look at today’s world strongly suggests that logic to be bankrupt.

Although we continue to recognize that NATO Europe is our primary commitment, it is clear to TRADOC that the increase in Soviet international activity places increasing demands on US
ground forces beyond Central Europe. With this in mind, and in response to the Chief of Staff’s challenge that our Army must meet threats to our vital interests outside of Europe without compromising the decisive theater in Central Europe, BDP II accommodates the broader view of this environment.

We are planning to meet the numerically superior and increasingly sophisticated threat of the next decade through new operational concepts and advanced materiel systems. Between now and 1986 almost all of the Army’s major systems will be replaced, and new systems with improved capabilities will also be introduced. In order for new systems to be of value, organizations that can best employ them using the operational concepts developed are necessary. New systems also require new logistics support concepts and training strategies.

Here are some of the new materiel systems that will be entering our inventory:

- **Infantry:** XM2 (IFV), SAW, ITV, thermal sights.
- **Armor:** XM1, XM3 (CFV), M60A3, ITV.
- **Aviation:** Cobra/TOW, AAH with Hellfire, Blackhawk.
- **Field artillery:** Improved range 155mm (M109A2/XM-198), 8-inch (M110A1).
- **Munitions:** Scatterable mines, ICM-AT. TPQ-37, TPQ-36, CLGP with GLLD, TACFIRE and battery computer.
- **Engineer:** UET, GEMSS.
- **Signal/C&C:** SINCGARS, TRI-TAC.
- **RSTA/EW:** RPV, SOTAS, REMBASS, MAGIIC, TACJAM, ASAS.
- **Air defense:** Stinger, Roland, DIVAD, Patriot.
- **USAF systems:** A-10, PGM, EW systems.

Just managing the change from “old to new” systems on a one-for-one basis would be a major task. However, when we consider that doctrine, training, force structure, and manpower requirements and utilization will each be significantly affected by these systems, the problem becomes more complicated. Add to this budget pressures and limits on the size of the Army and it is evident that we are dealing with a complicated series of interrelated problems that cut across the business of TRADOC and the Army.

The magnitude of equipment modernization and the short time in which it will occur require a framework that will provide for an orderly transition from today’s Army to one fully capable of operating on the battlefield of the middle 1980s. TRADOC has been engaged in designing that framework for some time. We call this effort Division 86. Division 86 has evolved from several events of the past few years—the Division Restructuring Study, Division Restructuring Evaluation, and Battlefield Development Plan.

The Division Restructuring Study was initiated in May 1976 to determine the optimum size, mix, and organization of the US Army heavy division in the FY 1980–1985 timeframe. A “clear alternative” heavy division organization and concepts for its employment, test, and analysis were developed; this was called the restructured or T-series division.

Proposals generated by the study group included integrate combined arms at battalion; leader-to-led ratios; develop balanced, weapons-oriented units; increase fire support; improved mobility-countermobility; move administration to battalion; weapons system-oriented logistics; and staff realignment for operations/intelligence and personnel/logistics. One brigade of the 1st Cavalry Division was restructured for test purposes.
A Division Restructuring Evaluation was initiated in February 1977 to evaluate the recommended organization. Restructured tank and mechanized infantry battalions, field artillery batteries and a field artillery battalion, an ammunition transfer point, a modified tank battalion, and one brigade were evaluated. Surveys related primarily to garrison activities and maneuver battalion gaming simulations were conducted. The results told us that both current and restructured divisions had features that should be considered for the heavy division of 1986.

Out of these earlier studies and reevaluations, we determined that the product of our Division 86 efforts should develop and disseminate operational concepts that capitalize on Soviet weakness, recognize battle environment, and modernize doctrine. Also, our efforts should build a balanced team that could facilitate near-term improvements, exploit new systems and facilitate management control and execution of the division’s Central Battle and Force Generation tasks, and develop personnel redundancy for key tasks. Other requirements included the ability to exploit technology, deal with the division component of corps and above structuring efforts, provide the basis for resource decisions, and constitute a new Army planning base.

Considering that a problem-solving process was needed, there seemed to be two alternatives:

- Continue with the current approach, working year by year, system by system, and in successive budgets.
- Look to the future by selecting a point and planning backwards.

Because new operational concepts, systems, organization, and training methods are phased in over time, we have chosen to look to the future and work backwards. This process will provide yearly resource requirements needed for our budget programs.

The year 1986 was selected because the majority of our new systems will have been fielded by then. Having determined that we should “look out and plan back,” the next decision was to select the organization to be examined. Since the “division” is the increment that drives our structure planning and level of command that will operate the majority of new systems, the choice became apparent.

