Q: Did he retire while you were Chief of Public Affairs or was that slightly thereafter?

A: No, afterwards.

Commander, 7th Engineer Brigade

Q: From ’76 until ’78 you were commander of the 7th Engineer Brigade and the Ludwigsburg–Kornwestheim military community commander. I wonder if we could start with discussing how you got that position and how you got that job.

A: Well, basically I came out on the engineer troop command list from the OPMS centralized board selection process, and through that process I was programmed to the 20th Engineer Brigade at Fort Bragg, I think because I had had airborne experience in the past. Colonel Herc Carrol had been programmed to go overseas as commander, 7th Engineer Brigade. His wife, Sue, became very ill, later died of cancer, and so he removed himself from the command list that year. So, it was a consideration on how to rework the list—what to do about it. Because I was in the position as a public affairs officer, I was programmed after a two-year tour for the 20th Brigade a summer later, ’77. When this came up I spoke with General Gribble, the Chief, and asked to be released early from my position so I could go to the 7th Engineer Brigade and take command. He approved that request and MILPERCEN, Colonels Division, processed the change, and so I was assigned to command the 7th Engineer Brigade in summer 1976.

Colonel Kem received the colors of the 7th Engineer Brigade from Lieutenant General Frederick J. Kroesen, Commanding General, VII Corps, in July 1976. The departing commander was Colonel Harry Lombard (right).

Q: Before we start talking about that position and its responsibilities, could you give me a sort of overview of the engineer troop organization in USAREUR at that time, how the 7th Engineer Brigade fit into the engineer structure in USAREUR.

A: Surely. It had been for years in about the same mode. Basically there were and are two Corps, the V and the VII Corps. Each Corps had two divisions and some other combat elements. In each of those divisions there was the divisional engineer battalion. In the other combat elements that I referred to, which might be a cavalry regiment or

something like the 1st Infantry Division (Forward) Brigade, which was located there, there would be an engineer company that was organic to that combat element.

In addition to those engineers assigned to larger combatant elements—doctrine calls for, and our force structure provided for—there was in fact, an engineer combat brigade with each Corps. That was the 130th Engineer Brigade in V Corps, and the 7th Engineer Brigade in VII Corps.

Now, in addition, our doctrine and structure calls for a brigade at echelons above Corps; that is, that would be part of the communications zone or rear combat zone as portrayed in Europe. In Europe that was the 18th Engineer Brigade, which was composed of four combat heavy battalions and the topo battalion.

So, then, and until recently when the drawdowns began, the 18th Engineer Brigade had the four combat heavy engineer battalions plus the topo battalion. The 130th Brigade supporting V Corps had three engineer combat battalions (Corps) and some number of bridge companies and combat support equipment companies. The 7th Engineer Brigade had at that time four combat engineer battalions (Corps), plus three float bridge companies, plus a panel bridge company, plus two combat support equipment companies. At that time both Corps engineer brigades had an atomic demolition munition company. The one with the 7th Engineer Brigade was the 275th ADM Company. So, the 7th Brigade had about 6,000 or 7,000 folks and provided engineer support from the Corps' rear boundary forward into the division in support of the division elements and backing up the divisional engineer battalion.

Q: Now, you said in another interview that in this position you really were wearing three hats. Could you talk just in an overview way about that, and maybe then we could talk about each hat a little more.

A: Certainly. Well, you identified that I was assigned as the engineer brigade commander and as the commander of the Ludwigsburg–Kornwestheim community, and that sounds like two hats. In effect the first one, brigade commander, has two within that position. So, let me first address the other one, and that is the commander of the Ludwigsburg–Kornwestheim community.

In Germany, all U.S. forces are assigned in communities, and there are 40-plus major communities with subcommunities under them. A troop commander, usually a ranking person in a community or subcommunity, is made the commander of that community. That was done to make a single commander responsible for both the troops in it and the community structure—that is, the support structure, the organization that takes care of the schools, the facilities engineer, and all the other aspects of community life. This was done in the '70s, I think, by General Blanchard, so that we didn't have a we–they kind of set-up where the troops always felt, "We're combat; we don't have to bother ourselves with support," and the support folks had to try to provide the support but had not the wherewithal to make it happen. By having one commander who had both the troops and the community responsibilities, there was somebody there who could mind the store for all aspects of military life and would have everybody pulling together.

Now, not everybody had just their own troops in their community, so there had to be a lot of cooperation. There certainly was a great understanding that everyone had a duty to contribute to the whole. I'll come back to that, but let me say that the 7th Engineer Brigade headquarters was located in the town of Kornwestheim, which is just south and contiguous to the town of Ludwigsburg. It had been there for years, and before that there had been an engineer group there. This was a sizable subcommunity of the greater Stuttgart military community.

The greater Stuttgart military community had six subcommunities of various sizes, to include Patch Barracks, where the EUCOM [European Command] headquarters was located; Kelly Barracks, where the VII Corps headquarters was located; and Nellingen, where the Corps support command was located. Each of those was commanded by a general officer: EUCOM by a four-star, VII Corps by a three-star, and 2d SUPCOM [Support Command] by a one-star. The deputy community commander was a colonel who was the effective everyday operating official for the community. He also commanded the subcommunity at Robinson Barracks. Then there were two—the Ludwigsburg–Kornwestheim and Böeblingen—subcommunities that were commanded by colonels. I was the ranking person as a colonel in the Ludwigsburg–Kornwestheim community.

It was a community composed of seven battalions and many separate companies from all over the Corps. In fact, I only had one of my battalions there and the atomic demolition company. We had an infantry battalion, a transportation battalion, maintenance battalion, signal battalion, and so forth. It was a very large subcommunity and the northernmost in the greater Stuttgart area. We had a very large family housing area, Pattonville, where people lived who worked all over Stuttgart—at Patch Barracks, Kelly Barracks, and Nellingen, south of Stuttgart.

My first hat, then, was to run the subcommunity, but we never used the term "subcommunity" in the greater Stuttgart community because our subcommunities were bigger than a lot of other communities. Therefore, we commonly used the term "community." So, I commanded the Ludwigsburg–Kornwestheim military community, with support and logistic responsibilities for how we Americans lived there in Germany.

Now, then, to go on, the commander of the 7th Engineer Brigade carried two hats, as I mentioned. First of all, the command of the brigade as we traditionally view it—all the aspects of commanding an engineer brigade of four battalions, an atomic demolition company, and six separate companies.

Now, I said four battalions, but we really had six battalions because the separate companies—bridge and combat support equipment companies—were formed into what were then called "composite" battalions. The battalion commander was selected off the battalion command list and had a small staff. Thus, in essence, we had six battalions, which included the normally separate companies and the ADM company. Those battalions were located throughout Germany, so time and distance was a big situation for me and for operations command and control, but we can get into that later.

The other so-called hat comes from the fact that doctrinally and by organization the Corps engineer brigade commander operates also as the Corps engineer—that is, the senior engineer staff officer of the Corps commander. It was similar to a division, where the engineer battalion commander is the division engineer and has at the division staff a major, the assistant division engineer major. The Corps engineer, the brigade commander, has on the Corps' staff a colonel, the assistant Corps engineer. So, that was my third hat—Corps engineer. I was the Corps commander's engineer staff officer. For that role there were about ten to twelve people who worked at Kelly Barracks with a lieutenant colonel or a colonel, the assistant Corps engineer, who was the day-by-day operator in that position.

So, those were the three hats—brigade commander, Corps engineer, and military community commander.

Q: Let's talk a minute, again maybe with some questions on the command of the 7th Engineer Brigade. This is in the late '70s, in the post-Vietnam period. I wonder if you could comment on the several aspects of the battalion under you—training, discipline, morale, these sorts of issues. What shape was the Army in during this period in terms of combat readiness, training, and these sorts of things?

A: I'd say at that time the Army's position was one of emerging from the bottom of its depths after Vietnam. Certainly it's been well-written of the many problems in Europe during Vietnam where commanders had few resources and few people to work with and also had many troops who had come out of Vietnam, out of combat, many bringing with them drug problems. There were racial tensions and all kinds of problems in the early '70s. That had bottomed out by the time I arrived and was on an up trend. There are others who certainly get credit for this, but General Blanchard gets a great share of the credit. He had made the community commander and troop commander the same person so that morale, discipline, order, and support kinds of things could all be addressed.

Some regulations were being changed so the Army could deal more effectively with druggies; that is, urinalysis testing was starting and we were modifying the rules for discharges, so it was easier for commanders to deal with and discharge the misfits and the malcontents. We were starting to emerge from Vietnam, and there was a little more stability, and people were starting to work to train noncommissioned officers and this sort of thing.

I heard an awful lot of stories from folks who had been recent company commanders and were still in the brigade's battalions about how bad it had been just the year before or just two years before. That is why I'm saying it was emerging because there were some conditions that weren't the best, but it certainly wasn't as it had been, for example, where in Bamberg an officer just had difficulty walking the streets safely. You know, garbage cans thrown out of windows nearly missing somebody entering the building, tires slashed repeatedly, things like that—really representative of a low state of discipline. Those kinds of events were in the past by the time I arrived.

I found within the command leadership structure a really positive attempt to recognize and deal with that. General Blanchard was a very positive person, just was ebullient about

everything, and that enthusiasm drifted down through the ranks. General [Frederick] Kroesen was the VII Corps commander, later to be the Army Vice Chief of Staff and come back as the USAREUR commander. They had people oriented back to making things better, making them right, establishing good order and discipline, getting people into the field so we could train. Money and resources were coming so people were back in field training, learning their combat tasks and working as teams. They were addressing the personnel problems, trying to put money into the housing so that families were happier, thus the soldiers with families were happier; trying to get rid of the malcontents, isolate the druggie from the good folks, and all of that.

So, there was certainly a positive command structure and climate that had started things on the up trend, and we were emerging from the post-Vietnam doldrums. I don't think it was there yet. We continued on beyond that to improve to the point of a kind of ebullience you have about the Army of DESERT STORM. We were just then a few years into the all-volunteer force, and we were starting out and had not yet got to the great recruiting years of "Be all you can be" that started about 1980. I mean, this was still pre-'80. You recognize in 1980 still only 54 percent of the recruits were high school graduates, later to rise in '93–'94 to over 90 percent.

This period I'm talking about, 1976, still had us recruiting a lot of category–4s. We still had noncommissioned officers that had not gone through the kind of training and improvements that we had later when we recruited the more positive folks of the early '80s, took them through basic leadership training and made them noncommissioned officers of a bunch of other high-quality recruits. So, I guess that would be my comments as to the general climate.

We were back into training. We were going to the field, and REFORGER [Return of Forces to Germany] exercises were happening regularly, and there was an orientation that—well, General Blanchard had it throughout the command, but I'm really speaking of VII Corps. I mean, there was that feeling that you wanted to be training combined arms and that you wanted to be in the field with infantry, armor, engineers, artillery, and doing things to improve our combat readiness. The things that service in Europe has always provided, back when I was a lieutenant, and then now in this particular period when I returned—the fact that we had a real mission. I mean, there was the Warsaw Pact across the border. The Cav always was doing border patrols. We fell out and had alerts. There was always the significance that you knew you were there in a forward deployed posture and you had a real mission. Therefore you went out and trained the mission. So, we were spending many days in the field.

