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### CHAPTER 3 THE POST-VIETNAM YEARS

Like other Vietnam era classes, the number of our classmates on active duty after the war dropped below the historical retention rates for West Point graduates. As we reached four years of service, the years required to fulfill our active duty service obligation, many of us were extended on active duty, and at the six-year mark, only 330 (or 63.6%) of our original 519 in the Army remained on active duty. At the 11-year mark, 289 (or 55.7%) were still in the Army and at the 21-year mark 198 (or 38.2%).<sup>1</sup> At 25 years 97 (or 18.7%) and at 30 years 27 (or 5.2%) remained on active duty in the Army. Larry Isakson, who retired as a colonel in October 2005, was the last to retire from active duty. Larry wrote: "It took me 40 years to complete 20 years of active duty."<sup>2</sup> The longest serving of our classmates, Bob Doughty, completed 40 years of service in June 2005 and retired shortly thereafter. As President of the Army and Navy Academy in Carlsbad, California, Steve Bliss continued wearing a uniform the longest. Army regulations permitted retirees who were JROTC instructors or who worked at military preparatory schools such as the Army and Navy Academy to continue wearing the uniform, and Steve did. On January 14, 2014, he relinquished the Presidency of the Academy and hung up his uniform.<sup>3</sup>

In the almost 50 years that members of our Class wore the uniform, numerous changes occurred in American national security policy, structure, and means. We came on active duty just as the United States sent significant combat forces to Vietnam. After the United States left Vietnam, we went through our first strategic and doctrinal shift as the armed forces changed focus from Vietnam to Europe. At the same time, with the last draftees leaving the service in September 1975, we went through our first "downsizing" as an all-volunteer force replaced a force relying on a combination of volunteers and conscripts. All the armed services, but especially the Army, devoted considerable time and energy in the late 1970s to restoring discipline and confidence in units and rebuilding the officer and non-commissioned officer corps. The armed services also adjusted to the increased presence of women in their ranks. The demand for equal rights for women and for more volunteers in an all-volunteer force resulted in women being added in larger number to active, reserve, and National Guard units and being accepted into the service academies and ROTC. Additionally,

considerable change resulted from the ending of the Cold War in 1989-1991 and the almost simultaneous launching of operations Desert Shield, Desert Storm, and Provide Comfort in the Middle East. In the wake of those operations we endured another "downsizing" and shift of strategic focus similar in many ways to the one after Vietnam. As the threat of a massive nuclear exchange with the Soviet Union subsided, the threat of a nuclear or cataclysmic strike from a deranged dictator or blood-thirsty terrorist also emerged. Such a threat became most apparent when terrorism reared its ugly head on September 11, 2001, and struck the Twin Towers in New York City and the Pentagon in Washington, D.C. The long wars in Iraq and Afghanistan and the global struggle against terrorism brought challenges very different from those of Vietnam and the Cold War.

Amidst the changing national and international environments, a veritable revolution in military affairs occurred. Remarkable advances in precision munitions, communications, strategic mobility, satellite technology, intelligence acquisition and assessment, and previously unimaginable computer and electronic applications changed the way armed forces functioned in peace and war. Rarely has any four-decade period (1965-2005) in American military history witnessed such remarkable, broad, multi-faceted change.

Our classmates not only adjusted to these changes but also helped shape them. Of those remaining on active duty, eighteen of our classmates became general officers, including three who were Professors USMA. Most notably, Ric Shinseki served as U.S. Army Chief of Staff. We also were leaders in combat. Wes Taylor commanded the Ranger battalion when it dropped into Grenada in October 1983, and Bob Higgins commanded the lead brigade of the 3rd Armored Division when it attacked into Iraq in February 1991. Fred Scruggs commanded the 7th Special Forces Group during its operations in Central and South America. Harry Dermody played a major role moving VII Corps from Germany to the Middle East for the first Iraq War. Chris Needels served as a battalion commander in "a special operations unit which is not publicly acknowledged by DOD." He later was inducted into the Skydiving Hall of Fame.<sup>4</sup> As leaders and staff officers, we contributed to highly technical areas such as research and development, computers, nuclear systems, and foreign area officer. John Concannon was selected to be a member of the Defense Attaché Hall of Fame and the MI Corps Hall of Fame. Tom Fergusson also was selected for the MI Corps Hall of Fame. Seven of our classmates served as members of the Senior Executive Service whose positions correspond in protocol to those of general officers. Ray Pollard was selected to be a member of the Army's Operations Research and Systems Analysis

Hall of Fame, which--with his induction--had only sixteen members.<sup>5</sup> Fingerprints from the Class of 1965 can be found in, to name a few, Ballistic Missile Defense, information warfare, the Army's ground vehicles program, the 9mm pistol, the 35 Standard Army Information Management Systems, and unmanned aerial vehicles. Less obvious but perhaps more important since no incidents occurred, Barry Levine oversaw the withdrawal of nuclear devices from the Army's arsenal. Of those continuing to contribute in the Reserves and National Guard, Dick Coleman rose to the rank of major general and eleven others to colonel. Our efforts strengthened and protected our nation and fulfilled our promise to serve to the best of our abilities.

#### THE ALL-VOLUNTEER ARMY

The final years of the Vietnam War coincided with morale and discipline in the Army reaching a low point and with many of our classmates leaving the service. Ric Shinseki described the Army when it came out of Vietnam as "torn and in search of identity, discipline, and direction" and emphasized, "Men of courage, strength and vision marched that Army through the Cold War and Desert Storm, and back out again."<sup>6</sup> Leo Kennedy wrote, "I felt (and feel) strongly that those who stayed in the Army from about 1970-85 or so, when it was no fun and there was every reason to get out, saved it. The Army was a mess and it took some very hard work, leadership at every level, discipline, and forward thinking to get things straightened out."<sup>7</sup> John Wattendorf wrote: "When the last U.S. forces left RVN our Army was at one of the lowest points in its proud history. Professional officers and non-commissioned officers were leaving the Army in droves. But not all left. Some dedicated professionals stayed the course and shepherded what by the time of Desert Storm would prove to be one of the most successful organizational transformations in history."<sup>8</sup> As still young officers, we helped the Army make this successful transformation.

The confluence of the withdrawal from Vietnam and the creation of an all-volunteer force opened the door to huge personnel problems and numerous personal and professional challenges. Sandy Hallenbeck wrote: "All units were, at one time or another, plagued by severe racial unrest, rampant drug use, and bouts of indiscipline. To some extent, the same problems were occurring in Vietnam and throughout the Army. However, units in Germany appeared (at least to me) to be the most affected, primarily because the small cadre of officers and NCOs in Germany were not quantitatively or qualitatively up to the task of providing strong leadership, dealing with the drug and/or racial problems, and/or addressing the dissatisfaction of

soldiers who had been drafted and (despite their good fortune in being assigned to Germany) were unhappy with their living and working conditions and with the drug and racial strife in which they were immersed." According to Sandy, disciplinary problems were exacerbated by units not having enough personnel to man all the equipment and having to place equipment (as much as one third) in administrative storage. A shortage of fuel, ammunition, and spare parts compounded these problems by limiting the amount of training units could conduct. Vehicles and barracks, said Sandy, were "run-down and in need of repair."<sup>9</sup>

Amidst these significant challenges, we worked hard to make the all-volunteer force work and to restore pride and rebuild effectiveness in those wearing uniforms. As senior captains and majors, many of us served as company-level commanders, operations officers and executive officers in battalions or as staff officers in brigades, division artillery, or corps headquarters. For example, Skip O'Donnell served as a Battalion S-2 and S-3 and commanded two batteries in Germany in the early 1970s. He also served on the staff of VII Corps. He wrote: "My experience in Germany in the early 1970s was very troubling. There were a lot of drug problems in the units. My first battalion commander wanted me to sign the monthly battalion operational readiness reports as a C-3 rated unit while we had only one half of the personnel and much equipment inoperable. Many of the battalion commanders were below average." To make matters worse, a Quartermaster colonel became Skip's artillery group commander, and he, to use Skip's words, "did not know anything about Field Artillery operations."<sup>10</sup>

Some of us found much personal satisfaction amidst the numerous challenges. Doug Kline wrote about his experience as an Executive Officer in a Field Artillery battalion: "As Battalion XO, I had the challenge and privilege (although I'm not sure I recognized the privilege part at the time!) of working with and coordinating the Battalion staff, including the S-3..., and 5 2LTs! I loved working with all of them, especially the lieutenants. It was great to help guide their development and watch them as they made mistakes, learned and grew to the point where we operated efficiently as a staff and had fun at the same time. The experience was very gratifying to me."<sup>11</sup>