The next step was to describe the interaction of weapons, organizations, tactics, and the operational concept necessary to defeat the enemy of 1986. What operational concepts can we employ? Being realistic about NATO Europe and a policy prohibiting first attack, we would begin a war there defending—just by the circumstances.

We consider it essential to use terrain to beat the enemy, exploiting his propensity to mass without regard to the ground. As you know, the defender loses the initiative to the attacker. But we also believe that, to win, we need to regain the initiative. Even if for short periods, it is necessary to attack—even while defending.

And so we decided that, first, it is necessary to see deep to find the following echelon, then move fast to concentrate forces, strike quickly to attack before the enemy can break our defense, and finish the fight quickly before the second echelon closes. All this was to be done using the defender’s natural strength, terrain, to multiply the strength of the defense. Using this operational concept, then, we analyzed capabilities and deficiencies within those battlefield tasks I talked about earlier and were able to determine what the Division 86 organization structures should be.

As I’ve indicated, we’ve been at this for some time now, and we’ve about got the heavy division finalized. Its characteristics are these:
Press On!

- Comparable in size to C-series divisions.
- Structured with redundancy and robustness.
- Improved command-control due to battle management concept, integration of shooters and jammers, and smaller, less complex fighting companies and platoons.
- Consolidated aviation assets.
- Increased fire support and air defense.
- Redressed tooth-to-tail imbalance.

Division 86 first addressed the organization of our heavy divisions, the armored and mechanized divisions. We have since started efforts to examine our corps and light division organizations under the umbrella of the Army 86 studies.

We have been talking about the threat, about organizations and concepts, about new weapons systems and equipment, and about battlefield functions. It is also necessary to look at the human dimension in battle, and the BDP/Division 86 approach provides for that—the man-machine interface.

Let me sum up by saying that in the end, as it has been throughout history, it is the individual soldier who will be the critical battlefield ingredient. Only if we have soldiers who are trained to fight, and trained to think, can we move our oncoming technology to victory. The Battlefield Development Plan and Division 86 are steps in this direction.
It appears that, if you had some idea as to where our Army is headed and the requirements associated with that direction, you might be able to get in front of the power curve and help us get there. So for the next few minutes, let me lay out for you what kind of an Army we’re designing in the next five or so years.

You, in DARCOM and in industry, generally deal with the physical equipment side of the house. In TRADOC we must deal with the ideas, the concepts, that eventually result in equipment requirements. How well we do our work has a direct bearing on how well you can do yours. We visualize the battlefield—today, tomorrow, and in the longer term—and then attempt to portray how our Army will fight on that battlefield. We try to do that in a realistic atmosphere, but generally without the constraints of present technology.

Once we’ve decided on how we’ll fight, we attempt to fit in the constraints of manpower, budgets, and present equipment. It’s an iterative process, obviously. For instance, if we can’t have the overwhelming manpower strength we need to defeat every enemy, then we go back, change how we’ll fight, how we’re organized, and what we’ll use, and then we try again. To replace manpower we might require more mobility, more firepower, or different tactics as a substitute. It’s a constant process of balancing the realistic with the ideal. From this process, eventually we come to equipment requirements—better guns or an improved communications system. Sometimes we find that more sophistication is not the answer, but that better training on what we have is.

Now I tell you this so you’ll understand that we’re not just dreaming up requirements to find ways to spend money or keep you all busy and frustrated. It may seem like that at times, but I assure you that it’s not the case. Nor are we looking for scapegoats on whom we can lay the blame for the loss of a battle or a war. The stakes are too high for that, and we’re all in this together. There’s no room or time for pointing fingers.

This process I’ve described is not formally laid out, but it’s our everyday work. But we have some large-scale projects that illustrate how we go about it. The first one is a document called the Battlefield Development Plan (BDP), first published in November 1978. It was designed to focus, prioritize, and integrate TRADOC efforts in training and materiel developments, force structure, concepts, and doctrine. Some have called it a roadmap to the future, but it’s really a very candid assessment of where we are today and where we’re going. The BDP does state priorities for what we need, and the results are realistic and eye opening. We are now completing BDP II and starting on BDP III.

I must admit that the BDP is classified, so I cannot go into much detail on it. From the BDP, however, a series of studies have started that are designed to reorganize the Army for the future. What happened was that we realized we were about to introduce some 40-plus major systems into the Army with no overall plan to maximize their potential. The studies are now gathered under the title “Army 86” and include everything from Army divisions, light and heavy, through corps to the echelons above corps. All these studies and the new organizations that will result will require equipment development and production in both the near term and midterm.
Modernization

They are not pie-in-the-sky—Buck Rogers requirements; we focused on 1986 to prevent that approach. They are hard, realistic and include a transition plan to get from today to 1986. Most of the organizations are based on the equipment that is in development or coming on board. There is, however, always room for something better, but frankly, to get it, we’ve got to identify tradeoffs. The bow wave of procurement spending is already too large.