As for the state of combat readiness, I think, for its time, it was pretty good. It was certainly better later when all of the positive things after the pullout from post-Vietnam came together—that is, the better recruits, the new items of equipment, better facilities, and the resources for training. Considering the equipment we had at the time and the people, we went out and trained and I think we did a great job.

The 7th Engineer Brigade had a lot of deficiencies that were really based on the fact that the engineer force had remained basically unfixed since World War II—that is, we were still a

wheeled brigade. We ran around in trucks trying to support tank and mechanized divisions who were in tanks and armored personnel carriers. We couldn't go cross-country like they could—we were an all-wheeled force.

We were also lacking total communications. I did not have a signal node assigned. Corps signal provided communications nodes to the other major subordinate commands of the Corps—that is, the two divisions, the Corps artillery, the Corps support command. All those other major support elements had a signal node in the field that really tied them into the Corps communications net. I didn't have one of those that came with us, and we were often out of contact with the great distances in VII Corps. You have to recognize how big VII Corps was even compared to V Corps in land area, stretching all the way from the Czech border back to Stuttgart and then its width between II German Corps in the south and V Corps to the north—quite large. That's also why we had the 1st Infantry Division (Forward) as another combat element besides the two divisions that V Corps also had.

In combat capability I think with what we had we were capable, but we lagged and lacked critical things that inhibited our capability to go to war as engineers to properly support the Corps.

At the time I arrived, we still had the M4T6 bridge and the Bailey bridge; all vehicles were wheeled; and we had dozers and so forth—so we've come a long way since then.

In the Army of its day, within the capability of the rest of the Army, we were probably commensurate with it except for the fact that engineers had never been fixed—doctrinally, organizationally, or properly equipped—really since after the war until then. These would later be the things that prompted E–Force and were never fixed until E–Force was implemented.

Q: So, you could see some similarities with your first tour there when you were a young officer? Some of the problems you saw the first time around still were evident?

A: I think my ability to start running in the 7th Brigade really went back to my good upbringing and initiation in the 23d Engineer Battalion, 3d Armor Division, V Corps, years before. That experience, being part of the combined arms team, was ingrained in me. I was back on the German terrain and we were back doing the things I knew. I knew what the platoon leaders were doing trying to support their mech infantry or tank cross-reinforced task forces. I had just moved up a couple of echelons but, in essence, the divisions and the Corps were doing the same things. The kind of REFORGER exercise we had in '76 and '77 were not dissimilar from the basic things that we had in the FTX Winter Shields and Sabre Knots of '58 and '59 in terms of being in the field, interacting, part of the combined arms team, and that sort of thing.

So, both the good things and the bad things related back. Yes, we were wheeled back then, and we were still wheeled in terms of the Corps battalions.

Q: What about troop construction projects? Was there much use of troop labor for construction projects while you were there?

A: Yes, there was, quite a bit. Now, the 18th Brigade had as its mission, of course, to do troop construction, but Corps engineer brigades had considerable activity doing that as well. Specifically—this is a good place to put it in—one of the things about the 7th Engineer Brigade was its very large geographical spread.

With six battalions and all of those companies, we really were spread all over the southern German map. As I mentioned, we had a composite battalion in Kornwestheim with us and the ADM company. We had a combat battalion at Aschaffenburg, the 9th. We had the 82d Engineer Battalion (Combat) in Bamberg, the 237th Engineer Battalion (Combat) at Heilbronn, and we had another composite battalion in Karlsruhe, which had the bridge companies. When I started off, there was a float bridge company down in Nellingen all by itself. The other battalion was the 78th Engineer Battalion (Combat), which was located at Ettlingen, which is right outside Karlsruhe.

Colonel Kem, Commander of the 7th Engineer Brigade, addressed soldiers of the 78th Engineer Battalion on 30 November 1977.

Then there was a combat support equipment company located at Grafenwöhr. V Corps had a combat support equipment company located at Wildflecken. The two companies were there to do range maintenance and construction at the training areas, so they had their equipment out on the tank trails all the time doing work.

We had summer construction programs where we would rotate combat battalions through the major training areas—that is, Wildflecken and Grafenwöhr. We would send a combat battalion for six weeks to do construction projects and training at the major training areas. They would get in range time and required training, things like that, and they would work on building ranges, knocking down ranges, fixing things, and that sort of thing. Hohenfels was part of that program as well, along with Grafenwöhr. So, we basically supported Graf, Hohenfels, and V Corps

basically did Wildflecken. Of course, they had the 54th Engineer Battalion at Wildflecken all the time also.

Q: This will probably be more appropriate later on, but did you have much contact with people from EUD [Europe Division] when you were at 7th Brigade?

A: No, almost none. They had an area office in Stuttgart, and we would see each other at the Society for American Military Engineers meetings and that was about it.

Q: Anything else about the 7th Brigade command that we should discuss?

A: Oh, well, surely. Lots. [Laughter] Where do we start?

Q: I thought before we went to the VII Corps engineer I was interested in—

A: Well, maybe we ought to talk about VII Corps engineer and then come back and do the two together because things that happened track together because I'd be commanding the brigade and then I'd be doing the Corps engineer part. I might be sending a message from the Corps down for all engineers in the Corps to include the brigade, so I might be sending myself a message about doing certain things. There was always an interaction between the two, and so we ought to talk first about the general aspects of the Corps engineer position.

Q: Okay.

A: Then we can talk about how things happened because if we want to talk about REFORGER '76, we'd want to talk about both brigade and Corps engineer aspects of it. So, what would you like to know about the Corps engineer?

Q: You had a role in the war planning, planning for combat operations. What's the role of the engineer in dealing with war planning?

A: The Corps engineer really has responsibility at the Corps headquarters for all things engineer, which means he deals quite a bit with the G–3 in terms of planning and operations, and quite a bit with the G–4 as a logistician in terms of planning and operations because we really support across the board those activities.

During peacetime, planning for wartime is one of the major functions that happens there at Corps headquarters. Whenever the G–3 was reworking a plan, mission plan, real-live contingency plan, or if the G–3 was preparing a training exercise, like REFORGER, where there was a scenario similar to a wartime plan, whichever G–3 element was working it—maybe the wartime planners or the training planners—would call on us, the Corps engineer section, to provide the Corps engineer input. We had quite an interaction in developing, recommending, making estimates of the situation, recommending action to the Corps commander, to the G–3 or the G–4, chief of staff, as to what the engineer application should be to support this contingency or that contingency. Then, once decisions were made, the Corps engineers section would write the engineer part of the operations order or war plan that

delineated how that was to be executed. So, in all war planning, the Corps engineer was the major player in terms of the engineer applications.

In 1976, there was the political decision to "fight forward" in NATO [North Atlantic Treaty Organization]. So, in fact, our general defense plan was being revised to reflect this doctrinal shift of fighting forward. This came about from the standpoint of the German government that basically the thought that we would trade space for time, which had been the strategy before—that we would pull back until reinforced and then regain the border—was no longer sellable to the German populace; that is, that NATO would give up portions of Germany.

So, within the NATO countries the decision was made that NATO would fight forward. "Forward defense" became the new operating words and that, in fact, required us to change some things, especially within VII Corps with our great depth. Just look at the map and look how far east the Czech border is from, say, what V Corps faced at Fulda. Certainly, V Corps had the shorter distance, but we had the depth, which meant if we were going to fight forward we had to move forward.

So, we had a lot of things to do, and when you revise wartime operating plans it's not just a paper exercise. It means terrain walks, picking positions—those typical steps you go through for any kind of a military operation. The Corps concept of the operation goes down to the division commanders, who would develop their concept and then brief it back. Once it's decided on a forward position kind of thing, then division commanders pass down to the brigade commander to pass down to battalion commanders and to the company commanders who pick the actual fighting positions and kill zones on the actual terrain for how you wish to fight. After that you sort of roll the process back upward by putting on paper all those aspects at each level so that it's a cogent war plan. That was the process that was going on in 1976–'77. We were really redoing operating plans and redoing them in terms of not only forward defense concepts but down to the actual terrain.

There were some other changes too at that time, most of them reflecting on the great size of the VII Corps area. For the first time a German division was given to an American Corps. The 12th Panzer Division was assigned to VII Corps for the warfight. We now had three divisions plus the 1st Infantry Division (Forward) and the 2d Armored Cav Regiment as major combat elements to fight the battle.

There is great initiative and vigor caused by change. So, there was a lot of thought, a lot of meetings, a lot of people throwing out their ideas, and it germinated quite a bit of good kind of tactical thinking. It was a real positive for me to arrive at this time because in the midst of change you can make things happen. Over the next year the war plan for VII Corps to support the new forward defense doctrine was developed.

Q: There would have been engineer input at all stages of that roll-down and roll-up.

A: That's right. So, what that meant for engineers was that we would participate at the Corps staff level and the initial Corps concept of operation to include troop lists. For example, we would put a Corps combat battalion, as was then doctrine, in direct support of a division. So,

the battalion that we would put in direct support of the 1st Armored Division we would designate. When the Corps commander said, "1st Armored Division, I want you to plan a defense on this line," the 78th Engineer Battalion that I put in direct support tied in with division engineer, the commander of the division's organic battalion, the 16th Engineer Battalion. As division engineer he was doing the engineer planning in the division sector, and so my 78th Battalion commander was then tied in with that planning, also.

When the maneuver and engineer units were picking positions, they would be deciding which engineer company would support which maneuver unit, et cetera. All that detail was going on, coordinated with part of the 7th Engineer Brigade.

Meanwhile, back at brigade headquarters we were doing our planning also. We at the time really didn't know what the 78th was going to do when they were up in the division sector. We were responsible for everything behind the division's rear boundary or the "engineer support line," which might be forward of the division's rear boundary. As brigade commander I had responsibility for the Corps' rear and how we were going to take care of our missions, to include what we were going to do with our panel bridge companies, float bridge companies, where they would fit into the war plan, and how we would move them to where they ought to be. You have to remember that the 3d Infantry Division was fighting forward of the Main River, so very quickly the Main River was at their backs. Consequently, we might well be called to put in a float bridge rapidly for a potential retrograde or counterattack mission for the 3d Infantry Division.

We would have to coordinate that kind of planning with the division engineer of the 3d Infantry Division, who was also the 10th Engineer Battalion commander and had his own float bridge company. We were doing all that kind of intricate planning down at brigade and battalion level. So, throughout the structure everybody was out on the ground planning the forward defense.

I found at this time that it was an ideal opportunity for change, and so we did several things. I felt that things had been the same for so many years that our approaches to combat engineer support were relatively sterile. I would go to a division engineer battalion and their supporting Corps battalion, and I was getting routine answers and comments that didn't reflect much new thought but really a response that, "this is the way we've always done it and so we'll continue to do it this way."

At this time, with the many new parameters thrown into the picture—that is, we were fighting forward and the new 12th Panzer Division was serving in the sector—there was an opportunity to change the relationships. The 9th Engineer Battalion had been supporting the 3d Infantry Division and the 10th Engineers. So, I split the 9th away from 3d Infantry and assigned them the engineer mission to support the 12th Panzer Division. We now had a U.S. engineer battalion who provided direct engineer support for a Panzer division, and that's the way we were supposed to fight, combined operations. We didn't get extra engineers with the 12th Panzers, so we had a gap within our Corps engineer capabilities.