Steve Harman was very proud of what he accomplished in Korea in 1975-1976 as the S-3 for the 307th Signal Battalion, an "echelons above corps" unit that provided command and control communications to units deployed in a "tactical setting." Along with another signal battalion, the 307th was responsible for communications services in the northern half of South Korea. Proper training, careful planning, and good leadership, said Steve, "minimized the downside impacts of frequent turnover due

to one-year tours in Korea." The greatest challenges Steve faced were neither technical problems with equipment nor disciplinary problems with soldiers. The battalion had "state of the art" communications equipment and teams of soldiers who were well trained for the equipment they operated. Though there were some "racially based fights" over a holiday when "the soldiers had a few too many beers and too much free time," most of the soldiers, he said, were well motivated and well behaved.<sup>12</sup> One of the most difficult challenges Steve faced was navigating over "difficult terrain with 2 1/2 ton trucks carrying expensive vans and pulling generator trailers." He added, "The mountain roads in South Korea were not the best in the mid-70s." He also cited difficulties in gaining access to mountain top locations, many of which were occupied by South Korean units and guarded by South Korean soldiers who sometimes had not gotten "the word." Steve wrote: "The key to successful accomplishment of our mission during tactical exercises was the planning and pre-deployment activity. This work was primarily accomplished by the non-commissioned officers in the S3 section along with the team chiefs from the companies. We had a system that worked."<sup>13</sup>

After CGSC, Steve Kempf returned to Germany for an assignment as the S3 for the 1st Battalion, 59th ADA, the Chaparral/Vulcan ADA battalion for the 8th Mechanized Infantry Division. He wrote: "Since we had to cover and protect the division on exercises and movement to our war plan positions, I spent time with the division's G3 Plans section and the Cavalry unit to our front on the border. After two years as S3, which included the battalion having a very successful REFORGER [Return of Forces to Germany] Exercise against the 101st Airmobile Division using a method I developed to provide real-time air situation information to all division units down to battalion level and excellent gunnery and missile firing qualifications on the North Sea and on Crete, I was assigned as the division G3 Plans officer. This was a great educational experience. At that time the 8th Division had 4 Mech maneuver Brigades, Major General Paul Gorman was the Division Commander and liked to run lots of exercises and was a real stickler on clear, simple war plans. He told me that 'It's not enough to write a plan so that everyone can understand it, you have to write it so no one can misunderstand it!'" Steve added, "I enjoyed developing war plans and integrating all the capabilities of a four brigade, heavy mechanized division and then seeing the plans executed in division-level exercises and REFORGER exercises and then adapting them as the situation changed...."<sup>14</sup>

A PLETHORA OF CHALLENGES

We faced challenges wherever we served. In the decade or so after Vietnam, if we were not serving with an operational field unit, we were going to graduate school, working with one of the branch schools, serving with Recruiting Command, teaching ROTC or at West Point, serving with the reserves, or toiling on one of many staffs. And we moved frequently. Pat Kenney and his wife Alice, for example, had lived in fourteen different locations by late 1985.<sup>15</sup> Examples of our various assignments include: Frank Koleszar and Don Appler teaching in the Armor School; Rick Wetherill teaching ROTC at the University of Arizona; Al Clark working in a Readiness Region with duty at Stewart Field near Newburgh; Paul Barber serving as aide to the Deputy Commanding General of Fifth Army; Frank Hennessee and Frank Skidmore serving in the Office of the Chief of Legislative Liaison; Ken Lemley being the Assistant IG in the 3rd Armored Division in Frankfurt, Germany; Bill Birdseye working in the Protocol Office of the XVIII Airborne Corps; and Howie Reed working at Lawrence Livermore National Laboratory. Many of our classmates served in the Army's Office of Personnel Operations (later known as MILPERCEN and PERSCOM). Among those who worked in the military personnel center were Steve Ammon, John Connor, Tom Fergusson, Grant Fredericks, George Gehringer, Steve Harman, Jack Keith, Steve Kempf, Ken Lemley, John Mogan, Tad Ono, Terry Ryan, Wayne Scholl, John Thompson, and Dick Tragemann. We also served in interesting assignments around the world. Mike Abbott was an Assistant Attaché in Zaire, and Bob Radcliffe was an aide to the head of the Military Assistance Advisory Group (Army component) to Iran. As will be explained in a later chapter, some 120 of us served on the staff and faculty at West Point. Wherever we were, we found time for Army-Navy foolishness. While at the Naval Academy from 1972 to 1974, Norm Boyter was one of two West Point graduates "who slipped into the USNA yacht basin and towed the largest USNA boat into the Annapolis Harbor with Beat Navy banners flying where sails would normally fly."<sup>16</sup>

Our Air Force and Navy classmates also had widely diverse experiences. While serving in the Navy, Bill Brush worked with the Seabees in Gulfport, Mississippi, and Tim Vogel flew jets off the *U.S.S. Enterprise*. Among those in the Air Force, Joe Koz served as a Tactical Officer at the Air Force Academy, and Tom Genoni taught in the mathematics department.<sup>17</sup> T. J. Kelly served as Deputy Project Manager for the Short Range Attack Missile which was carried on the B-52. John Media worked in the F-16 Systems Program Office. Cooky Leverett was an instructor pilot at Columbus Air Force Base in Mississippi. Mike Concannon served in the Air Force's Patent Office with the JAG.<sup>18</sup> Like those of us in the Army, our classmates in the Air Force and Navy found rewards outside their normal duties. The magazine

Texas Woman chose Tommy Thompson as the winner in 1980 of the "Texas Man T-shirt" contest.<sup>19</sup>

Three of our classmates who went into the Air Force after graduation returned to the Army (Tom Johnson, Kramer, and Webb) and five went from the Army to the Air Force (Divers, Isakson, Mitchell, Joyner, and Leverett).<sup>20</sup> Those of us who stayed in the Army did not necessarily stay in one branch. Ted Kleinmaier served in three different branches: artillery, finance, and military intelligence.<sup>21</sup> Dick Coleman, who served in the Army Reserves and the National Guard, served in six: infantry, adjutant general corps, armor, quartermaster, ordnance, and engineers.<sup>22</sup>

For a few of us, the highlight of our careers occurred when we were majors. Rich Boerckel, for example, served as a relatively junior major with the 470<sup>th</sup> MI Group in the Panama Canal Zone. His assignment there from 1976-1978 coincided with the Panama Canal Treaty negotiations, which eventually recognized Panamanian sovereignty in the Canal Zone, fixed an expiration date for United States control of the canal, and increased Panamanian participation in the operation and defense of the canal. As part of his duties, Rich briefed Senators Barry Goldwater, Jake Garn, and Howard Baker on the situation in Panama and was manning the communications center one day when a "guy who was very hard to understand," Henry Kissinger, called to ask questions about the intelligence situation. Rich also worked with the Secret Service when President Jimmy Carter traveled to Panama to sign the protocol (agreement to do a treaty) with Omar Torrijos, the president of Panama. Rich recalled, "I was the SIGINT detachment commander when the Sandinistas overthrew the Nicaraguan dictator [Anastasio] Somoza. It's not often anyone, let alone a lowly Major, gets just 10 minutes to send a CRITIC message (highest precedent message) to the President of the United States. Yes, the 470<sup>th</sup> was definitely the highlight of my career."<sup>23</sup>

Some of us had assignments that literally shaped the rest of our military careers and lives. Clair Gill wrote: "On my first deployment to Germany in the mid-Seventies, I had the good fortune to be diverted to a 'community' job as their facilities engineer and later added family housing to the portfolio.... I got to develop my first real budget, based on higher headquarters numbers and guidance. Operating with no history or prior year expenditures, my civilian deputy and I cobbled together our initial attempt...." Though this budget did not meet his boss's expectations, the next one did. Clair added, "As the execution year progressed, we also learned techniques to get and spend OPM (Other People's Money), as well as fiscal law restrictions on the 'Color of Money.' It was an eye opener and

a gamey course, one that served me well throughout the rest of my career."<sup>24</sup> In subsequent years, Clair served with the Army's Program Analysis and Evaluation Directorate in the Pentagon, Deputy Chief of Staff for Engineers in USAREUR, Deputy Chief of Staff for Resources Management in Forces Command, and Director of the Army Budget (managing about \$67 Billion in his final year).