There is an exception, however, that has some interesting potential—the light division. We are looking for equipment in that organization that will make it tactically mobile with a high intensity of firepower that allows it to be less manpower intensive. The equipment needed for this division must be capable of being *produced*—not just developed, but *produced*—in the next five years. Obviously all the equipment must be strategically mobile, and that means more than one or two vehicles per plane. That’s the requirement.

The other Army 86 studies—Corps 86 and Echelons Above Corps—are still in their infancy, so I can’t say specifically what will be needed. But you can judge that we are looking hard at command and control systems and a much different approach to combat service support.

One of the concepts we embraced in the Army 86 effort was redundancy, robustness, and resiliency—R3. The words are awkward, but they mean that we must build, in our organizations and our equipment, alternate and supplementary ways of doing things. It means the ability to take losses and still achieve our mission. It means that centralization, although cost-effective, may not be effective on the battlefield. One computer controlling all of a theater army’s supply system may be effective, but it’s also very risky without an alternative, maybe even a manual system, as a backup.

There is another aspect of TRADOC work that impacts on requirements. We are now beginning to rewrite our Army doctrine—how we fight—to reflect that the next battlefield will be an integrated one—with nuclear and chemical weapons. We believe that this may occur early in the battle, just as our potential enemies have been writing, saying, and training for the past 20 years. They have the capability; they train with it; they deploy it even into fellow Communist countries. We must believe their words and actions. Now rewriting the doctrine won’t be easy, for somewhere in those same 20 years past our Army turned away from the integrated battlefield.

In the 1950s we had doctrine for and trained on an integrated battlefield. But when Vietnam came along and our focus on contingency operations became all-consuming, we enjoyed a great strategic and tactical nuclear advantage, so our doctrine talked less and less about an integrated battlefield. Our units, facing the reality of a war of insurgency, trained for that war and not some future event.

Vietnam is over, and I don’t have to make the obvious point that the world conditions have changed. We no longer enjoy any advantages, conventional or integrated. Facing that, we must train for an integrated battlefield that may become a reality. The Catch-22 is that, if we don’t plan and train for that integrated battlefield, we make it more likely to occur. Our potential enemy forces—equipped and trained as they are—are watching, and our only protection is in being prepared.

What that means to you is that this new doctrinal approach will result in more requirements in both new equipment and improvements to what we already have. For instance, we must look now at improving the NBC protection of our vehicles, developing and producing better individual decontamination kits, and resurrecting our almost moribund 1950 vehicle decontamination programs with 1980 technology and longer range and more versatile delivery means. The list
goes on and on. If we really need some ideas, I suggest we all go back and read our manuals and professional magazines of the 1950s—Infantry, Armor, Artillery, Army R&D. Many of the ideas on those pages died at birth, overtaken by the events of the 1960s.

Our new doctrine will also include a strong emphasis on deepening the battlefield by finding and attacking the follow-on enemy echelons. If you look at the enemy battle array, you will note that the enemy depends on an echelonment of forces to achieve mass, momentum, and continuous combat. Much of our effort in the past has focused on destroying the enemy first echelons—on target servicing, to use the analyst’s term. We’ve done a lot in this area, but the simple fact is that, if we let the enemy echelons move into the battle unhindered, then they will overwhelm the first-echelon target-serving capability.

The problem is twofold. We must see deep and attack deep. Today we can’t do either very well from the ground. Our doctrine to fight the battle is that brigades fight first-echelon regiments and must see out to 12 hours, while divisions fight first-echelon divisions but must see out to 24 hours. Corps fight the second-echelon divisions and must see out to the second-echelon army. So the requirement is that we need some systems, both air and ground, that will do these jobs. And those systems must fit with the battlefield systems we have today.

There’s another aspect to the fight in the follow-on echelons that generates requirements. We’ve looked at the composition of the enemy array and found that it isn’t just a simple case of finding and killing tanks. When you examine the array, you find that the follow-on echelons are much heavier in combat support and combat service support elements than tanks. There are quantities of targets—command posts, radar installations, logistics vehicles, ammunition, and fuel depots—that are lucrative and hard to replace.

Now two competing theories have evolved. One says kill tanks, infantry fighting vehicles, and artillery in the deep echelons and they won’t be around to fight later. Good, we need all the help we can get. But those combat targets—tanks, etc.—are hard to find and hard to kill. Only one or two losses from those elements won’t make much of a dent. They’re easily replaced.