The 237th Engineer Battalion, which had previously been left to the rear area, I assigned to be the new battalion in direct support of the 3d Infantry Division. The 82d Engineer Battalion, which had supported both the 2d Armored Cav and the 1st Armored Division, I assigned just to the Cav because of its very large border and forward area responsibilities. Then I had the 78th Engineer Battalion take up direct support to the 1st Armored Division. So, with the exception of the 82d, which had supported the Cav and was still supporting the Cav, I had a new challenge for each battalion. There was nothing old, nothing routine remaining. They each had a whole new mission area and combat unit to support. They had to go out and generate all of the things they needed to do to provide that support, and nobody could sit back on their heels and do business as usual. They all had to go out and create it new. I thought that was a rather opportune thing for me to have—to be able to have them all out doing that kind of invigorating change.

Q: As this new planning went along, how did engineer capabilities measure up to the requirements that were being placed on them?

A: Well, we were quite short in terms of capabilities. Of course, the entire warfight is predicated on reinforcement from the United States, and so you get into the entire reinforcement picture—that is, how much do you have, how much is in POMCUS [pre-positioning of materiel configured to unit sets], fighting capability, and on back to the capability of reserve forces and the issue of activating the reserves. So, it's pretty difficult to describe things like shortfalls except in terms of the first day of the fight, second day of the fight, tenth day of the fight, first day of reinforcement, or however that comes about, because it's an over-time kind of thing. Even as we drew the war plans up for that time frame, we put contingencies in the war plans. In the VII Corps plan we called for the return of engineer battalions to be released by a division on order. That was a recognition that we really had placed all of our Corps combat elements forward in the divisional areas and had relatively little in the Corps' rear.

I remember well we told General Webb of the 1st Armored Division that he got the 78th Engineer Battalion initially, but on order, Corps would pull them from him. He said, "No, I have to have that engineer battalion all the time. Everybody knows you have got to have a divisional battalion plus one more—you can't pull them away." So, in the strong debates that followed about that, my pitch to the Corps commander was, "That's true, everything he says is true, and we want to give it to him, but we do have a Corps' rear area. You may have difficulty, as Corps commander, ensuring your other folks are supported, and I may have difficulty in keeping the main supply route open to the divisions without some capability." We needed a string to be able to pull back capability if need be.

We were right in putting them forward initially. War plans would dictate we might have so many days' advance notice, which means we may well have so many days of putting in obstacles. Then our capability should be forward, putting in those obstacles, and then after the fight begins, once other engineer missions in the rear area—that's not engineer missions just as engineer missions, but our engineer missions derived out of cut main supply routes and damages in the Corps' rear—become critical, then you have to divert capability. That's the time then you would pull it back and balance capabilities against requirements.

Q: Well, much of this planning went on in the context of the post-Arab–Israeli 1973 war, I think. It was expected there were going to be violent encounters that would cost a lot of equipment, a lot of manpower, in the first few days of the war. So, the whole idea of reinforcements from the United States, how quickly that would get there and how much destruction there would be in this initial confrontation between Soviet and U.S. forces, put a lot of pressure on the troops that were there planning to hold out for the first few days, I guess.

I mean, there are a lot of changes in thinking going on during this period, aren't there, like forward defense?

A: Oh, there was considerable thinking. It was at this time that the administration was, because of the agreed-upon strategy of forward defense, thinking about how they could, would meet the U.S. commitment. The echelons higher than us at VII Corps, that is at USAREUR and EUCOM or at SHAPE and NATO, were thinking about how to improve our capability more rapidly. The administration adopted the strategy of rapid reinforcement of NATO. This became a State Department, Defense Department item to take to NATO. The Carter administration pushed for each country within NATO to increase by 3 percent its defense budget over the next several years to improve NATO's capability to fight. Out of that came the American initiative to provide NATO more rapid deployment of three more divisions. This became a requirement to build warehouses of equipment for those three extra divisions in Europe. This is what I became so involved in after I left 7th Brigade.

So, there was considerable activity being addressed because of recognition of what you mentioned, the '73 Arab–Israeli war. It's going to be violent, it's going to be sudden, we're now fighting forward, and what's all that mean in terms of improving our capability to fight and win. We're no longer going to trade space for time. We better reduce the time it takes reinforcing folks over there so they can be part of the fight. That's been every year an issue for the U.S. Army in Europe, I guess, since we started NATO and thinking about those kinds of things.

For us in the field it meant recognition that we were on the margin and we needed to figure out how we were going to take care of those kinds of things.

When you talk about the Arab–Israeli war, you prompted another thought, and that was we were at that time reading the books on the lessons from that war. I remember carrying around a super book that described the violence of the fight of the Israeli 7th Brigade, an armor brigade, and the Barak Brigade in the Golan Heights. It was violent, and their tanks were just destroyed one after another. Also, we were getting interested again in the antitank ditch as an obstacle because of its success in the Golan Heights, where the Israelis had used an antitank ditch quite successfully in spoiling Syrian attacks. I remember pictures of Syrian vehicles in the ditch and their AVLBs rolled over in the ditch. So, we stepped up our interest in trying to figure out how we could do antitank ditches more quickly and how we could effectively use them. As in the Golan Heights, you're talking about something dug prior to battle because it is an equipment-intensive thing to build an antitank ditch.

We then were trying to reduce the antitank ditch down to doctrinally fit us and to a size that was capable of stopping the enemy—or not stopping them but having them present targets to our gunners because our concept was bring them into a killing zone, hold them to present good targets, and then kill them. Recognizing the mass formations of their kinds of attack, we had to be able to service many targets in only so much time because of the mass of what was coming at us in terms of armor. So, recognizing an obstacle not covered by fire is ineffective, then any obstacle to be effective had to provide some kind of delay to improve the capability of our gunners to get the target. So, with the antitank ditch, what we were looking for was having a ditch of such minimal dimensions that it could be dug with as much ease as possible and yet present the kind of an obstacle that would break up the flow of this massive armor down an avenue of approach, cause them to be stopped to get into the sights of our gunners, our gunners meaning in the combined arms context.

We had our 563d Engineer Battalion (Composite), with two combat support equipment companies, run tests at Grafenwöhr on various sized antitank ditches to see what could happen. It came out with, as I recall, that a 1.8-meter-high ditch, dozer width, with a spoiler berm on the friendly side, would disrupt the enemy tank. The tank would have to move forward, go down a ditch, and then when it came up it would have to rock back and forth, trying to obtain an ability to work its way through the ditch. When it did that, it would provide opportunities for belly shots—exposing the lesser protected belly of the tank to our TOW [tube launched, optically tracked, wire guided] gunners and tank gunners. That was the concept and design of the antitank ditch.

With a lot of experimentation with that, we then built that into our war plans. Some were up in the Meiningen Gap, which was a broad plain to the west of Würzburg, and a high-speed, massed armor approach. We planned some rather extensive antitank ditches that would require some days to put in. The extent of the obstacles was dependent on the number of days of before-battle prep available. In other places, in narrow valley defiles, the antitank ditches would be relatively shorter. We were doing a lot of this kind of thinking.

The other point at that time was that we still had massive stocks of the mines left over from World War II. We did not have a good new modern mine. All of these became things I later took on when I commanded the Engineer School at Fort Belvoir. We were trying to solve the problems of that day in the field, but these weren't newly discovered; they were old, existing problems.

We didn't have a new modern mine but we had lots of the old kind, so the idea was how do you put the old one in more rapidly? There had been developed mine plows with chutes. Engineers would pull this behind a truck and slide the mines down the chute. The plow would open the ground and just let one slide underneath before it closed. We also started just leaving mines on top of the ground, armed, recognizing they were exposed. In the smoke of battle, with all kinds of lead flying, a person's eyes might well not be fixed to the ground as they, in their mass of armor, are churning forward. Again, it wasn't always a stop we needed. We wanted to delay, we wanted disruption of the formations.

As we engineers, meaning divisional and Corps battalions supporting, did our thinking, it was always in terms of the combined arms. How do we better the capability of all arms to fight the battle and how do engineers emplace obstacles to prepare the battlefield in advance of the fight so that tank and infantry TOW gunners can get a better sight and a better shot? We planned multiple obstacles and then commanders, maneuver and engineer, had to be flexible with all the obstacles planned to know where to implement and execute. By that I mean—this was a major change from my day as a platoon leader, where even though we planned withdrawal, retrograde operations, and delay operations, it was never quite in the same terms as the warfighters were now thinking, that is, in terms of positions, alternate positions, killing grounds, and moving in thrusts and counterthrusts at the speed of armor. That was a big change.

During general defense planning down at the lower levels, the maneuver commanders would be saying, "I intend to fight from here and here and here. I want my tank guns here. I want my TOW gunners there. I want the artillery to focus in this area." Engineers would then sit with those commanders, figure out that with our assets available we couldn't build every obstacle, so priortize to build the obstacles effectively, say, to delay them coming up a high-speed avenue, or plan one in a location that would cause them to move around that obstacle, which say allows them to no longer use a hill mass as a hide position but pushes them out in the open ground where our gunners could take them under fire.

It had to be a coordinated ground maneuver and fire power oriented thought process that the engineer, with the maneuver commander and the artillery gunner, had to think out all together. So, we used our limited assets to focus on the primary killing area. That would be the first constructed position and obstacle. Then the maneuver commander would have another position or an alternate that would then prompt other obstacle combinations. What we had to get to was a capability, for example, that if we were pulling back at this particular time, or moving laterally to set up a new kill zone, the maneuver commander would indicate his intent, "I intend to occupy this position. Once forced out of that, I would occupy over here but I might change to occupy here a third position." Having declared that intent and then "on order" during the battle he makes the call that all—maneuver, engineers, artillery—execute.

Engineers couldn't deliver needed support in those days without remotely projecting mines, without modern tools—couldn't deliver on call like artillery could. So, the engineer would have to be predicting which operational concept was going to be and work out with the maneuver commander, "Okay, while you're fighting this fight and I'm fighting it with you, I'll have some people back preparing this alternate obstacle to support your alternate fighting positions. You need to know that I need so many hours to do that, and so if you want to pull back to that one, I'll work on that as your first priority. If you want to go to your second priority, I won't have that done, so you'll be fighting without the obstacle."

That kind of thought process, you know, magnified by every fire team and battalion out there, means a lot of those kinds of interactions are going on. That also means there was lots to be done every day in training and in preparing for the general defense plan.

All that, also, was a good prompter for people to train well. I mean, the general defense plan in Germany becomes a great vehicle for training, a great motivator, and for keeping sharp the senses of the leaders, noncommissioned officers and officers, oriented toward that mission. That mission keeps reminding everybody of why we are there. So, that's always been a great thing about service in Germany over all these years—you're always working on a general defense plan that always keeps you sharp and keeps you trained.

Q: That also requires an appreciation by the maneuver commanders of the role and capability of engineers, and also the ability of the engineer to sell those commanders on what he can and can't do. This is a broad generalization, but how well was that going over there? Did the maneuver commanders have a good sense of what engineers could and could not do? Were they wanting too much? Were they impatient?