Some of us had some unforgettable responsibilities and experiences in the late 1970s. Art Adam served as LTG Tom Rienzi's aide from 1977 to 1979. He wrote: "My job as Aide de Camp...was as unforgettable as any experience I had in the military (some of our classmates will remember the then 'Colonel Rienzi' providing a pep talk to us as cadets)." Art functioned as General Rienzi's aide from 1977 to 1979 while he was the Deputy Director General of the NATO Integrated Communications Management Agency (NICCSMA) in Brussels, Belgium. Art wrote: "There is no end to the stories that my wife, Linda, and I could tell about that assignment (Linda worked for him, too). LTG Rienzi (and his wonderful wife, Claire) worked us to an extreme but were the most thoughtful and accommodating 'bosses' one could have. We taught our little boys to swim in the Rienzi's indoor pool (NATO positional quarters); we used his living room to watch new movies that were circulated first to general officers (usually Tom and Claire would go to bed while we were entertaining ourselves). But I worked unbelievable hours, answered his calls at midnight to note new instructions for the next day. I traveled with the General or drove separately if Claire wanted to go, in which case Linda would accompany us; we went to every NATO conference in Europe! We visited every World War II American Cemetery; we sat in at dinner parties for NATO hierarchy such as the NATO Director General, SACEUR (General Al Haig), and others whenever an 'extra' man or woman was needed. I was able to get an audience with the Pope for the General, and was able to keep the General on track with his homework and classroom attendance as he studied to become a Deacon in the Catholic Church; I arranged for his elevation to that position in Heidelberg by Cardinal Cook, the then U.S. Military Vicar for the European Theater. All this, and I wasn't even Catholic! (Linda is however and she kept me 'pro'). It was a tortuously exciting and fun two years. I arranged his visit to Fort Monmouth for a retirement roast (Senator Max Cleland, LTG Rienzi's first Aide de Camp, was the principle roaster) and then his official retirement ceremony at Fort Myer, Virginia. What a trip! And the General is now, no doubt, an Aide to a significantly higher authority."<sup>25</sup>

Despite the long hours, we enjoyed many of our assignments in the late seventies enormously. Ed Zabka wrote: "Newly

married we were sent to Munich, Germany for three years; what a great deal!!"<sup>26</sup> Those of us fortunate enough to serve in Germany will never forget the food, drink, and people of that beautiful country. Our families also enjoyed Germany, particularly the festivals, historic sites, and scenery. Our wives loved the "shopping tours," and our cupboards are still filled with the crystal, China, and porcelain they purchased.

#### CHALLENGES: EXPANDING THE ROLE OF WOMEN IN UNIFORM

One of the challenges we faced during the 1970s was the integration of women more broadly into the armed forces. When we first faced the issue, some of us had reservations about greatly increasing the percentage of women in uniform. We knew from personal experience that combat could be deadly and unforgiving and we had no desire to undermine unit cohesion with the complications of male-female interactions. A few of us complained loudly when 119 women were admitted to West Point for the first time in July 1976 as members of the class of 1980. As we did this, however, our mothers, wives, and daughters often disagreed with us, and our female soldiers demonstrated that they could out-perform males in many tasks or situations. Over time our reservations subsided, and we gradually adjusted to the increased presence of women in uniform. Even those of us in cavalry squadrons patrolling the West German border and occupying the forward-most positions in the event of a Warsaw Pact invasion soon had women with us as drivers, intelligence specialists, staff officers, military police, etc. As we adjusted to larger numbers of women in uniform, we slowly gained respect for their dedication, competence, and professionalism and watched them take on greater and greater responsibilities. We admired and appreciated their willingness to shoulder the same burdens that we carried.

Bill McKemey described his experiences in integrating women into ROTC at Cornell: "The fact that I had the freshmen class is what got me involved in the integration of women into ROTC. In 1973 the Army only had a couple of college locations where ROTC was being opened to women on an experimental basis. Cornell was not one of them. Well, a young lady from Brooklyn was awarded an ROTC scholarship. She had also been accepted at Cornell. However the Army told her she could not attend Cornell, and must go to one of the couple of schools that admitted women to ROTC. This young lady was the neighbor of a legendary, flamboyant, Congresswoman who had been one of the leaders of the feminist movement. Apparently there was a lot of sound and fury over this; but the result was that this lady was going to attend Cornell on an ROTC scholarship. We found this out from the Congresswoman's office about two weeks before the Freshmen were

due to enter. The Army later confirmed that. Obviously we would also admit to ROTC any other women who wanted to join. While we were sort of dreading the arrival of this particular young lady who had stared down the U.S. Army and won, she turned out to be a delightful student with no desire to be a pioneer. We were able to get a handful of other women to join as well."

Bill continued, "Initially the difficulties with integration were more logistical than anything else, uniforms, physical standards, etc. Classes were classes; drilling was drilling. The upper class cadets had a little bit of a problem getting used to the new environment, but the staff had all served with women officers and saw no big deal. The first year actually went pretty smoothly once the dust settled; we did have a good supply of kid gloves however. As the first class moved into their sophomore and junior years, things got a little more complex due to field exercises, field trips, and summer camp, but we learned as we went. The first time we took the ladies to the field along with all the men, we could have planned a little better, particularly in terms of facilities required, supplies needed and all those kinds of things that a bunch of men would never think of. But it got better as we went along. Actually the women performed amazingly well; they had something to prove. Our experience with women coming into ROTC at Cornell was successful in spite of no notice and an absence of guidance."<sup>27</sup>

#### CHALLENGES: THE ALL-VOLUNTEER FORCE

Members of our Class worked hard to make the All-Volunteer Army work and to recruit high-quality individuals into the service of their country. As the last draftees left the service in September 1975, the transition to an all-volunteer force required new ideas and approaches, something suggested in the early seventies with the Army's campaign slogan "Today's Army Wants to Join You." Many of us cringed at the compromises implied in that slogan, as well as some of the steps that loosened standards and discipline in an effort to recruit and retain soldiers. We also cringed when the Army missed its recruiting goals and when we learned that young soldiers with families were paid so little that they fell below the government's poverty level and were eligible for food stamps. We agreed with the Army Chief of Staff, General Shy Meyer, when he said in May 1980, "We have a hollow Army." Fixing the "hollow" Army required increasing pay, strengthening the G.I. Bill, buying new equipment, improving training, and making a host of other improvements. As the Army adjusted to the new environment, General Max Thurman took command of the U.S. Army Recruiting Command in 1979 and breathed new life and ideas into that organization. Almost without exception, we welcomed his

replacing the slogan "Today's Army Wants to Join You" with "Join the People Who have Joined the Army" and then "Be All You can Be." We preferred tough training, stronger professionalism, and increased unit and individual pride, and we were confident volunteer soldiers in the early eighties could "be all they can be" and meet or exceed performance standards of previous generations.

Several of our classmates made important contributions to the U.S. Army Recruiting Command. In 1981-1982, when the recruiting effort was still being shaped, John Swensson served as Director of Personnel/Operations for the Western Recruiting Command. Several of our classmates served as recruiting battalion commanders. Don Parrish commanded a field artillery battalion at Fort Hood and commanded a recruiting battalion in Richmond, Virginia, in 1985-1986.<sup>28</sup> After commanding an engineer battalion at Fort Sill, Chuck McCloskey commanded the Recruiting Battalion in Lansing, Michigan, in 1985-1987. Chuck wrote: "I had no desire for this assignment but had no option to get out of it. When I arrived in Lansing, I found a unit that had been failing for some time, so my job was to turn it around and lead it to success. With no previous sales background (and that is what recruiting is), I had to learn recruiting on the fly. I decided the best fix was to concentrate on sales fundamentals through training, command emphasis and success recognition. It took about eight months of steady hard work to turn it around, but we did it and from then forward Lansing stayed at or near the top of our fellow recruiting battalions."<sup>29</sup>

Bob Radcliffe was assigned to the U.S. Army Recruiting Command in June 1984 as Commander of the Seattle Recruiting Battalion. Bob wrote: "The Seattle Recruiting Battalion was one of 56 recruiting battalions nationwide and one of nine in the 6th Recruiting Brigade. The USAREC I joined was a fairly mature organization, vastly different from the organization formed by Max Thurman when the nation abandoned the draft and moved to create an all-volunteer Army. In simple terms in [General] Max Thurman's day the Army had to move from a 'processing command' to a 'recruiting command' with the draft no longer a motivation to join the Army versus to have one's number called."

Bob continued: "For all of us in Recruiting Command there was a great pride in knowing that we were recruiting the high quality Army for our nation's future, the Army that fought the first Gulf War and the current conflicts in Iraq and Afghanistan. The work was hard with many miles of travel to be with recruiters and their leaders when they were calling potential applicants. But there was incredible satisfaction in making the assigned mission and like no other job in the Army the making or failing to make the mission was very visible. For

me commanding in USAREC was a perfect fit as my leadership style fit in a world where rejection was a daily fact of life. Successful Recruiting Commanders were visible, concerned, positive and encouraging; yet they could still enforce prospecting standards and when needed could remove the soldier recruiter who could not make the transition to recruiting."<sup>30</sup> Bob went from the Seattle Recruiting Battalion to be a Deputy Commander in the Western (6th) Recruiting Brigade where he shared his experience with the nine Battalion Commanders in the Brigade. His great success resulted in his being chosen for promotion to colonel without his having attended the War College.<sup>31</sup>

The advent of the all-volunteer force, increased numbers of women, and modifications in force structure and equipment kept personnel specialists busy. From 1975-1977 Jim Webb served as commander of a regional personnel center in Giessen, West Germany. Jim wrote: "My unit's mission was to provide personnel support/services to all units within my designated geographic area of responsibility. I was authorized around 300 personnel. We supported large units such as two brigades of the 3rd Armored Division and small units such as 3-to-15 person detachments. I had my HQ and largest element in Giessen, and smaller elements in Friedburg, Kirch-Göns, and Butzbach. As Regional Personnel Center commander, I was both a senior personnel services provider to dozens of units and commander of my own unit." Jim added, "This was a wonderful assignment/experience for many reasons. I had the opportunity to serve as a commander; I had the opportunity to put into practice my philosophy of what personnel support should be and how it should be provided; and I had the opportunity to positively impact the personal and professional lives of my unit's soldiers. Also, I was able to travel to most parts of West Germany. My major challenges included satisfying the varied needs of the dozens of different commanders I supported, and being sure to insulate as much as possible my soldiers from unwarranted complaints and pressure. Being overseas, I also had a major role in providing needed support to family members in all aspects of their lives."<sup>32</sup>