The other theory says destroy the command posts, communications means, and logistical sinews and you really disrupt the enemy. It makes sense when you consider that one or two fuel tankers destroyed will immobilize 10 or more tanks. One or two command or communications centers may immobilize a whole brigade—90 tanks. That’s the requirement we must achieve now. We need intelligence and weapons systems that will find these “soft” targets and put them away. Strip the combat services support from the tanks and the tanks will stop. It happened to us in World War II in Third Army. It happened to the Japanese in the Pacific in that same war.

I’ve talked about organizational changes and doctrinal changes. Let me just touch briefly on an equally important area that affects our Army requirements—training. Later in this seminar, General Bob Shoemaker from Forces Command will discuss the environment and problems of training in today’s Army, so I don’t want to steal his thunder. But this environment and the problems impact on the requirements for equipment.

We don’t have many college graduates in the Army as enlisted men, so it is no good if you engineers develop a system that works perfectly for them in a laboratory-like environment. It’s got to work for our troops in a less-than-ideal environment, where it’s wet and cold and one of the crew is on detail and another just reported in and a third one never saw this type of
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equipment before, an environment where the system’s manual has pages missing and the stress level is very high because the risk is great and the only law is Murphy’s.

Soldiers aren’t dumb; they’re our own sons and daughters, but they have a great many things to do and time is always short. The average infantryman has more than 140 tasks he must do to perform his job, and sophisticated equipment that doesn’t have a very high payoff only adds to his burden. He takes shortcuts and does those things well that he feels really enhance his fighting ability. You can’t fool him with nice-to-have eyewash, and he’s quick to spot things that are designed wrong. His only question is, “When can you correct it?” So we can’t build into our equipment sophisticated problems. He doesn’t have time for them, and I don’t blame him. There are examples of this—the M551 Sheridan assault vehicle, sometimes called a tank; our antiquated mine detection equipment; the old coaxial tank machinegun; even our basic M16 rifle when it first appeared.

One more aspect of sophistication and complexity is important to keep in mind. When you’re in the lab trying to develop that last little bit of sophistication, stop and think. Do we really need it? There are studies—one on tank fire control, I remember—that indicate the last 10 percent of complexity usually has a very low percentage payoff. This is where the maxim “the better is the enemy of the good enough” often comes into play. Programs are delayed for years just to achieve that last 10 percent.

I’ve talked about doctrine, organizations, training, and equipment prospects for our Army. John Blanchard asked me to be as specific as possible on requirements, so let me give you a partial list of our chief concerns over a broad spectrum, something all of you can take back and on which you can turn your smart guys loose.

In command and control, C2, we need today a system that will tie together—jury-rig, if you prefer—all our command and control systems. We had a system called the Tactical Operations System, TOS, that was going to do this, but it’s been killed, overtaken by time and events. I don’t want to be the father to the “son of TOS,” but we need something and we need it now, not 10 years away, something that works with reasonable use of the state of the art and no need to wait for a technological breakthrough.

In regard to our fight with the follow-on echelons, we need the ability to see deep, one that discriminates targets. We need to search out the enemy command, control, and communications and the other soft targets I mentioned earlier. This capability has to be in real time, and it must be accurate enough for targeting purposes. We don’t need more 8x10, 3-day-old glossies—“Army happy pix,” the Air Force calls them. This integrated system could be sensors, radar, TV, RPVs or a combination, but it must be redundant so all our eggs aren’t in one basket.

Along with C2 and see deep, we expect to have an awesome amount of information flowing back to the commander, so much that he is in danger of going into overload. General MacArthur, among others, suffered from this in Manila at the time of Pearl Harbor. It was costly. We can’t afford it on the next battlefield. We need a system or an arrangement that will get the critical information needs to the commander, but only the critical ones. We need some sort of preprogrammed discriminating system tied into all our information-gathering devices, both friendly and enemy. Our studies show us that this information engineering, the sorting of information, is a great effectiveness multiplier. TRADOC has a group involved in this, and DARCOM and industry should too. The requirement is there.
In the forgotten and neglected area of barrier warfare, we must have lots of everything. We need multiple technology detectors that combine metal, nonmetal, influence, infrared, and whatever signatures, and do it at high speed. They must also do it over a wide area, in real time, and with a reasonable degree of accuracy. The technology must be simple and easy to operate and maintain and rugged enough to survive.

Our means of elimination of barriers must also be part of a family of alternatives. Plows, rollers, flails, explosive devices, and so on must be developed and fielded. The same technology requirements are necessary here. Above all, they must be easy and simple to operate and maintain. Complexity has been the problem with most of our efforts in the past.