A: Well, that's a question that's always germane, and the first part of your question really established the essence of it. There has to be a real interaction between maneuver commanders and their engineer. The engineer cannot wait for the commander to call for him. The commander needs to have an appreciation for what this element of the combined arms team can do for him. A lot of them don't have that; they don't get that training. I mean, at the TRADOC schools, as I learned when I was there later at Fort Belvoir, when you're told to cut back your curriculum here and there and you start paring things out, you find out that in the other service schools your part seems to get pared a little bit more. I found in the Armor School, for instance, that we'd put engineer instructors there—I've really now jumped ahead to my Fort Belvoir time, but it's pertinent to your question—that our instructors were basically just teaching wiring diagrams. "This is an engineer company; this is an engineer battalion. When you're here you can expect this." After that hour and a half of that, then—"we've had *Engineer.*"

We found graduates—captains, advanced course graduates at the Armor School—that thought the combined arms team was when you had infantrymen with tankers, as opposed to having engineers, military police, artillerymen, et cetera, as the combined arms team. They thought the hasty breach was the one tankers did by themselves and the deliberate breach was the one where you called the engineers—as opposed to the entire combined arms team moving forward so when it hits an obstacle everybody ought to be operating to get across it and the commander uses his engineers as his main breach element. This later became the reason at the Engineer School that we rewrote the manual for breaching and we set up different definitions. We called the tanker-only concept the "bull through" operation. This was not defined as a doctrinal breach operation but an act by a desperate commander who found himself in the middle of a minefield, taking fire, and who had to decide whether to go forward or backward. If he decides to go forward, it becomes a "bull through," and he must expect to take great losses. He would never decide to do that if he didn't have to in a desperate situation.

We also changed the name of the hasty breach to the "in-stride breach," which identified the connotation that a combined arms fighting unit on the move, once it comes across an obstacle identified by scouts, would like to cross that obstacle "in stride" without losing momentum. The unit doesn't want to get bogged down and allow enemy gunners to bring fire in on it,

sitting behind the obstacle even one or two kilometers. This certainly was not a breach done by tankers only, but a combined arms breach using all maneuver and fire support arms.

A deliberate breach, then, was that breach in which you are stopped, facing a formidable defense line that you must plan for, send out scouts, recon, assemble, use diversions and whatever else you can to have surprise and make the deliberate breach—much like in DESERT STORM when we made our first assault. That was certainly a deliberate breach. We had time for photos, ground recons, figuring out all we needed to do in each unit and place and detailed planning and preparation on how the breach would be executed.

So, back to the essence of the question. When an officer comes out of the advanced course, as I found out later, the person is a product of his experiences. So, we found many commanders knew quite well what engineers should do and were receptive to advice and were comfortable with all of this being worked. Others really didn't understand where they were, thought almost simplistically, like engineers should be along for the ride. "When I have a problem, I'll send for the engineers." Of course, in today's modern armor operations you don't have time to send for them.

That brings to mind the movie *A Bridge Too Far*. When the British Corps was strung out on a single road and came upon a major river obstacle, the commander radioed, "Send back for the bridge." It took hours for the bridge to come forward. The commander has to know the water obstacle is out there and have the bridge in formation with him when he needs it. It is part of the commander's concept translated into operational plans and executed if you're going to fight in today's armor and heavy battle operations.

What I found then was that some commanders were quite attuned to what's going on; some were tuned so that wasn't their prime thing. I also found everybody was receptive to ideas to make things better and to fight better.

General Kroesen as a commander was well attuned to fighting the battle and the necessity for complete interaction of combined arms. General Ott, who followed him, likewise was really attuned to the need for a combined arms fight, not just a single branch or service kind of fight. As a major subordinate commander in the Corps, I felt my job, the senior engineer commander, was to meet with the division commanders and create initiatives for us to work well together.

Combined arms and battle preparations were major motivators for me. A major thing I took on was to move the 7th Engineer Brigade to the field more often. As I went around the Corps, I would tell each and every maneuver commander that when they went to the field on an exercise, we wanted to be with them and we would contribute to their operation, their training exercise, and support it with engineers. If they were in the field, we wanted to be in the field with them. That meant we increased our field time considerably, and it paid dividends.

When I arrived in July of '76, the FTX for REFORGER '76 was to occur in September. I found the 7th Engineer Brigade headquarters was not going to the field as part of the Corps.

That the brigade headquarters was not going, not being a part of the Corps FTX, was shocking to me. The brigade battalions, certain ones, were going. Some were already constructing the many kinds of facilities needed—an umpire headquarters and a Corps headquarters, and a visitor headquarters because REFORGER FTXs draw visitors from all over the world. So, we had a lot of responsibilities, but we were not going out there to be a tactical headquarters. I was told by my staff, when I asked why, "Well, we just never do that. We don't need to be out there. The Corps engineer section can run the engineer part. They don't need us out there."

I said, "Well, gang, we're going." They said, "Well, you know, we can't. All that planning goes on months ahead of time, and the troop lists and all that are finalized and there's no money and there's no place to go." There was only a month and a half left before the FTX. I said, "Sorry about that, but we're going!"

I had them rustle rations, use our own training money, go find us a place to set up, called the Corps commander and G–3 and said, "We're going." They said, "Fine." It was only within our own brigade kind of thinking that had us not going. So, we went out on the REFORGER '76 FTX.

Frankly, it was not a very successful exercise from my standpoint. It certainly led to our preparing for REFORGER '77, which turned out to be a most significant exercise and one that was a culmination of a lot of planning. The seeds for success in '77 were set in REFORGER '76. For example, in REFORGER '76 engineers only built two bridges in 10 days of FTX. One of those bridges came about because we sent a message from Corps headquarters out to the orange forces and told them to build a bridge at this location by such and such a time. Otherwise, they'd have never built it.

In the '76 FTX we engineers really weren't integrated into the operations. So, out of that, and because I lived through that frustration, I had a feeling for how we needed to be prepared for the next year. Our prep for REFORGER '77 was significantly different.

To answer your question, commanders were receptive, but if you, the engineer, really wanted to be integrated, you needed to take the initiative to ensure the integration. I met with the commander of the 3d Infantry Division, who was a bit skeptical when I told him we wanted to be in the field with him on his training exercises. He was taking the whole division out for a January–February winter exercise, and I knew there'd be great training opportunities. He was taking the 10th Engineer Battalion out, and I wanted him to take others from his expected engineer support slice. So, I developed a plan with the staff to piggyback on his exercise. I mean, the U.S. Army's exercises always focus on a brigade and the fight at the line of contact, and the things that happen in front or behind of it never get any emphasis.

I mean, if the scenario had a blown bridge, we'd come in and replace that bridge, the brigade fight moves on beyond it, and it's now in your rear area. Now everybody's using the old bridge all the time and nobody ever blows a bridge in the rear. It's always just the ones right up front. So, for Corps troops on a typical maneuver FTX, there could be a point where there's not much to do in a moving forward operation. So, when we were piggybacking, what

we would do was to develop our own scenario within their scenario, so we would track the basic plans of the division, and our units would responsively support whatever the division engineer and G–3 came up with for support requirements.

In the meantime, we would develop requirements in the rear area that would cause another engineer battalion to be doing realistic training things, and the bridge companies and the combat support equipment companies would likewise be doing things. As an example, we'd be out in the field. The maneuver brigade has this particular tactical problem; the division engineer wants one more company of his supporting Corps engineer battalion to be direct support to the brigade. So, having taken that second battalion to the field with us, we would send the company forward in direct support so it would help with his tactical situation.

In the meantime, we would cause a bridge in the rear, or something else to happen in the rear, which would have the other two companies of the engineer battalion busy. When the other company comes back, as part of the scenario, then we would move it out as the situation dictated. We always had things being done that would require coordination by the line company commander and by the bridge company. We were putting in bridges because we had our own scenario. It would have to blend with the maneuver division's overall scenario and never interfere. By our presence we could then talk them into recognizing that cutting a main supply route was a good realistic exercise for their logistic troops. They would have to bypass around the obstacle because we had the supply route cut, and then when we restored it, shifting the main supply route back would be coordinated.

By this mechanism we provided a depth to the exercise that was not only realistic but to our advantage for training. We took full advantage of it. Initially there was a little skepticism, but once they saw it work, that we weren't taking over their exercise or inhibiting it because we had so many obstacles, they recognized it could work to everybody's advantage—and we then maximized our training opportunities.

Another thing that had started before I arrived was to sponsor bridging exercises. That was another super tool to integrate engineers with maneuver elements. The brigade staff would obtain maneuver rights in a particular area that happened to straddle a river, would coordinate river crossing closures with the Germans, would even call up and submit a plan, as was necessary, many months in advance to get Air Force air sorties to support a training exercise in that maneuver box. Then we would go to the divisions and their brigades and say, "Wouldn't you like to have a good training exercise? We can give you a super combined arms training exercise. We have the maneuver box and the river crossings and sorties, and here's what we propose. We propose you bring your brigade or two battalions of your brigade to this site, and we'll give you one day of training just to get your people to run across the bridge and rafts and get used to driving on them—hands-on river training. After you get everybody up to speed, then we'll run a tactical exercise for three days in which you can, your choice, attack across the river, move forward, and then delay back and cross it again; or you can start forward, delay back to cross the river, and then attack back across the river and go forward."

Colonel Kem inspected the bridging exercises on the Rhine River conducted by the labor service companies and the 565th Engineer Battalion in the spring of 1977.

A most difficult combined arms operation is one where you have to bring the maneuver elements from a spread formation down to constraining points, process them through constraint, and then let them maneuver out and be ready to go again, whether that is a minefield, complex obstacle, or river line. So, we would use this mechanism to convince them that "your commanders would be aptly tested in their ability to communicate, coordinate, write plans, and your noncommissioned officers, company grade officers, and everybody will get a good exercise trying to cross this river—because it's tough. You will really understand yourself better. Not only that, you get a two- or three-day realistic field training exercise. You can attack; you pick the objectives. Here's the way we see it." Let them actually develop the exercise to their needs.

Just as later we got into mission essential task lists, commanders could pick out their training objectives, which ways they wanted to train, write the scenario to get the maximum amount of training the way they wanted it, and we had already done a lot of the early staff work for them. All they really had to do was provide their own training money for fuel and that sort of thing.

In essence, for somebody who thought, "Gosh, I really wish I could get out and train," that hadn't thought about it enough in advance, to have that kind of opportunity was helpful. We're not talking small maneuver boxes, either. It was a ready-made FTX. We would then move the engineer brigade headquarters and one of our bridge battalion headquarters to the field and we'd stay there for a month and we'd do bridge training on our own and then move a maneuver brigade or a couple of brigades through an FTX with supporting engineers.

This provided a great point of integration of engineers into the other combined arms from the standpoint of training activities.

Q: You mentioned the significance of the REFORGER '77 exercise. You were probably referring to the fact that the brigade was better prepared and participated more fully, but were there other significances to that exercise over the one in '76?

A: Yes. To put it all in context, REFORGER '77 provided the impetus for a lot of things that have since happened in the engineer force. If you will go back and read the after-action report for exercise Carbon Edge, the FTX part of REFORGER '77, you'll find that after-action report refers to a lot of things that are now in the engineer force today.