Steve Kempf served in the U.S. Army Military Personnel Center in Washington in 1979-1981. He wrote: "I was assigned as the Personnel Distribution Management officer to manage the strength at installation level of all Army aviators, Warrant Officer to Lieutenant Colonel, worldwide, according to the Officer Distribution Plan and aviation unique policies as established by the Chief of Staff of the Army. The real kicker here was there was no Army aviation branch established yet and I had to deal with all of the Branch managers (Armor, Infantry, Artillery, etc.) whose officers also had aviation

qualifications. They wanted to have all of their officers assigned to branch-related units and schools and had all the records for those officers under their control for assignments. I developed and introduced some innovative computer programs in the Company Grade and Warrant officer Divisions for precise strength accounting to improve aviator distribution and then worked with them by looking into the future to assure that required aviators were available for emerging systems and activating units so that all worldwide aviation distribution requirements were met. Another duty was to develop and brief Major Command strength reports at monthly MILPERCEN Operations Briefings."

Steve continued: "I was then assigned as a member of a small Special Study Group under the direction of the Inspector General of the Army, LTG Richard G. Trefry. The study was personally directed by the Chief of Staff, Army, and reported directly to him. The study director was LTG Charles Bagnal. The study was the first comprehensive review of the Army Manning System in over fifteen years. After receiving the report of the Special Study Group, the Chief of Staff, General E. C. Meyer, directed the Deputy Chief of Staff for Personnel, then LTG Maxwell R. Thurman, to put together a Department of the Army Task Force charged with developing and implementing a New Manning System for the Army. I was selected as the Executive Officer to the Special Assistant for Manning, HQDA, and became the Executive Officer/Operations Officer of the U.S. Army Manning Task Force responsible for developing the force structure, personnel management, and operations (unit rotation) aspects of a New Manning System for the Army that supported a unit replacement or rotation system that would enable units to train, deploy and return to home stations together."<sup>33</sup>

As the Army changed from a conscript-based force to an all-volunteer force, we had to contend with an increase in the number of families. Marty Johnson wrote: "I took over the 14th Engineer Battalion at Fort Ord, CA in 1982 from Clair Gill. The battalion was transitioning from mostly single soldiers to those with families. Because of the large number of families and the high cost of living, they brought with them a new set of challenges for them and the services the Army could provide. Over the next 2 years, a large number of soldiers were discharged early because of discipline and competence issues, and the battalion with new soldiers had to greatly increase its deployment readiness. After command I served as Army Community Services Director and dealt with all the issues faced by the families: housing shortages, indebtedness, child and spousal abuse, juvenile delinquency, child care, and all the other

issues brought on by the rapid influx of families to an area noted for its high cost of living."<sup>34</sup>

#### CHALLENGES: THE "TOTAL FORCE"

Amidst these numerous changes, the Army underwent a fundamental restructuring. The "Total Force Policy," which changed over time, modified the number of active U.S. Army divisions, moved many combat support and combat service support functions to the reserve components, and assigned reserve component "round-out" brigades to some active divisions. Some of our classmates were attracted by the challenges inherent in these changes and did well in the U.S. Army Reserves and National Guard. Dick Coleman retired as a major general. Eleven of our classmates retired as colonels (Bob Frey, Art Hester, Charlie Eckart, Mike Fligg, Ernie Knoche, Bob Mace, Ted Kleinmaier, Glenn Nenner, Tim Simmons, Bob Wolff, and Ken Yoshitani). Others retired as lieutenant colonels.

As reserve officers, our classmates also served in many different locations and had widely varying responsibilities. Bob Anderson served as an Army reserve officer from 1981 to 1993 and did active duty training in Damascus (1984), Cairo (1988 and 1989), Baghdad (1990), and Riyadh (1992).<sup>35</sup> While on active duty, Ted Kleinmaier was commissioned in the Field Artillery but then branch transferred to the Finance Corps. After being sworn into the USAR, he taught officer basic, officer advanced, and CGSC in a USAR school and then branch-transferred to Military Intelligence. He took command of the 480th Military Intelligence Detachment in 1987 and remained in the Reserves until 1994.<sup>36</sup>

Ernie Knoche also served in the Reserves. His last regular Army assignment was at Fort Bragg where he became involved with a local church. He wrote, "I had to make a decision where I wanted to serve, the Army or the Lord." He chose the Lord, resigned his regular commission, and received a reserve commission. While attending the Seminary of the Lutheran Church, Missouri Synod, he served with the various Reserve units and eventually joined the Texas National Guard. While serving as pastor of Christ Lutheran Church and School in Pittsburgh, Pennsylvania, he joined the 99<sup>th</sup> Army Regional Command as chaplain of various units, some of which served in Desert Storm. Ernie wrote: "The most heart-wrenching deployment was of the water purification unit of the 14<sup>th</sup> Quartermaster Battalion. That was the unit hit by the [Iraqi] Scud. The days were never the same after that, as families that experienced loss were ministered to; the soldiers who returned were supported and cared for. As the chaplain for the unit I was able to reach out to my congregation for their support of the unit. This was

truly an example of citizen soldiers in action. Congregation and unit formed a close bond that lasts to this day." Ernie added, "At the end of my assignment as Command Chaplain, 99<sup>th</sup> Regional Support Command, I finally retired after 32 years in uniform." Still a servant of the Lord, he and his family moved to Canton, Georgia, where he is "currently" serving as interim pastor of King of Kings Lutheran Church Mission in Jasper, Georgia.<sup>37</sup>

When Dick Coleman left the Army in 1972, he promised himself that he would never serve again. The commander of a National Guard tank battalion, who owned a local hardware store, however, had recruited him for several years and finally convinced him to join the National Guard. Dick transferred from the Individual Ready Reserve in 1976 to the Mississippi Army National Guard and commanded an armored company for five years. After that he served as commander of a Supply and Services Battalion, an Engineer Group, and a USAR school. Dick wrote: "In 2002 I was selected for assignment as Commanding General of the 412<sup>th</sup> Engineer Command, and promotion to Major General in the Army Reserve. Happily this concluded my extensive travel to monthly battle drills at locations far from my home. In reality it began a four year tour with extensive travel requirements. The 412<sup>th</sup> was responsible for war planning and reinforcement of reserve engineer forces to both the European and Korean theaters. To facilitate this mission, the 412<sup>th</sup> maintained a robust forward presence in both theaters and participated in all exercises/conferences, etc. Additionally, the 412<sup>th</sup> maintained and managed an aggressive troop construction program in both theaters, wherein Army Reserve and National Guard engineer units traveled to the theater to perform construction missions during three weeks of authorized annual training with several units rotating to complete the mission duration. This program was highly successful and resulted in substantial monetary savings to both theaters. The 412<sup>th</sup> also had responsibility for the Pacific Theater, and maintained a forward element with the Engineer Section in USARPAC Headquarters, responsible for humanitarian missions throughout the Pacific Theater. This program was extensive, resulting in a multitude of construction projects throughout the region, including projects in Vietnam and Cambodia. I relinquished command in February 2004, and retired from the Army with more than 37 years of duty, both active and reserve."<sup>38</sup>

Those of us who remained on active duty sometimes had assignments with reserve units. In June 1989 John Mogan was reassigned from the Pentagon to be the Senior Army Advisor to the 125<sup>th</sup> Army Reserve Command [ARCOM] which was composed of a large array of units across Kentucky and Tennessee. During

Operation Desert Storm, many of the units in the command were mobilized and deployed. John wrote: "I observed an impressive display of personal and professional excellence within the USAR Chain of Command and a serious commitment in both the Officer and NCO ranks.... One of my greatest challenges during the deployment after the shooting started was visiting the large number of Family Groups across the two-state area and providing an honest explanation of what was going on with each unit. Deployed soldiers' access to modern communications was a blessing in general but led to some serious apprehension for family members as some young Rambos had a tendency to embellish their situations. The ARCOM's performance was widely acclaimed and the Engineer Battalion in particular distinguished itself during the opening assault phase and earned the nickname of 'Berm Busters'. Returning units were greeted with great celebrations and were home town heroes. Loss of life was minimal as two soldiers died from non-hostile circumstances. I completed my four year tour in 1993 with a great respect for the USAR and a feeling of personal satisfaction."<sup>39</sup>

#### CHALLENGES: SHIFTS IN THINKING

In the late 1970s, we also participated in some interesting debates about strategy, operations, and doctrine. The decade after the withdrawal from Vietnam proved to be a period of fertile ideas and sharp debate about strategic priorities and operational methods. As the armed forces, but especially the Army, shifted focus from Southeast Asia to Western Europe, advanced technology used in the final phase of Vietnam War and in the 1973 Arab-Israeli War suggested the opening of a new era in the waging of war and a future with less emphasis on insurgency/counterinsurgency and infantry-airmobile operations. During the same period, General William E. DePuy introduced the "Active Defense" and championed the 1976 edition of FM 100-5, Operations, which proved to be one of the most controversial publications in the Army's history. Those of us who attended the Command and General Staff College in the mid-to-late 1970s participated in numerous, sometimes heated, "discussions" on changing strategic priorities and evolving technologies and methods on the modern battlefield. As young lieutenants and captains, we had deployed early and often to Southeast Asia, and as brash young majors, we saw no reason to focus single-mindedly on the Fulda Gap.