I have mentioned the requirements for the integrated battlefield already, so I won’t repeat them. They are urgent and compelling. The shame is that, at one time, we led the world in this. I daresay we may have forgotten more than many have yet learned. We must relearn it quickly.

Our tank development program illustrates another problem. Our XM1 being fielded this month is super; we need it badly. But now we’ve got to look at it and start reducing the weight. We’ve been striving for protection and firepower so hard we’ve come up to around 60 tons combat loaded. We can’t go on or we’ll have a 200-ton invulnerable tank that won’t move. We used to call that a castle. So the requirement now is to reduce the weight.

This list could go on and on, but I’m going to stop now so you can ask me questions if you have any. Let me summarize by saying there is an Army master plan. In TRADOC, we call it the BDP, and there are many studies and requirements that flow from it. Anyone with a good idea is welcome. There is no prize for solving any of these problems—unless you can place a value on liberty and freedom. Whether you can or can’t, they are what are at stake here. We cannot afford to delay any longer.
Modernization Issues
Message to General E. C. Meyer
Army Chief of Staff
13 May 1980

1. We are in receipt of the POM alternatives for FY82–86. The choices available to you are not easy ones. As your officer-in-charge of determining the requirements to modernize the future Army, I strongly support your efforts to secure more TOA (Case C), but must express my grave concern over the alternatives (Cases A and B).

2. As you know, the first edition of our Battlefield Development Plan (BDP I) reported that the US was losing the race with the Soviets to modernize its ground forces and that the Soviets would be difficult to match and impossible to surpass with the current level (FY81–85) of funding. It concluded that the US must increase its pace of modernization and maximize its combat readiness. Our net assessment was later confirmed by the Army Science Board.

3. We are currently in the final stages of completing the second edition of the BDP. While it will not be available to you until after the POM is submitted, it will show that Soviet capabilities are growing. They continue to outspend us, outproduce us, and are introducing the latest technology into their inventory and into surrogate states in Eastern Europe and the Middle East. They have also demonstrated a willingness to accept greater risk in power projection. BDP II restates that we will seriously lag behind the Soviet modernized capability, even if we fund all of our current programs. Case C is essential merely to avoid widening the gap. When we lay BDP II alongside POM 82–86, we find that Cases A and B actually slow modernization, thereby increasing the disparity to be portrayed in BDP II.

4. In our Army, and with our allies, we have great acceptance for the conceptual idea that to win against Soviet-style forces we need to fight concurrent battles against assault echelons and follow-on echelons. Cases A and B effectively foreclose our ability to implement the second echelon concept. Moreover, Cases A and B preclude initiation of the BDP I recommendation to implement “telescoping” (preplanned product improvements) as a way to accelerate modernization.

5. If we do not get all the TOA proposed in Case C, or if we get no additional TOA proposed in Case C, or if we get no additional TOA, we still must modernize. Three major sources of funding appear available to the Army: kill some major systems; defer force structure actions such as additional POMCUS, 10 heavy battalions, and an additional brigade; and, finally, reduce end strength.

6. As regards systems, it is patently clear that we cannot defer a large number of systems one year as POM A and B would have us do. This kind of discontinuity in the program adds to program costs and makes the affordability problem worse next year. Thus, instead of deferring a large number of systems, we should kill some of them. While our prime candidate to kill is Roland, we clearly cannot concentrate on one mission area and kill Roland, DIVAD, Improved Chaparral, and air-to-air Stinger as POM A and B would do.

7. As regards force structure, it is clear from early work that there will be a bill to pay for Army 86. This will occur even if Case C is approved. Much needs to be done with our force structure to accommodate the emerging light and heavy divisions and the support structure that they require. We discussed several of the ways to pay this bill at your commander’s conference.
last October, such as incorporating the separate and special mission brigades into our division force structure. Lacking approval of Case C, certainly we should not proceed with the heavying up proposals in Cases A and B (10 heavy battalions and the brigade for the 24th). We should also consider diverting the money for some POMCUS into modernization. We might even be forced into eliminating end strength to afford modernization. This is a bitter pill—one that would be tough to take and would further complicate our force structure modernization.

8. In summary, POM Cases A and B are clearly unsatisfactory in terms of Army modernization. If Case C is not forthcoming from OSD, we must make some very difficult choices other than Cases A and B in order to provide for Army equipment and force structure modernization. This may require use of all three major sources of funding described above: killing systems, deferring force structure actions, and reducing end strength. As you and the Secretary stated in your FY81 posture statement: “The alternative to expediting force modernization is increasing obsolescence. That alternative is unacceptable.”