When I came out of the '76 experience, it was obvious that we had to prepare for an exercise. Later on, people like Generals Carl Vuono and William Richardson were talking that up in TRADOC too. That's what we were teaching later at the Engineer School—that leaders have to prepare a training exercise so it's effective.

At the end of REFORGER '76, to go back to that just for a second, on the last day of the battle a tank went across a thousand-year-old bridge that wasn't quite wide enough and kicked out many stones of the bridge. I mean, it was a major German–American issue because some tanker ruined a historic bridge. The bridge was closed and General Kroesen sent out an order saying, "7th Engineer Brigade, go down and put in a bridge overnight so normal traffic can be ready to cross in the morning."

So, we got this about seven o'clock in the evening and our bridge—the second bridge that I mentioned—was in the ground. We started pulling it out and pointing people in the direction of the damaged bridge. We made a quick recon and found out that we didn't have enough bridge, and it was a very difficult site with one bank very high above the waterline. The permanent bridge was high enough to hit that bank, but when we put in a float bridge, you then have to come up the bank, so we would have to do major carving away at the bank. This would require major coordination with German highway and political authorities.

So, I told General Kroesen that we should not build this bridge. First of all, it would be great training over time, but it couldn't be done as part of the exercise. It really needed to be thought out and coordinated with all these other authorities, and we needed to get the right kind of equipment to the site. If we started that night, in the morning it would be unfinished, and we would have people upset again because we went ahead and did this without coordination. He said, "Okay, but I was just trying to find you something to do. I just knew you didn't feel that you had a very good exercise out here."

So, we talked about that a little bit right there—sort of our own after-action review at about eleven o'clock at night on the last day of the exercise, and it was just General Kroesen and me. I said, "I think we didn't come out here prepared, and I need to do a lot of work with the divisions to get it to where we can be better integrated and realistically do all these things. We just have to do better next year." Well, remember, six weeks before that we weren't even going to go to and be in the exercise, and he knew that.

His comment was telling, though. He said, "No," he said, "you know, it's my fault. This is my second REFORGER. Last year I made every commander—division, Corps artillery, engineer brigade, Corps support command—come in and tell me what their objectives were for the exercise and how they intended to meet those training objectives and how they had laid it out so that we planned our training so we got out of it what we wanted to." Then he said, "This year, I didn't do that. I figured with all of that last year they'd know how to do it. So, we came in here and so-and-so really didn't do this and so-and-so didn't do that, and I never caused you to have to come up and show and tell so you could say you were concerned about bridging and this and that and everything else."

That was certainly an eye-opener for me because it was obvious that we had to plan and prepare for REFORGER '77 and have our own training objectives if we wanted it to work out right. I won't say we started that same month, but as we looked toward REFORGER the next year, we did a lot of different things to prepare for that exercise. We started with the troop list. I wanted to put everybody possible on that troop list. I mentioned before we had been revising the general defense plan, so we had all that thinking about how people would be employed, so we used that. I wanted to portray our engineer capabilities—strengths and weaknesses—as a part of Corps combined arms on the doctrinal battlefield during the FTX of REFORGER '77.

On the doctrinal battlefield, if you have a division, you have a Corps engineer battalion in direct support of that division and another general support battalion behind that. Too often, on a training exercise, you know, the engineers are going forward and find a bridge out. Being track mobile, the tankers and division engineers say, "I'll bypass this. The engineers behind us will put one in." Then later when the truck convoys come up that would need that bridge that would have been put in, they just go across the original bridge because everybody's forgotten it was knocked out (simulated), and they move forward.

I wanted to put in the doctrinal slice and avoid that kind of unreality. I wanted to take out sufficient troops to really have two battalions for each division and an appropriate slice of the separate companies—panel bridge, fixed bridge, float bridge, combat support equipment, and ADM—atomic demolition munition.

In addition, typically on an exercise, engineers put in a bridge. Then they're just going to pull it out. When you don't have bridges there in an exercise, it is easy to say, "Well, I'd call up the bridge, and when it gets here I'd wait three hours and then the bridge is in—so then we'll use the original bridge." Or maneuver guys go up to a minefield and say, "Well, no engineers here, so we're going to cross."

So, we did several things that could happen. First, we got the troop list fixed so we had two battalions for every division, plus separate companies. To get that, Corps asked USAREUR for, and I talked with Colonel Ed Keiser of the 18th Engineer Brigade, actually the 24th Engineer Group at that time, to have the 79th Engineer Battalion (Combat Heavy) to come to the field with us. Parts of the 79th would come to us in the general defense plan for doing those antitank ditches I mentioned earlier.

So, on the one side, that is the orange forces, in addition to the 3d Infantry Division and its organic 10th Engineer Battalion, we had the 78th Engineer Battalion available as the Corps battalion in direct support of the division and then we had the 79th Battalion (Combat Heavy) as the one providing general support behind the division.

On the blue forces side, which were going to be the 1st Infantry Division coming over from the States as part of the reinforcement package, we had behind them the 9th Engineer Battalion, which would be the Corps battalion in direct support, and then also coming from the States as part of the reinforcement was the 20th Engineer Battalion (Combat), a Corps-type battalion from Fort Campbell. So, we would have the divisional battalion, plus two supporting battalions, or three engineer battalions on each side. Then we'd put a composite battalion, since I had two composite engineer battalions, on either side with a mix of companies—float and combat support equipment. We took out a full complement. Later on, they decided to run the 2d Armored Cavalry Regiment in to screen in front of the arriving 1st Infantry Division as an extra, so I had the 82d Engineer Battalion, which had not planned to play in the exercise because they were constructing the many required Corps facilities, come aboard for the first two days of the exercise to participate while the Cav was a participant.

So, one early important thing was getting the force structure organized. A second thing was ensuring rules of realistic engagement. We worked hard on umpire rules and we asked for lots of umpires. We took the initiative to work with USAREUR to get V Corps to provide additional engineer umpires so we could try to come to grips with realistic obstacles and really not let people bypass obstacles. That's why engineers don't get battlefield credit—because the maneuver team roars up to an obstacle, soon as nobody's looking, they rip down the engineer tape or whatever that identifies the obstacle and they roar on. We wanted to come to grips with that, so we did it by writing the rules, by having engagement rules that required a unit to do the realistic kind of thing—he had to get the right engineers there with the right equipment if he was going to build a bridge to get across that obstacle that you really couldn't construct because of maneuver damage. Maneuver damage was a factor. He had to have the bridge and the engineers on site before waiting the construction time, and we had enough engineer umpires to enforce that.

Then we talked with the Corps commander and the chief umpire, who was General Webb, who'd been through the previous year's exercise as the commanding general, 1st Armored Division. Consequently, the umpire system knew that obstacles were supposed to be realistically obeyed. At the last briefing of all of the maneuver commanders, battalion and up, the day before the exercise, Lieutenant General Ott emphasized, "I want you all to play obstacles correctly. We don't gain anything by moving them aside. We gain with a realistic

exercise." So, then, at the Corps commander's emphasis, did that mean that there wasn't an obstacle or two bypassed? No, but it meant that we did better than other times.

Another thing we did was to bring adequate bridging to the battlefield. We wanted it there so it could be used when needed. We pulled bridging out of bridge storage parks and moved it down and set up a bridge depot, or bridge park, which would represent where we normally stocked bridging in various parts of the Corps' rear and at storage depots. We did that behind each division, in the Corps' rear of both blue and orange forces. We brought some people down from V Corps and some of our people who weren't in the playing units to run the parks. So, they had bridging available, panel bridge and other bridging that they could issue. So, when X knew they were going to need to put in a bridge, they could draw that bridge and go put it in—no saying if it was available we would put it in. It was available.

Then we played the scenario so we had crews who could go up and take out a bridge and bring it back to the park. So, a unit who was on the advance didn't have to stop, administratively pull down a bridge they had put in tactically, and thus be out of the flow of the tactical combined arms operation.

We tried to play damaged rear areas with interrupted main supply routes. Now, if I can jump ahead again, for example, on one of the days of the exercise we destroyed a major bridge in the rear of the 3d Infantry Division. I'm talking major. The 79th Engineer Battalion got the responsibility to replace the bridge. They ended up putting in a double–triple Bailey—big—over quite a gap. It took them two and a half days to do it. They had to bring in major equipment items to carve down one of the bank approaches. I mean, it was a major undertaking. During the time they were building that bridge, the destroyed bridge (simulated) was closed and not used as a main supply route. There was at that point a 14-kilometer logistic detour for 3d Infantry Division logistic troops to go around.

We effectively, within the FTX, broke the main supply route and caused it to be fixed. The real bridge was used by all the German citizens that needed to cross and that came to watch all the activity building the bridge, but it was not used as the main supply route—realistic in terms of battlefield requirements. So, we worked hard on making realism happen.

Corps' general defense planning had been completed; we had new battalion commanders in; the relationships with the divisions were jelling that we have been talking about. We really had a bright bunch of commanders aboard who worked together well, and so another thing we did was we started anticipating the FTX and how we would interact and support the Corps.

We sent a lot of people down to recon the maneuver area that was south of the autobahn between Stuttgart and Augsburg. We reconned bridge crossing sites so we could try to make sure things happened. There were major autobahns down there and there was a section where the Iller river was bermed and we could not cross there. We were going to have to have rules to realistically simulate a river crossing in that section. We tried to find ways so things didn't have to be simulated. As much as possible, we wanted to make things have to happen. That was ingrained into our approach.

Everybody, all engineer units, went down on a recon. We already had a technique that started long before I got there of having engineer map exercises where all of the engineer battalion commanders in the Corps—and there were eight plus the Corps engineer and brigade staffs—would come to Kornwestheim. The commanders would bring their S–3s and S–4s. Our headquarters had its own small airfield right outside the Pattonville housing area. It had a hangar and was quite convenient. We'd move all our helicopters out of the hangar and then we'd move in tables. We would set up all of the engineers from the Corps in the hanger—that included the divisional ones. We'd set up bleachers and we would run map exercises to run through the general defense plan.

While we had been revising the general defense plan and planning how we were going to fight in the forward defense, we would come in and exercise our plans. We would say, "Okay, now it's D minus 2; where's the 9th Engineer Battalion?" The 9th Engineer Battalion commander or S–3 would come up and tell everyone what they were doing and what they would be expecting to do over the next day and a half. Then we would have others present similarly. We were map-thinking it out, as we withdrew along certain lines, as we attacked back of a line or took various Corps kinds of actions that we would anticipate and describe. So, the S–3, the S–4, and the commander were able to think on the ground how they expected to be employed in the battle.

Our staff, both brigade and Corps, could then think out how that interacted with things that were going on. That kind of exercise was very useful in our general defense planning.

As we approached REFORGER '77, we conducted engineer map exercises on the terrain that we were going to train on. We anticipated the exercise maneuver. We knew that orange forces were to attack initially and they were going to attack up to the Iller River line. Meanwhile, blue forces, with reinforcements coming from the States, would be ordered in to defend the Iller River line with a Cav screen in front of the arriving 1st Infantry Division. After that, there would be a fight between orange and blue. Orange would cross the river and attack, pushing blue back to a certain point. Then blue would counterattack, restore the ground before the river, recross the Iller River, and move forward.

Having that concept, we could then do our own map exercise. The battalions on the orange side would describe what they anticipated during a particular phase; then the blue forces would also. We were able to pretty well war-game out the exercise day by day with expected maneuver and supporting engineer interactions.