Some of our discussions took place around what was known as the "Dunn-Kempf Battle Simulation." Along with his tablemate at CGSC, "Stretch" Dunn, Steve Kempf built an accurately scaled terrain board simulation using miniatures of military vehicles, equipment, and units, as well as a detailed set of rules. Steve

explained, "The main reason we developed the rules... was to have some way to 'test' and 'execute' the battle plans that were developed by students during the CGSC course. The culmination of most of the courses was the development of a plan or plans to address some scenario. But other than discussions and critiques there was no method or process to see if the plans were practical, effective, or could be improved. Wargaming provided the rigor of actually evaluating the plan against a thinking adversary using current (for that time) weapons and tactics set on terrain dictated by the scenario. The secondary benefit was that because we used very accurately detailed scaled miniatures and terrain the players were also learning vehicle and system identification and ranges."<sup>40</sup>

Steve noted that some 500 Dunn-Kempf Game Sets were distributed throughout the Army and other Allied forces. One of the secrets of the game's success was that units could customize the terrain boards, or make new ones, so they resembled the areas (whether Europe, the Middle East, or elsewhere) where troops were deployed or could expect to be deployed. Units could rehearse an operation using the terrain board and then conduct an operation over the real terrain shown on the model. Units also could modify the rules to focus more on their needs. The Infantry School, for example, changed the scope of the game to focus more on the infantry-tank platoon to meet their needs. Interest in the Dunn-Kempf Game, however, declined as computer technology advanced and wargames came to rely on computers.

We also took part in discussions and preparation for force projection and contingency operations. While working at the Concepts Analysis Agency in the early 1970s, Phil Cooper helped develop the Army's first computerized system to match deploying units and materiel with appropriate transportation.<sup>41</sup> We witnessed the transformation of such planning from "stubby pencils" to computers and participated in much planning and preparation for exercises such as Return of Forces to Germany (REFORGER). Initially conceived in 1967 amidst plans to return two divisions from Europe to the United States, the annual REFORGER exercises involved transporting U.S. Army personnel to Germany and their using prepositioned equipment known as POMCUS (Prepositioning Of Materiel Configured in Unit Sets). Whether assigned to Europe or the United States, many of us participated in the autumn maneuvers associated with REFORGER and have "war stories" of German farmers whose fields were damaged by heavy tanks or by village or city dwellers whose homes or businesses may have been damaged by a careless or unlucky American driver. Such exercises were extremely important not only for reinforcing NATO but also for deployments or contingency operations elsewhere. As the Congressional Research Service has

documented, the United States had 19 military deployments in the 27-year period of the Selective Service Draft after World War II and 144 in the 40 years between 1973 and 2013.<sup>42</sup>

#### OTHER RESPONSIBILITIES

Our classmates also had responsibilities far outside the realm of wargames, exercises, and doctrinal debates. Tom Mushovic was one of those who specialized in petroleum. After obtaining an advanced degree in petroleum management at Kansas University, he served in the U.S. Army Petroleum Distribution System in Korea. He taught for three years in the petroleum division at the Quartermaster School, served in Iran as a logistics advisor, and became chief of the Petroleum Division in the 172<sup>nd</sup> Infantry Brigade in Alaska. After commanding the Petroleum Distribution System in Okinawa, he returned to the Quartermaster School as the "first" TRADOC Systems Manager of Petroleum and Water.<sup>43</sup>

Bob Clover served two tours under General Paul Gorman. The first was in 1975-1977 when he was deeply involved with the creation of the National Training Center and the second in 1983-1985 as a special staff member to the commander of SOUTHCOM. On the latter position, he wrote: "I was given a wide range of duties and a great deal of latitude in executing those duties. I interfaced regularly with the Military Commanders throughout Central and South America, with the National Security Agency, and with all of our Military Groups throughout the region. A very challenging and rewarding assignment."<sup>44</sup>

We also served in the Pentagon. Jim Webb was assigned to General Officer Management Office (GOMO) from 1979 to 1982 and worked in a Pentagon office just off the E-corridor around the corner from the DCSPER's office. He wrote: "My GOMO assignment was both tremendously challenging and tremendously rewarding. As did so many in the Pentagon, we worked 12-18 hour days, 6-7 days a week. However, this put a real demand on me and on my family. My wife and I had to do a lot of coordinating and compromising to be sure family requirements and needs were met. One of the highlights while in GOMO was being the point man during the kidnaping of BG [James] Dozier in Italy. Among other duties, I kept his wife informed on developments and was sent the classified notices and back-channel messages. I learned about the political side of Army operations and senior level operators, and became very comfortable/confident in dealing with GO's. Especially as assistant chief, GOMO, I worked directly with the CSA and 4-star commanders. This was definitely one of my most professionally satisfying assignments, but it was the worst assignment I ever had from a family standpoint, because I spent so little time at home."<sup>45</sup>

Jim Helberg worked in the National Military Command Center in the Pentagon in 1984-1986. He was the Senior Operations Officer on one of the operations teams and worked eight-hour shifts of six days on and four days off. The team was headed by a brigadier general who had one of the nuclear release keys and who had a colonel as his assistant. The team consisted of operations officers, intelligence liaison officers, a technical officer (automated systems), emergency action officers (one of whom held the second nuclear release key), communications specialists, and Russian-speaking personnel who operated the Moscow-Washington hotline. As Senior Operations Officer, Jim was not the commander of the team, but he was the "team leader for this gaggle" and was the keeper of the lockup for the nuclear codes used by those with the nuclear release keys to encode nuclear release messages.<sup>46</sup> He saw a dimension of the Pentagon that most of us saw only in the movies.

Gordy Larson wrote: "My last assignment in the Army was as the Education Staff Officer for Fort Dix, and part of my responsibility was to oversee the Basic Skills Education Program (BSEP). The Deputy Commander had some questions about whether the BSEP program was effective, and asked the DPCA [Directorate of Personnel and Community Activities] to evaluate the program. I was looking for a dissertation topic, and offered to conduct an evaluation of the program using an experimental design in which half of the candidates for BSEP would be sent to the school and the other half would be sent to AIT without the literacy training. The study was conducted over a half year, and it turned out that the soldiers who did not receive literacy training did as well or better in AIT as those who received the literacy training. I wrote up my report for the commander and it was forwarded to the Army Education staff, who tried to bury the report. Our deputy commander did an end run around the Army Education staff by sending a copy of the report to TRADOC, where it caught the eye of an Assistant Secretary of the Army for Manpower. I was invited to come to Washington to brief the Undersecretary of the Army, who then formed an ad hoc team to propose revisions to the literacy training program and assigned me to the team as the subject matter expert. At that point, I became the Army's leading expert on literacy training and was assigned to visit with literacy experts from the Air Force and Navy...."<sup>47</sup>

Wherever we served, we often had experiences unique to our generation of commissioned officers. In 1983-1986 Jim Long served in Berlin as the Director of the Berlin Brigade Maintenance Division and had the responsibility for depot-level maintenance, three ammunition supply points, and explosive ordnance disposal. Since the Americans, British, French, and

Soviets in Berlin still had their "occupier" status, he and his family lived in a magnificent five-bedroom home that was provided by the Bonn government. He and his family also had full access to all sectors of Berlin, to include East Berlin. He wrote: "Whenever we had an American visitor, we would take them to East Berlin; just as in Korea, we would take them to the DMZ. It never failed to make an impression. So often, when these visitors flew into Berlin, they would not realize that we were deep inside East Germany, surrounded by a wall. They thought the city lay on the border of east and west Germany with part in each country.... We would often meet American visitors at our church. One, who we met, told us she had been trying to get to East Berlin but was unable to make the arrangements needed as a civilian. We put her in our car and drove over. She then told us that she had lived there before World War II and began pointing out familiar landmarks as she guided us deeper into the east. She had been a Jew at that time but was now an American and a Christian. At last she asked if we could stop in front of a rundown apartment; we did and she got out. It was then that we found that her mother still lived there and she was coming back to visit after many, many years. These kinds of experiences brought to life the history of this city."<sup>48</sup>