Now, we knew there were a lot of problems in the engineer force, things I've talked about. We knew that one major problem was that we were wheeled Corps engineers trying to support mechanized forces. We had certain objectives that we thought and wanted to make sure that our exercise validated the point. So, we sort of scoped out the after-action report in advance—with the objectives that we thought would be proven. Because they were such obvious shortcomings, they ought to be recorded when they came out. One thing we knew we would be able to show was that Corps engineers need to be mechanized on the modern battlefield. Everybody had that in mind.

We knew that the relationships of the Corps engineer company and the divisional engineer company both supporting a maneuver brigade were troublesome and difficult. With a direct support battalion and a divisional battalion, how do you integrate them with maneuver to fight the battle? It's difficult. Today it is solved by E–Force, you see. We wanted to point out those kinds of difficulties on the training and doctrinal battlefield that the REFORGER exercise provided—a great forum.

We felt that engineers could greatly help in the combined arms fight if we could prepare terrain and use obstacles to improve the fires—tank, infantry, artillery.

Another point, we knew it was difficult to move a tactical bridge to be available when you need it. If you have your bridging on the roads, exposed, enemy air is going to attack it. If you have it so far back where it's not exposed, then it's not going to be there when you need it. Remember the example in *A Bridge Too Far.* We knew that it was difficult and so we wanted to work on that. How do you do it? Did we need to rewrite our doctrine or what to solve that question?

We had the new medium girder bridge on that training battlefield for the first time ever. We didn't have it in the brigade yet, but V Corps had it and we brought it down for this exercise. We also had the ribbon bridge available, which we had received since the last REFORGER—also a first time on a REFORGER exercise. So, we were taking out some new stuff, and we knew we wanted to say, "Hey, that's an improvement, but we need more of it. Field it faster." We also knew that the dozer on its tractor-trailer was not the right thing for forward brigade engineer elements and we badly needed the M9 ACE. We knew that because we had been to the field with maneuver elements so many times. We knew that whenever we went to the field, engineer company commanders always left the tractor-trailer and dozer back to the rear. They'd never take it up into the forward brigade area because you couldn't turn it around fast enough on German roads to beat it out of there. It just wasn't sufficiently maneuverable, so it was kept back.

We had this nice list of things we knew were shortcomings. So, we taught our people, as they were going through day-by-day actions, to keep an after-action log—jotting down instances and anecdotes, real-life things that happened to prove the points. As we did our map exercise, we would say, "Hey, we think that's going to happen there. We think this is going to happen here. This would be a good point to emphasize." So, we really framed and scoped out the major elements of our after-action report—what we thought we'd be commenting on and were looking to have identified in the exercise.

Ground recons—people were really familiar with what was going on. We really prepped to try to make sure it was realistic and we did it right. We took out more engineers than have been on a large Corps exercise for I don't know how long. There were 6,340 combat engineers, over 11 percent of the total force of 56,000 in the field.

We had a great exercise. I think we put in something like thirty-one bridges over a 10-day period as compared to the two the year before. People didn't stop action to take out the

bridges they put in. Engineers conducted eight river crossings and installed over 2,000 obstacles.

We were able to say that because of the way we were watching the battle, that the difference in approach of the three different brigades of the 3d Mech Infantry Division, the orange force, reflected the interaction of brigade commander and the engineer. In one case the brigade commander didn't do anything without his engineer's input—close integration. In another case the brigade commander would listen when the engineer could get the door open. In the third case the brigade commander just kept his engineer away. The success of the three in terms of what happened in the battle reflected their relative interaction. The first brigade commander was able to maneuver and did better in his obstacle plans and coordination compared to the other two.

The Corps commander made a statement at the end of the battle. One of his observations, unsolicited—that means he didn't get it from me—was that he felt that the relative ability of blue forces in the defensive phases as opposed to the orange forces was because the blue forces did a better job of reinforcing terrain, combining obstacles and fires.

In one notable instance, the 1st Infantry Division developed an effective killing zone. They called engineers together with their maneuver folks, established a fire trap across from where orange would cross the river. The next morning as that orange brigade moved forward, they were caught in the fire trap—they ran into many obstacles and were caught in the cross-fires of 1st Infantry's tanks, TOW missiles, and artillery and were annihilated.

The G–3 of 1st Infantry Division was Colonel Bill Reno, who had left command of the engineer battalion and moved to be the G–3. He had an engineer's understanding of using terrain, maneuver, and fires. Ted Vander Els was commanding the 9th Engineer Battalion in direct support of the 1st Division. Ted was the commander who spent the night down there with a couple of his companies putting in the obstacles that were the hold-ups, the stoppers, that would spring that fire trap. So, that was the Felheim fire trap.

We had several interesting things happen, all of which carried teaching points. As orange ran for the river, the covering force on the east side of the river, which was expected to delay about 18 hours, collapsed. Orange moved over the terrain quickly and reached the river line in 4 or 5 hours, instead of the 18. Then, when orange pulled up to the river and called up their bridges and follow-on forces, they didn't bother to tell them where the mine fields were that the tanks and infantry had bypassed or breached. So, the bridging, which would have facilitated an early, quick crossing, got caught up in the obstacles and couldn't get through to the river. So, although the combatant force moved and reached the river line early, its capability to cross was not brought up commensurate with it and got caught up in the obstacles that had been bypassed, once again making my point that training to be realistic must cover the depth of the battlefield.

On the other side, the Corps commander did an interesting thing for us. I've got to back up a minute and say we took the 7th Engineer Brigade headquarters to the field, unlike the year before. We rented a village and were established in buildings with our communications

masked in the buildings typical of the way we did our general defense plan. We didn't tent in the woods, we went into buildings where we would be camouflaged within the German countryside. Also, the brigade, like the Corps headquarters, played both orange and blue. Thus, I was both the orange engineer and the blue engineer. Within my own headquarters, my S–2 and S–3 shops had both an orange segment and a blue segment, and they weren't permitted to see the other's side of the maps.

At the Corps headquarters they played the same way. There was a G–3 orange and G–3 blue. The Corps headquarters and the Corps engineer operated on both sides, but it was a control thing too. I mean, the Corps ran the exercise so they were there making sure the training objectives were met. So, I would do the same thing down in my headquarters for engineers. We would play each side—play orange and blue. So, if you wanted to call the engineer brigade for support for something and you were orange forces, then you had an engineer brigade to call to. If you wanted to call the Corps for something, you had a Corps to call to. There was always somebody to call to.

I also wore the white controller/umpire stripe on my helmet. I would go back and forth—I could be blue one day and I could be orange another day. I would go visit the forces in each of those modes. One day I might be helping the 1st Engineer Battalion commander find one of his long-lost companies with my helicopter because he couldn't get one from division. The next day I might be over with the 10th Engineers of the orange force doing something or back with the 79th on their big bridge.

This allowed me then to see both sides and pull all of the engineer things together—to get the most from our training.

I diverted to tell you that, but back to the first day of the exercise when orange had attacked and the 1st Division was in-country but physically on the move from POMCUS sites and staging areas and not yet in the maneuver box—a rather realistic situation. The Corps commander decided to give me and the 7th Engineer Brigade responsibility for the river line, knowing we didn't have forces to defend them but were, in fact, preparing the bridges to be blown. The concept was that the 1st Infantry Division would come in and take over responsibility for the bridges and the river line from me. I had no forces to defend with but had the 9th Engineer Battalion, which had not yet passed to the control of the 1st Infantry Division. The 20th Engineer Battalion had arrived, too, so it was also attached to me. So, in effect, I now had the blue force responsibility for the river line, and we had some fourteen or fifteen bridges.

As I mentioned, the covering force collapsed quickly. Instead of being relieved by the 1st Division early enough so they could fight the river line battle, I was still owning bridges when orange forces were approaching those bridges. So, the 9th and 20th Engineer Battalions, working for me, started destroying the bridges without exposing that there was really little force on the near bank. It was a dicey time as I was flying about trying to figure out who and what and where. I got a real appreciation for the difficulty.

Colonel Kem (front left) reviewed the 20th Engineer Battalion's plans to destroy bridges on the Iller River in Exercise Carbon Edge, REFORGER 77, in September 1977.

That experience addressed a real doctrinal issue: which bridges, then, do you retain for Corps responsibility? Answer: the fewest possible—those that are significant and critical to that level of commander. Thereafter, in our general defense plan, we pushed a bunch more down to division commanders while we kept a few for Corps. For those, we said, "You've got to call me before you blow these; the others are yours." So, we modified our general defense plan from that FTX experience.

One exercise we almost didn't get to run because the FTX was terminated early was deployment of the ribbon bridge by CH–47s. Blue forces were counterattacking back and were about to cross the Iller River. We had tactically planned the first helicopter delivery of the ribbon bridge. We'd never tried it in training before. We'd figured out how we wanted to do it. We had a good operations plan with the Corps aviation folks and our own 502d Ribbon Bridge Company. The aviators would deliver the bridge by helicopter, and the bridge company would put it together, and we'd get our maneuver teams across. The idea being that as the force is moving forward, you want to cross the river in stride, that is, without delay. The commander doesn't know which of his tactical units is going to have success, which one won't be opposed at the river line. So, he doesn't want to commit his bridge assets to a road that binds it to one crossing if that turns out to not be his best opportunity.

By keeping the bridge back with multiple roads or paths to the river line as opportunities dictate, he can then decide which one to move on with success—catch one where he can get

forces across the river more rapidly before the enemy has an opportunity to oppose the crossing. We rigged each ribbon bridge section so that a CH–47 Chinook could pick it up, move it down to the river, and deploy it in the water. The CH–47s would remain back in defilade, back behind hill masses until they were needed.

Unfortunately, the exercise was terminated early because the Canadians went into a town that was off limits, crossed an existing bridge that was supposedly blown—because they were not supposed to be in the town. The Iller River had been crossed, and then people got in a verbal fracas as to who was right or wrong. So, Lieutenant General Ott, the Corps commander, said, "This is probably a good time to stop the exercise." We huddled together quickly with the aviation folks and immediately—I mean, within the hour—put the bridge in on the Donau River in the same manner of operation we had planned for the Iller.

The first CH–47 brought in an assault boat and the operator and some crews. They dropped the assault boat in the water and the crews on the bank. The crews captured the boat, hopped aboard as the next CH–47 came around with an interior float unit of the ribbon bridge. After that was put in the water, the assault boat moved up and triggered the release, and the bridge section unfolded right there in the water. Meanwhile, as that CH–47 flew off, the next one rounded the hill and came in with the next float. He put it in next to the growing raft and the crews hooked it up. One after another those CH–47s came in, dropped one float at a time, until we built the bridge. We felt we really had proven a really good principle right there—even though it was moments after, rather than part of, the exercise.

So, I guess I described basically what happened on FTX Carbon Edge. It was very successful. There were a lot of folks in that exercise of note—Paul Cerjan was commander of the 10th Engineers at that time, is now Deputy Commander in Chief in Europe. I mentioned General Reno. Brigadier General Ted Vander Els, then commanding the 9th Engineer Battalion, later was Director of Combat Developments at the Engineer School at Belvoir with me. A lot of good folks contributed a lot of good time and effort to making things happen.

Fred Parker was there as the assistant Corps engineer. He later on also became Director of Combat Developments for me at Belvoir.

Out of the Carbon Edge FTX came several things in the after-action report. We really made the case that you had to have mechanized engineers in the Corps. Now, for the last three or four years, all but one of the engineer battalions in Europe have been mechanized. It came out of Carbon Edge. The following year, as Corps engineer on the Corps staff, I fought the battle to make sure mechanization was in the Corps' program analysis and resource review, which leads to the POM [preparation for overseas movement], which leads eventually through the Army system. USAREUR prioritized it high on the command's needs. We found the armored personnel carriers, once infantry turned them in to get Bradleys, M–113s came to the engineers and we were mechanized at Corps level.

The after-action report of the REFORGER before '76 from the 7th Engineer Brigade had said, in a rather self-serving manner, "I think that this exercise has proven that wheeled engineers belong on the same battlefield as tanks." I thought that somebody was fooling

somebody, namely themselves. It was important that the '77 after-action report say just the opposite and make the point so they could be brought on later. We also made the point that we had to have the M9 ACE quickly in today's battle; the dozer and tractor-trailer combination did not fit the heavy force battle.

We also made the point that engineers needed to have remotely delivered mines. Hand-emplaced mines just took too long to put in. We made the point that our breaching capabilities were inadequate and engineers in the heavy force critically needed a breaching capability. We made the point that we had to have modern float bridges throughout the force. We wanted to get them totally converted from the M4T6 and Bailey. We made the point that the mix of Corps battalions and divisional battalions was only ad hoc and they really didn't fit together. As we needed to operate to support heavy forces, what we really needed was something like an engineer group or something like that within the division so there would be an engineer battalion per maneuver brigade. That was the first statement at that time of what would become the concept for E–Force later. We made the point that we needed to have more rapid terrain analysis capability from the topo folks available forward at Corps and in the divisions.

As you can see, we made quite a number of telling points that were to improve the combat engineers of today.

We made the point that we needed a permanent engineer at brigade level on the brigade staff. We were doing things ad hoc by necessity. For instance, in the 3d Infantry Division, the organic 10th Engineer Battalion headquarters would basically support one maneuver brigade plus the commander would do his division responsibilities. Its direct support battalion, the 237th in wartime, would have its battalion headquarters support another maneuver brigade, again with a mix of either the 237th or the 10th companies. Then they would take the remaining companies and put them with the third maneuver brigade with a field grade officer from each engineer battalion and set them up as an ad hoc battalion headquarters. That's how they were trying to achieve, ad hoc, the requirement to support all three maneuver brigades with a field grade headquarters and multiple companies. So, we made the point that that was bad; we needed the engineers throughout—thus, this later became E–Force.

We also made the point that we had to have an engineer at maneuver brigade headquarters all the time, so the brigade commander would always get the engineer contribution into his planning, his estimate of the situation, his concept of the operations, and the brigade's execution. Later on, that became the brigade engineer position filled by a major.

So, out of the REFORGER '77 Carbon Edge field came the brigade engineer. Mechanization took a step to the plus side instead of the minus side and became a happenstance several years later. The M9 ACE picked up valuable field support that was later turned into messages from Corps headquarters and USAREUR back to the Engineer School and the Army system with high-level commanders saying, "I got to have the M9 ACE." Breaching was listed as a critical heavy force inadequacy and the strong message was sent that things were amiss when engineers had to ad hoc things between two battalions supporting a division.

Q: Well, this exercise was important, then, in setting your agenda for your next several assignments, at least when you were commandant in the Engineer School.

A: That's right.

Q: Highlighting the things that you wanted to concentrate on.

A: We concentrated on writing a good after-action report, moving it along, and trying to support that at the Engineer School. I was in contact with Major General Jim Kelly, who was then commandant at the Engineer School, and Colonel Roger Peterson, who headed Combat Developments. We were trying to support their initiatives and communicate with them—we were trying to provide field experience and write-ups to support what the school was trying to do for us in the TRADOC arena. When I came back and briefed the Engineer Center team and wrote the after-action report, I asked General Kelly if we couldn't write an entire issue of *Engineer Magazine* about Carbon Edge, and we did. There were contributing articles by all of our battalion commanders on their various experiences. The 79th commander wrote about Elmer, his big double–triple Bailey bridge; Ted Vander Els, of the 9th, wrote about the Felheim fire trap; and so forth. We had people put together articles of interest for communication throughout the engineer force. It did become a real resource—as commandant at the Engineer School, Fort Belvoir, I could refer back to "REFORGER exercises have proven…," and use that Carbon Edge FTX experience as a basis for justification and rationale for taking certain actions.

Q: So, you were in this position, then, for—

A: Two years.

Q: —for two years. You weren't there for REFORGER '78—was there a '78?

A: There was a winter REFORGER in early '79.

Q: You had already moved on since then, probably?

A: I think the REFORGER exercise was in January or February of '79. I'd moved up to USAREUR headquarters by that time. I was fortunate that when I arrived, brigade command was an 18-month tour, but then the Army changed to a two-year tour for commanders. My request to stay an extra six months was on the Corps commander's desk the next morning and was approved.

Q: So, you were there from—

A: July '76 to July '78.

Q: Let's talk about your third hat as community commander of the Ludwigsburg–Kornwestheim military community. Before we talk about particular aspects of that, maybe you could talk, just in general terms, about what are the community commander's

responsibilities. These are a little different than your other two hats that you were wearing. In general terms, what role does the community commander play?

A: Within the U.S. forces in Germany context of that time and existing today, the community commander really operated as the mayor or city manager of the town or group of villages that made up what was called a community—a jurisdiction in terms of our civilian populace, where we have counties and cities. It was a geographical jurisdiction that brought together all of the—I'll use the term "support relationships"—having to do with taking care of our forces, soldiers, civilians, and dependents in Germany.

In other words, we put a division there to fight, but that division has to live in barracks and have motor pools. Then we bring the families over and so you need housing, both bachelor and family housing. Then you need recreation services and also logistic services to provide necessary supplies and services. That means you need POL tank farms and ammunition depots and pretty soon you have a very large infrastructure and a very large component of people in addition to those in the infantry division.

We, of course, were living within the German populace and Germany, and the U.S. Army in Europe had some 800 different installations and was organized into 39 communities. Those 39 communities, then, were the way the organization was geographically organized and provided the jurisdictions to manage the support tail that goes with the fighting force.

To run that, then, were a lot of staff people of many different kinds of talents. Back when I first served in Germany in the '50s, there were organizations called the Northern Area Command, Southern Area Command, et cetera. I guess there was somebody who was the installation commander, in the terms of, if I were using the United States, say Fort Knox. The commander of Fort Knox is the installation commander. In Germany, the difference was that it was not just one place with a fenced community around it of many different parts like Fort Knox. So, back in the '50s there was an installation commander who worked for that area commander, but that commander and support elements were completely separate from V Corps, VII Corps, the divisions, and all of the fighting forces. There were two separate chains of command.

Somewhere after that, it was decided to merge the two chains. I think it was in the Blanchard era that the senior tactical commander in one of those geographical jurisdictions was made the community commander. The idea was that now the same person was responsible for support of the families, the logistics, and for his units and his troops. He was the right one to interact with the populace; he was the right one to balance the priorities of time, effort, and resources between different missions; and they would work out better than separate commanders.

So, the community commander then was in charge of a jurisdiction that had some geographical boundaries to it. The job varied because the size of the communities varied. Some were small communities; some were very large. I happened to be part of a very large community, the Stuttgart greater military community. The Corps commander, General Ott, was the community commander. I was really a subcommunity commander. In the greater

Stuttgart military community we didn't use the term "subcommunity" because many of our subcommunities were bigger than some other communities, so we just used the term "community commander."

The support structure a community commander had would also vary considerably. Some of them had full service: full facility engineer and housing offices, logistics functions, public affairs functions, and all the rest. Others did not. In Stuttgart there was only a single facility engineer for the whole greater community of six subcommunities, so I didn't have a separate facility engineer that worked directly for me.

There was another major function—that was the interaction with the German populace, and the German mayors, the *Burgermeisters*, and county commissioners, the *Landrats.* That varied by community too. Some commanders would deal with a single county or a single town. Although I didn't have any facility engineer, I had numerous political contacts across the northern edge of Stuttgart. General Ott left to me all dealings with my *Länder Landrat* and also with the *Burgermeisters* and city councils and staffs in Ludwigsburg and Kornwestheim, and about five other smaller communities where my different military kasernes were located. I had some fourteen separate small installations that were located in and among these various towns.

Q: About how many people were in the Ludwigsburg– Kornwestheim community? Dependents and soldiers?

A: There were eight battalions of about 4,100 soldiers. There were about 6,500 dependents—some 1,340 plus families. Pattonville was a very large housing area that served all of the greater Stuttgart military community, not just those in the north. So, you see the cross lines of this held. I had soldiers living in Pattonville that worked south of the town in Headquarters, VII Corps, or Headquarters, European Command, or for the Second Support Command or the 1st Infantry Division (Forward). We also, of course, housed the soldiers and families who worked in the various battalions in my community. Those soldiers had responsibilities with me to help take care of the families. Yet, I would go to Robinson Barracks, another subcommunity, for facility engineer support, and we took direction from VII Corps.

The schools all varied too. The senior high school for all of Stuttgart was in my community. Students bused from all over to come to that senior high school. So, I was the person in the greater Stuttgart community directly responsible for supporting the senior high school. I also had a middle school and a couple of grade schools. We also ran the youth programs—the youth soccer, basketball, football, et cetera. We had a library.

There was a small snack shop. We didn't have many services there. Most of our people went to the big post exchange in Robinson Barracks. We ran buses back and forth. The major hospital was in Bad Constadt, which was 20 to 25 minutes away, and we'd also run buses over there. U.S. forces living in so many different parts in a huge military community like Stuttgart have just all kinds of interrelationships and problem areas and things that need to be worked out.

Thus, there was a staff that addressed those kinds of things and also a community commander who was responsible for both the tactical side and the support, community side. I couldn't say, "That's another's responsibility, go do it." I had the responsibility to get it done and make sure it was done for both sides of the house.

Q: Well, I want to talk about some particular subissues that you've been talking about, but obviously a lot of those issues had to be handled by your staff. What sort of issues reached your desk? What sort in that two-year time period?

A: From the community side of the house?

Q: From the community side that occupied more of your attention than others.

A: Well, just the whole host of things pertinent to a city. There were the streets that weren't getting fixed; the budget issues—trying to figure out where we needed things. For instance, we had a theater that only had a men's room, didn't have a women's room. So, we had to work that through the facility engineer to try to get that accomplished—so that was a facilities kind of thing.

There were traffic issues. The Germans wanted to change a highway and change access/egress to our facilities. There were many problems in the school. We had a big concern about drugs and drug availability around the high school. Although I didn't have a provost marshal working directly for me—the provost marshal worked for the greater community—nevertheless, the provost marshal always had people out in my community area. We had one plainclothes policeman who worked around the school. He would report in to me as the community commander involved as well as make his normal reports for the blotter back to the provost marshal. That didn't go to the community commander, General Ott, except as reported by the provost marshal, but every day it came to me so that I could do something about it. General Ott's expectation was that I would do something about the incidents.