#### BATTALION AND BRIGADE COMMAND

Of our numerous responsibilities, none was more enjoyable for many of us than command, and none brought us into more direct contact with the changes occurring in the Army. Fourteen of us appeared on the first battalion command list for which we were considered.<sup>49</sup> Others appeared on later lists. Rick Sinnreich, who had served on the faculty at West Point, been director of the School for Advanced Military Studies, and worked on the National Security Council staff, wrote: "All in all, commanding a howitzer battalion in Korea probably was the most enjoyable experience of my career."<sup>50</sup> Steve Kempf wrote: "1982-1984. Command of the 6th Battalion, 52d ADA Battalion. An Improved Hawk Battalion stationed on the German Border. Great command. Great Battalion! This was THE highlight of my career. The troops, NCOs, and officers were enthusiastic winners and enjoyed the unexpected actions we engaged in during tactical evaluations and working with the 3rd Infantry Division. We took every award or trophy for HAWK Battalions in the 32d Air Defense Command and the 4th Allied Tactical Air Force."<sup>51</sup>

Along with the enjoyment and personal satisfaction of command came stabilized tours, enabling commanders to remain in one location for a longer period. For 34 months, Leo Kennedy commanded the 1/20 FA and 3/29 FA, which were the same but renumbered battalion.<sup>52</sup> Hugh Kelly spent 5 1/2 years at Fort

Stewart as a battalion commander and brigade staff officer.<sup>53</sup> Reflecting on his time as a battalion commander, Pat Kenny wrote: "An item that remains a source of pride is that no officer resigned his commission during my tenure, and many applied to change their status to 'voluntary indefinite.' I concluded that I must have done something right in establishing a meaningful and professional atmosphere in which they believed they could thrive."<sup>54</sup>

As battalion and brigade commanders, we also faced the challenges inherent in fielding new fighting vehicles. John Harrington wrote: "As commander of the 2nd Squadron, 6th Cav at Fort Knox, I led the unit as it transitioned from M-60A1s and M-113s (as scout vehicles) over to M-1s, M-60A3s and M-3s. That was a challenging time as the unit had to operate and support both generations of equipment. I discovered then how good the soldiers we were getting via the volunteer Army really were. They accepted the challenge of the transition and I think enjoyed the opportunity to learn the new equipment before going off to another unit which might just be getting it. The Squadron also increased in size as we activated some new Troops so each would only operate one type of vehicle. The unit ended up with more tanks than the 194<sup>th</sup> Brigade. Again, skills learned at the Academy helped me get things done in a manner that gave each member of the Squadron opportunities to do their best. Teamwork was critical. Letting people have input into our projects and getting their buy-in made a big difference. I always found that giving people a mission and then letting them execute usually got a better result. I really think we had one of those 'high performing' organizations when I turned over command after two years."<sup>55</sup>

We learned a lot when we went to the National Training Center, which was a demanding experience designed to improve our performance and that of our battalion. Bob Guy wrote: "[I was] Battalion Commander of [the 2/21st] Infantry Battalion and made one of earliest deployments to the National Training Center (NTC) at Fort Irwin, California, in September 1983. This was really tough--the After Action Reviews (AARs) were intense and something that we were not used to in the Army--very acute/in depth criticism of how we performed and the mistakes that we made during realistic combat operations against a tough enemy in an unforgiving desert environment. But we quickly came to realize the value of the criticism and let our egos wane as we became immeasurably better at warfighting because of the realism and lessons learned at the NTC. Great experience!"<sup>56</sup>

Other classmates had highly technical responsibilities as commanders. Following an assignment to West Point, where he was the Signal Corps Branch representative and influenced the most

graduates in history to go Signal Corps, 88 in 1975 and 102 in 1976, Walt Kulbacki went to Korea and served as an XO for a signal battalion and the G-3 at I Corps headquarters responsible for developing two major military exercises, Ulchi Focus and Team Spirit, for American and South Korean forces. Walt wrote: "Assigned next to Pentagon as a Program Manager for a Joint major billion dollar communication and automation program and then selected early for [command of] 44th Signal Battalion in Mannheim, Germany. After 3 years [1980-1983] in command selected for Industrial College of the Armed Forces and Brigade command supporting tactical and strategic clients across the United States. After 2 years in Command assigned to Joint Staff as Division Chief responsible for all major Joint Command and Control programs and with a follow-on assignment with the Defense Information Systems Agency where I was Deputy Director responsible for all operations, programs and budgets. While there I was responsible for all DOD networks and communications supporting DOD and its major commands."<sup>57</sup>

In 1983-1985 Art Adam commanded the signal battalion that was responsible for the U.S.-Soviet Union "Hot Line," as well as ensuring communications "connectivity" for the National Security Agency from its worldwide listening posts and providing communications support for the White House communications agency, Air Force One, and the National Command Authority E4B aircraft. The Hot Line was not the red telephone of movie lore but instead was a teletype communications link. After the "land line" was inadvertently cut on several occasions, it was augmented with two redundant satellite terminals, one in West Virginia and the other at Fort Detrick, Maryland. Art had a number of Russian-speaking technicians who maintained the Hot Line and exchanged messages in Cyrillic with their Russian counterparts. In 1987-1990, Art, then a colonel, commanded the Electronic Materiel Readiness Activity and Vint Hill Farms Station in Warrenton, Virginia. This organization provided maintenance/readiness support for Army tactical intelligence units, for National Security Agency field stations, and for the ground component of the "infamous Doomsday" project. The latter was, as Art explained, "a ground-based, mobile, national command authority facility" that provided a "mobile command post" not easily "targeted" by the Soviets in an all-out nuclear attack. His responsibility was to "provide the signals intelligence logistical support"<sup>58</sup> if such an attack occurred.

#### FACING THE WARSAW PACT

Whatever our specialty may have been, much of our training and many of the scenarios for our training focused on defeating an attack by Warsaw Pact forces against NATO. With V Corps'

headquarters in Frankfurt and VII Corps' in Stuttgart, many of us served in units scattered across southern Germany. If Warsaw Pact forces attacked, two or three armored cavalry regiments acted as covering forces for the two corps as they moved forward from their peacetime positions into their battle positions. We also served in units whose mission was to reinforce NATO in the event of a Warsaw Pact attack. Each autumn many of us participated in Exercise REFORGER (Return of Forces to Germany) to practice the deployment of forces to Europe in the event of an attack.

Of the many responsibilities associated with defeating a Warsaw Pact attack, none required more planning and preparation than those of the engineers. Rick Charles, for example, commanded the 54<sup>th</sup> Engineer Battalion from July 1982 to August 1984 in Wildflecken. His predecessor was Dan Christman. During Rick's command, the 54<sup>th</sup> Engineer Battalion was the covering force engineer battalion supporting the 11<sup>th</sup> Armored Cavalry Regiment in V Corps. The 11<sup>th</sup> ACR's headquarters were located in Fulda. Needless to say, Rick and his battalion spent a great deal of time preparing for the possibility of an attack by the Warsaw Pact through the so-called "Fulda Gap," and their close proximity to the border gave them little time after being alerted to move to their battle positions.

Rick wrote: "During my command, we were able to remove all the 54th's wartime munitions out of the large Corps ammunition storage points (ASP). This allowed us to better support our covering force mission since all wartime target munitions (demolition and mines) for our road, bridge, and minefield targets were stored in sector in dispersed 5-ton munitions bunkers. I had the S-3 develop standard targets (hasty road craters and 100 meter row minefields) for follow-on missions after the covering force targets were put in and turned over [to other units]. We uploaded all the munitions for these follow-on missions on TOE bolster trailers that we stored in the Wildflecken ASP a few kilometers from our motor pool. The bulk of our wartime targets were part of NATO's Central Region Barrier Agreement (CRBA) and on the CRBA target list. The battalion was able to upload its TOE gear, pick up the loaded bolster trailers, and be fully prepared to move to sector within two hours. The battalion viewed its mission as real world, 24-7. Upon alert notification, soldiers would literally climb the fences of the motor pool if the CQs were too slow to get there to unlock the gates. Our squad vehicle then was the 5-ton dump truck and obviously maintenance of it was paramount."<sup>59</sup> Rick's command sergeant major explained, "We're out here just eighteen kilometers from the East German border, and we train from the one-kilometer mark back. If there's a war, each of these trucks

represents about 10 demolition targets. If we can't put them on the road, bridges won't get dropped, and roads won't get blown, and people all over Germany will be up to their ass in Russians!"<sup>60</sup>

Bruce Clarke, who had commanded the 2nd Squadron, 11th Armored Cavalry Regiment, while Rick Charles commanded the 54th Engineer Battalion, faced very different challenges when he took command of the 2nd Brigade, 1st Infantry Division in Fort Riley, Kansas, in 1988. Bruce wrote: "The Dagger Brigade was unique in that it had two M-1 Armor battalions (3/37 and 4/37 Armor) and one Infantry battalion 2/16 Infantry that transitioned to M-3 Bradley fighting vehicles while I commanded the brigade. What made the brigade unique is that we had a round out battalion, 2/136 Infantry, Minnesota National Guard. My first National Training Center [NTC] rotation was with 2/136 and 3/37 Armor. My second rotation was with 4/37 Armor and 2/16 Infantry. Our primary mission was to deploy to Europe on short notice, draw equipment from POMCUS (Prepositioning Of Material Configured in Unit Sets) and go to war. This is what REFORGER was all about. We practiced this as part of every NTC deployment. In addition to the NTC rotations I sent a Task Force to Idaho to fight forest fires one summer." He concluded, "Several weeks after I gave up command Saddam [Hussein] invaded Kuwait and I was terribly frustrated that I could not take the team that I had trained to war. The brigade excelled, and when it returned to Fort Riley the company commanders called and told me that they had done what I taught them to do and had taken all of their men over and brought them back--that was heartwarming and made the effort to build a fighting team worthwhile."<sup>61</sup>

Even though the Cold War dominated our attention in the first decades after Vietnam, the interests of the United States were too far-flung and complex and the threats to our interests too diverse for us to focus solely on Europe. Those of us who served in the 82nd Airborne or 101st Airborne Division (Air Assault) often deployed to far-away places or stood by ready to deploy on short notice. The 82nd Airborne Division was the nucleus of the newly created Rapid Deployment Force. The 101st maintained a battalion on constant readiness alert with a "wheels up" criteria of 30 minutes. The 82nd participated in operations in Grenada, Honduras, Haiti, Bosnia, Kosovo, both Gulf Wars, and Afghanistan. In later years the 101st participated in operations in Panama, Rwanda, Somalia, Haiti, Bosnia, both Gulf Wars, and Afghanistan. Additionally, both divisions responded to domestic contingencies such as wild fires.

U.S. Army units in Alaska also prepared for contingencies in far-flung places. Mike Connor served as the commander of the

2nd Brigade, 10th Mountain Division, before becoming ADC Support and later ADC Maneuver of the 6th Infantry Division in Fort Wainwright, Alaska. In describing what the 6th ID did, he wrote: "We were a rapid deployment force [in 1990-1991] focused on the Middle East and on Korea. Flight times to those places from Alaska were the shortest for any CONUS division. For example, we deployed the combat aviation battalion for Desert Storm along with the division's command and control systems and were among the first units to arrive. When Iraq invaded Kuwait we had a battalion deployed in the Sinai. We regularly conducted exercises in Korea. We were also focused on the Russians in the Soviet Far East. When the cold war was going strong, we invited the commander of Group of Soviet Forces Far East and his staff to watch a battalion task force conduct parachute drops followed by a live fire combined arms task force including live air force bombing. The commander was so amazed at our skills that initially he thought it was a carefully rehearsed exercise. I invited him to walk over the hill we were on and to talk with any of the soldiers dug in on the hill below to see how many times they had practiced this no notice combat readiness exercise. The answer he got was none. With that he said our soldiers were better than his NCOs, the NCOs better than his officers and our officers better than any he had seen in his career. Later that year the Berlin Wall fell and you know the rest of the story."<sup>62</sup>

Barrie Zais commanded the "Old Guard," the 3rd U.S. Infantry Regiment, in 1989-1991, which had numerous ceremonial duties but also had real-world missions far from the parade ground. Barrie maintained the soldiers' proficiency through progressive training events at Fort A.P. Hill and company deployments to the National Training Center and Panama Jungle Warfare School. The contingency missions included responding to domestic disturbances and providing local support to civil authorities in the National Capital Region with primary emphasis on the White House. In later years the regiment deployed company-sized units to the Horn of Africa, Somalia, Iraq, and Afghanistan. Barrie wrote: "While the regiment had tactical and contingency missions, its most visible mission was ceremonial. I took command from the 65<sup>th</sup> Colonel of the Regiment, classmate Frank Hennessee. As the 66<sup>th</sup> Colonel of the Regiment, I was Commander of Troops for the Retirement of the Chairman of the Joint Chiefs, Admiral Crowe, at Annapolis. And Commander of Troops for the Arrival Ceremonies for Mikhail Gorbachev and the Queen of England, among many others, at the White House. I was also the Commander of Troops for the Arrival Ceremony for the G-8 Summit at Rice University in Houston."<sup>63</sup>

Whatever our responsibilities may have been, the threat of the Soviet Union during the Cold War remained the center-piece of our thinking and our preparation, and the demolition of the Berlin Wall and subsequent dissolution of the Soviet Union had a profound effect on us. Bruce Clarke wrote: "I had my brigade at Fort Irwin [in the National Training Center] training to fight the Soviets. On the night before my final attack as a brigade commander, my OC came in and told me that the Wall had come down. We had been isolated from the news during the field portion of my rotation. I remember thinking that it was the end of an era and the end of the Cold War to which I had devoted 24 years of my life."<sup>64</sup>

Jim Long and his wife Minnie Lou were in Germany on November 9, 1989, when the announcement came that East Germans could cross the Berlin Wall without hindrance. The next day they went to Berlin to witness the historic opening of the Berlin Wall. Jim, who had served in Germany from 1979 to 1986 and who had returned to Germany in 1988 after retiring from the Army, wrote: "The city was in joyful chaos. Thousands of East Germans surged through the Ku'Damm; each received 100 Deutsche Marks from the West German government as a gift and they spent it on bananas, pop music, and other things they could not get in the East. Their little smog producing 'Trabi's' (an east German car made from pressed wood with a two stroke engine) chugged around, filled with cheering East Germans who, themselves, were cheered by West Germans. The UBahn was jammed; the streets were jammed; the celebration went non-stop. And then, East German soldiers began removing sections of the Wall, the checkpoints, and the wire. Souvenir hunters began picking at 'The Wall' and all along its length, you could hear hammers and chisels at work on the concrete."<sup>65</sup>

Everyone in the Class of 1965 celebrated when the Berlin Wall came down in November 1989, and we watched in amazement as the Soviet Union dissolved over the next two years without a bloody revolution or civil war. We had gone full circle with the Berlin Wall's being built in August 1961 (while we were in Beast Barracks) and being dismantled in 1989. As Bruce Clarke observed, it truly was the end of an era.

#### NUCLEAR WEAPONS

Throughout the Cold War, the threat of a nuclear Armageddon remained with us. Most of us first became involved in the atomic/nuclear field as lieutenants and captains commanding artillery batteries, engineer companies, or ordnance units, but those of us in armor and infantry also had to contend with the employment of nuclear weapons. Some of us became "prefix 5" qualified, meaning we had received training as nuclear weapons

employment officers. During the Vietnam War, classmates in the artillery sometimes faced the challenge of preparing their batteries for the employment of nuclear weapons while simultaneously preparing for deployment to Vietnam. As we contemplated the enormous destruction associated with the employment of nuclear weapons, some of us had doubts about their use. Skip O'Donnell wrote: "I...always wondered if some of the firing units would have used them if authorized."<sup>66</sup>

For those who served in nuclear-capable units, ensuring the safety, security, and reliability of nuclear devices usually proved paramount to all other concerns. And going through Nuclear Surety Inspections, while contending with personnel shortages and turbulence, proved exceptionally challenging. At least once a year an inspection team arrived without notice for a Nuclear Surety Inspection to check a unit's ability to assemble a "reliable weapon," its operation plans and its security and transportation measures, and its communication and nuclear release procedures. The inspection team also checked the personnel, security clearance, and medical records of every soldier in a unit involved with handling or protecting nuclear weapons. A single critical deficiency in areas such as weapon reliability or inadequately trained personnel could result in an unsatisfactory rating. Kent Brown said a unit could "fail" an inspection for things like "using the incorrect screwdriver" or in setting up a weapon for emergency destruction using "a blasting cap crimper that had been ordered to be discarded in a technical message."<sup>67</sup> While in the USAREUR Inspector General's office in 1976-1978, Bill Hecker inspected over 100 "nuclear-capable units and custodial detachments."<sup>68</sup>

Of the various atomic devices we handled or managed, the most interesting, in retrospect, may have been the Davy Crockett weapon system and Atomic Demolition Munitions. The Davy Crockett was a recoilless gun with a 10-20 kiloton warhead and a range, depending on the launch system, of 1.25 to 2.5 miles. The weapon was placed in heavy mortar platoons in headquarters companies of Infantry or Armor battalions but was withdrawn from Europe in 1967 and the 82nd Airborne in mid-1968. The weapon was intended to be used against a massive Soviet attack by destroying enemy formations or denying access to an area. Very few of us had anything to do with the Davy Crockett, but nearly all of us heard stories of battalion commanders being relieved for some mistake or failure associated with the weapon system.