There were a lot of issues that were morale and discipline issues. Families would play loud music. Families were inconsiderate of others. Families had children who were truants, who ran away from school, or who would pick on other people. When you live in such close proximity as we did over there, there are a lot of those family kinds of issues. There was a staff structure to try to deal with those at a low level, but ultimately some of them came to me. Through our procedures they might come to me with a recommendation that the family be sent home—that extreme—or the family would be denied certain privileges.

There were all kinds of dealings with the local mayors and governing officials. Oftentimes, they were meetings—their staff and ours—so we understood each other better, talked with each other. There was a lot of that kind of activity, and we would always invite the local officials to our changes of command and receptions, and we would get invited over there. Each side was trying to keep a dialogue going so that when the sticky things came up, such as a bunch of soldier hoodlums who damaged some cars downtown and got thrown in jail, that

we could then try to address, justly, the image impact of Americans living in the German populace.

There were things like, for example, when I arrived we were operating a Sunday stock car race out at the trash dump on the other side of the airfield. This was very obtrusive to the Germans because the dust clouds and the noise on a Sunday afternoon were abhorrent to them. The noise was very annoying. The roar, roar, roar as twelve to fourteen cars roared around a tight circle and the cloud of red dust that rose—you could see it for miles—drifted over and settled in their homes. The mayor brought that issue to me, with petitions. So, I would have to deal with that kind of issue, as well.

There was a continuum of things that had to be addressed. Another was that I sat on the school board for all the military schools along with the other community commanders. I tried to be personally present in and about the school, to be helpful. We had community budget meetings, and we had community commander meetings of the greater community. I mean, there were all kinds of things that any mayor or community manager would get involved in.

So, which ones surfaced to me? Most of them. The contact with the *Landrat* or with the mayor was always me, not the deputy—because that's who they wanted to talk to. I wouldn't start the process of the discipline problems—we'd try to work them down at a lower command level and save me to be the review authority and final determinant so those things didn't have to go up to VII Corps commander. On those things I would become involved only at the threshold level where they passed somebody else's authority.

Q: What about facilities? By this time in the late '70s, I know, there were a lot of problems with the state of the facilities in Germany, particularly barracks and family housing. A lot of problems with quality and maintenance. Were those beginning to be addressed?

A: Well, some of the programs were already started, such as the Modernization of U.S. Facilities Program to fix barracks. That was ongoing and might have reached this community or that, even my community, one set of barracks but not yet another. We would have some undergoing the change because we couldn't do all of them at once. So, that was starting to be taken care of.

The housing areas had had some general upgrades, but they weren't in the best of shape. There was not a great deal of funding available. We were coming out of the Vietnam War and, like everything, we all wanted certain things to make the community whole.

One of the problems in my large community was having a place where I could bring people in to meet, a community meeting, so to speak. Then, when I'd been there four or five months, the gym and auditorium at the elementary school burned down, so we lost that large meeting facility. We wanted to get volunteers to contribute their time and draw together a community feeling but we really were inhibited by limited space. How can you bring people together, talk to them together, develop activities that get them all involved during long winter months, with so little available inside space?

Since then, I've returned and feel rather good about what has happened in Ludwigsburg–Kornwestheim. They now have rebuilt the auditorium at the elementary school and they have built a new middle school on the same grounds, which provides extra community capabilities. They have also built a bowling alley in the community, which provides another outlet for people's energies, improved the branch post exchange, and renovated the theater. So, some things have improved over time.

Q: What about facilities engineering support? I think by the time you got there in 1976—prior to '74 I think the facilities engineers had reported to the Engineer Command. That had been disestablished in '74 and the facilities engineers made responsible to the community commanders—in this case it would be the community commander at the level above you. I know that was a pretty difficult transition. What did you see as the quality or the problems with facilities engineering support while you were there?

A: Well, most of it had to do with money. Funding was still, as I mentioned before, austere. So, you couldn't do everything you wanted to do. The facilities engineer worked at the greater Stuttgart military community. I had no feeling for how it'd been before, when it was under the Engineer Command, so I had nothing to compare it with. There was no reflection back. I just don't recall it being said, "We used to do it this way; now we have to do it this way." So, I just lived with what we had, which was a normal relationship like you'd find in any post, camp, or station in the United States.

The maintenance folks were mostly German nationals and they worked the work orders we submitted. We had many more things that needed to be done than could be done by those folks—there was always a backlog. I can't really make a judgment that that was due to the organization or management. I think it was primarily a resourcing issue with a lot of valid needs beyond what could be met with dollars available and people available.

I have to say that my understanding of this was perceptibly better later when I went to the headquarters in '78–'79 and was involved in the programming of monies at USAREUR headquarters for allocation for facilities and then when I returned a year after that to work in the Office of the Assistant Chief of Engineers. As the Deputy Assistant Chief of Engineers, I was involved in the Army's Program Budget Committee's and the Select Committee's in-fighting for funds. One of the things we fought for in the '82 budget was an additional $200 million for Europe for the backlog of facilities maintenance. I remember that well because on the last day we worked with the Vice Chief of Staff, General Vessey, to get those funds reinserted into the Army program—certainly my understanding, having lived in Germany, was helpful in articulating the need.

That number reflected the fact that we had been living at a lower level for some time and only in this particular budget year was it being really addressed and money to correct the deficit being added.

Q: The term "facilities engineer" is still being used at this time rather than "DEH" [Director of Engineering and Housing]. That term comes in a little later, I guess.

A: I believe so. That's my recollection.

Q: Were there any problems with the facilities engineers reporting to General Ott rather than to you? Did that create difficulties in getting the work done or did you not perceive that as a problem?

A: Oh, some, but it's like everywhere else. There's a chain of command and he was my boss both on the troop side and on the community side, and so I had access to my boss to work the problems. He had a deputy community commander who did most of the legwork in the Stuttgart community, and that was Colonel Bob McDonald, Corps of Engineers. Bob had once been in the 7th Brigade and in the Ludwigsburg–Kornwestheim community, so he was familiar with us.

He didn't bend over backwards to help us because he also was subcommunity commander for Robinson Barracks in addition to being the overall deputy. We would have our arguments and discussions on allocation of resources and priorities and that sort of thing, but he was very professional in working these out. We'd make our case and he'd make his case and we'd work out a lot of them. Very few of them went up to the community commander for resolution. I mean, most of them Bob McDonald resolved for all six subcommunities. When you don't have enough money to go around, everybody feels a little short, so we had some very interesting meetings.

Q: I didn't realize that General Ott would have a deputy particularly assigned for the community—

A: So did I. I should state that as I wore the three hats, I had three deputies or assistants, one for each. I had a deputy community commander, a deputy brigade commander, and an assistant Corps engineer, each one a lieutenant colonel. Otherwise I couldn't have pulled off my responsibilities. In each case they were the person there daily. I was the one trying to provide focus, direction, resolution, and carried the accountability and responsibility. They would go down and interact with the staff. I didn't have to be at every staff meeting in the community. The deputy community commander would work that staff every day and do the follow-up. He was the one who would take those family disciplinary cases I talked about, and they would focus up to him, hopefully for his resolution, prior to getting me involved.

But, again, the mayors didn't want to talk with him. They would include him in, but when they sat down they wanted to talk to the boss, so then I would get involved. So, it worked much like anything else. You try to work at the staff level where possible. Some things rise up and have to be dealt with by the boss, and the boss in every case has to give direction, set standards, articulate needs, fight the battles for resources and that sort of thing after the staff's done their homework.

Q: You talked about the relationships with the German community. I suppose it would be inevitable that most of those issues would focus on the sort of rough edges of the interaction between the American community and the German community. Is that the case? You

mentioned the one example—I think the Germans have fairly strict noise regulations, don't they?

A: Yes, they do.

Q: Sort of working the rough edges and maybe the cross-cultural conflicts, things perhaps that Americans aren't used to that the Germans would be more sensitive to, or vice versa.

A: I guess I'd have to answer that yes and no. Certainly the example I gave was on the rough edge of where we were doing something that was counter to not only their noise standards but their culture that Sunday afternoon's a quiet afternoon. They felt that not only were we violating that, but that we were insensitive to their sovereignty because we wouldn't do something about it. That's the situation that I found myself.

Not everything was on the rough edge. What we tried to do in the community business from the top at USAREUR on down was to be proactive. General Blanchard started the German–American clubs and pushed the interactions. He started all commanders going to the Defense Language School at Monterey, taking German before they went over to take command. Every soldier that came in took a "gateway" class in German language within the first month or so of arrival. Everyone would have a better understanding of culture, a general familiarity with language, and an ability to be sensitive to things about Germany.

We had German–American clubs, and German–American youth clubs. Part of our community structure would have a person who was the facilitator for German–American youth clubs, and he would try to pull people together, go to meetings, work up transportation to make positive interactions happen.

Then we'd have our fests. We, together with the local communities, put on a German–American folksfest. We would have certain booths and they'd have booths, and we'd hire a carnival and try to bring German citizens and American citizens together to this fest, so we would be doing things together. We weren't one community and they another community—we tried to pull them together. We tried to be very proactive in articulating these kinds of things so as to avoid the rough edges. When things were coming up, we'd be very sensitive to them. They would warn us if a certain holiday was coming up and they felt a certain element might be out—and then we would acquaint our populace.

If something happened, like a group of soldiers who came out of a bar one night and broke car antennas and so forth, we'd get on to that quickly and try to figure out who it was so we could get them to pay back the people whose cars were damaged. If we couldn't do that, then we would send a U.S. claims person down to process their claims to get them hands-on service so they felt that we weren't pushing them away—insensitive to their needs. Yes, it happened. Yes, Americans did it. We're sorry about that. I can't correct it but I can address it from the perspective of the claim relatively quickly.

So, there was a lot of work on avoiding rough spots, and then we had to address them when they came up.

Q: On the disciplinary side, you just mentioned some examples of families. What sort of disciplinary legal responsibilities did the community commander have, or was that handled within the individual units, or did it mostly concern families for the community commander?

A: Well, the general court martial authority was at the Corps headquarters. We had special court martial authority then where we were. We were pooling judges by that time and pooled prosecuting attorneys, and so those all came out of the Corps headquarters. We had one JAG officer who normally worked all the cases for us. He was always about and had access to me—we would invite him in to staff meetings and that sort of thing.

So, we had the U.S. Army's court martial system, which wasn't applicable to dependents, even for capital cases. So, many of those the German authorities would make the arrest and they would be incarcerated in a German jail. Then the procedures would be through the JAG folks as to how that was dealt with, and they were advising me, or General Ott, the Corps commander.

Q: So, you would possibly get involved in some dependents' legal problems, personal problems with—

A: Yes, we were involved with dependents' legal and personal problems and with the German authorities.

Q: I guess what sort of impresses me about this is what you started out talking about—the enormous range of issues that a community commander is involved with, particularly in a foreign country with a lot of different sorts of people, not just soldiers in green suits but kids and wives and husbands.

A: Civilians who worked there, the complete range.

Q: Any other issues about this community commander's job you'd like to talk about?

A: No. Can't think of any.

Lieutenant General David Ott (left), Commander of the VII Corps, and Colonel Kem as Kem left his assignment as Commander of the 7th Engineer Brigade in July 1978.