Members of our class had significant experiences with Atomic Demolition Munitions. Our classmates dealt with two different types of munitions: the MADM (Medium Atomic Demolition Muniton), deployed 1965-1986; and the SADM (Special Atomic Demolition Muniton), deployed 1964-1988. The MADM

weighed about 400 lbs; the war head, in its container, looked like a 55 gallon drum and had a variable yield of 1 to 15 KT. The SADM was much smaller, weighed 163 lbs, and could be configured so a soldier could parachute from an aircraft with it; the weapon had a variable yield of .01 to 1 KT. The weapons were primarily deployed in Europe. In the event that war broke out and the Warsaw Pact appeared to making significant gains, ADMs could be used to create choke points for slowing down the enemy's forces. Instead of having to explode thousands of pounds of explosives to destroy a major bridge or autobahn interchange (the two most popular targets), one small team of engineers with one "bomb" could do the job. Unless there was a general release of all weapons, the President of the United States had to authorize the release of each weapon for use, and in order to expedite the nuclear release process, thousands of preplanned targets were designated. An annex to the war plans for every Corps in Central Europe contained a pre-approved ADML (Atomic Demolition Munition List) for that Corps. Most large bridges and interchanges in Germany had pre-chambers for ADMs built into the structures to expedite the placement of the weapons. Also an elaborate process relying on secure communications from an ADM Team to the President was developed for securing nuclear release for the weapons.

By the late 1960s there were about a dozen Engineer battalions in III, V and VII Corps that had assigned ADM platoons. Ken Slutzky commanded one of the platoons and wrote: "When people ask what I did in the Army and I tell them I trained soldiers to use atomic bombs, it never fails to impress them."<sup>69</sup> By the early 1970s the importance of passing the technical inspections had resulted in a great amount of attention being paid to these platoons, especially by battalion commanders who feared being relieved if their assigned ADM platoon failed an inspection. During the same period, new thinking about ADMs also occurred when an "Active Defense" was being considered for Europe. Consequently a decision was made at the highest levels in DOD and at SHAPE to consolidate the ADM platoons into ADM companies commanded by a Major. So, in late 1974 and early 1975, the ADM platoons were consolidated into three ADM companies. One company was assigned to U.S. III Corps in Ft. Hood, Texas, one to U.S. VII Corps in Stuttgart, West Germany, and one to U.S. V Corps in Hanau, West Germany. While one company in Europe supported two allied Corps and one U.S. Corps, the other supported five allied Corps and one U.S. Corps. Kent Brown commanded the latter company in Hanau. Needless to say, working with the British, Germans, Belgians, and Dutch on issues pertaining to Atomic Demolition Munitions proved interesting and challenging.<sup>70</sup>

Members of our class also became involved with issues pertaining to nuclear power generation. While serving for two years with the 535th Engineer Detachment in the Canal Zone, Ken Yoshitani dealt with numerous nuclear power and safety issues.<sup>71</sup> Ken wrote: "The unit owned two floating power plants, one on the Atlantic side which was a 10 MW [megawatt] net nuclear power plant and the second was a much larger gas turbine unit which may have generated more than 20 MW on the Pacific side. Since the entire Canal Zone required only 85 MW at its peak demand, the 535th provided substantial power to the Canal Zone." Ken served on the MH-1A Sturgis, a floating nuclear power plant which provided 10MW electricity. He explained: "Sturgis was a Liberty ship, cut in half to remove the engines and to insert the reactor containment. Sturgis was not technically a ship, but a barge because it did not have propulsion.... It was an expensive attempt to provide power to remote stations such as Canal Zone, Guam, and Kwajalein." He concluded: "I did learn the Army nuclear safety philosophy which I took with me to my civilian occupation. The Army nuclear safety philosophy is that the first line of defense is to have the best system and equipment to achieve safety. The second line of defense, should the first fail, is to have well thought-out procedures to overcome the problem and have the procedures rehearsed so that all know what should, could, and must be done. The third line of defense is to have a well trained staff to overcome any unforeseen problems. (This is exactly the line of defense that Apollo 13 took to come back). In 1972, we at Sturgis were drilled with this philosophy. I think this approach to achieve safety is still the most effective approach, and to think that a bunch of green suiters and civilian engineers came up with this is very remarkable."<sup>72</sup>

One of the most sensitive issues concerning nuclear weapons was their safety. Frank Meier served at U.S. European Command headquarters during the period 1980-83 and was responsible for policies and operations for the Safety, Surety and Security of the nuclear weapons stored in theater. The United States had weapons positioned in Europe for use not only by U.S. forces but also by other NATO members. Concerns about the possibility of an accident, or worse, rose because of a wave of terrorism from groups such as the Red Brigade and the frequent movement of weapons by helicopter for reliability testing, operational plan changes, and even retirement. Frank was directed to develop a theater plan to guide responses should there be an accident or incident involving any of the stored or in transit weapons. After drafting a plan, he coordinated it with USAREUR, NAVEUR, and USAFE and had it approved by CINCEUR. Frank wrote: "Since the plan designated who would be On Scene Commander, what in-

theater assets would be used, and what additional assets from U.S. could/would be made available, it became necessary to develop a course to train potential On Scene Commanders and staff. As a result, the Senior Officer Accident/Incident Course (SONAC), utilizing assets from the European Staff, Defense Nuclear Agency, and Nuclear Weapons School, and State Department was generated. The team conducted the course for U.S. Forces and briefings to Ambassadors/embassies in those nations storing special munitions." Frank concluded: "I would like to say that the plan and the course were well received, but service parochialism being what it was/is, there were hurt feelings and it became critical that they were approved by CINCEUR. The plan has not been used..., interest for the plan and the course has waned, but for that period I got plenty of 'show and tell time.'" <sup>73</sup>

Our classmates also made contributions to strategic targeting. In the late 1960s Ed Knauf, while in the Air Force, became the Minuteman Missile system performance and software manager, where he led the nation's largest software development effort at that time. He subsequently supported a special effort by the Air Force to develop error-free software for U.S. nuclear forces. Ed received special recognition for developing and implementing software changes in Minuteman II that greatly improved accuracy and allowed rapid re-targeting in a crisis. His revised targeting software enabled the missile to hit a baseball diamond-sized target after flying thousands of miles. Using test data and physical modeling, Ed became our nation's foremost expert on range and payload, and frequently gave high-level briefings, including to the President's Scientific Advisory Board and the Nuclear Effects Advisory Board. After being tasked by the National Security Council to review Soviet missile systems, he identified significant limitations in Soviet abilities to strike hard targets successfully and showed they were much less capable of hitting our strategic forces than many believed. After Minuteman III and Poseidon were added to our nation's strategic forces, Ed conceived and led a major software project to design, develop, and implement a special program for strategic weapon targeting for the Joint Strategic Target Planning Staff. Most impressively, Ed accomplished all this before he left the Air Force in 1973. <sup>74</sup>

Dave Mastran made an interesting and important contribution to the U.S. Air Force's ability to assess the reliability of nuclear warheads. He wrote: "The problem was that the component test results derived from the lab equipment simulating missile launch and trajectory did not match the actual launch reliability results from Vandenburg AFB in California." When Dave was given the task of reconciling the data, he adapted some

theories that he had learned in graduate school about subjective probabilities (Bayesian statistics). His approach worked and was soon adopted not only by the Air Force but also by the Navy and Army. Dave wrote: "The method was published and verified as valid." He later wrote his doctoral dissertation on the Bayesian methodology, which "spawned" some 20 more dissertations on the subject.<sup>75</sup>

Bill Hecker was Test Director for the Underground Nuclear Test Huron King in June 1980. Huron King, in Bill's words, "was a vertical underground nuclear test exposing an Air Force satellite to the System Generated Electro-Magnetic Pulse from a nuclear detonation." He was one of a few Army officers "in a sea of blue Air Force uniforms." To conduct the test, a 10-foot diameter hole was drilled to 150 feet and then an 8-foot hole to over 1,000 feet. A huge crane lowered the nuclear weapon on the end of a long pipe, and several mechanical clam shell doors were inserted deep underground to close after detonation and keep nuclear debris from being released into the atmosphere. Layers of sand, gravel, concrete, and coal tar also were poured into the hold to seal the pipe all the way to the surface. To replicate deep space conditions, the satellite was suspended on shock/bungee cords inside a huge vacuum tank and placed over the site. The only unexpected event was the loss of electrical power the day before the test when an electrical storm struck a high line near the edge of the huge Nevada test site and knocked out commercial power.<sup>76</sup> The unexpected loss of power added to the already high level of tension, but everything came together and, except for its being ten minutes late, the "shot" executed perfectly. Bill wrote: "The test was successful--for the first time in nine years, Defense Nuclear Agency had a successful vertical underground nuclear test--on time, under cost, with 97% good data and no radio-active leakage."<sup>77</sup>

Barry Levine served on the Engineer Test Board and the Army Science Board but he made an especially historically significant contribution elsewhere. He wrote: "While I was the Army Project Manager for Nuclear Munitions, I was responsible for the development, production, logistic support and withdrawal of Army Nuclear Weapons. I worked with active duty military, government civilians and personnel from all three National Labs. During my tenure, the U.S. renounced tactical nuclear weapons so I spent quite a bit of time planning their withdrawal from service."<sup>78</sup> He added, "The Army Project Manager Nuc[lear] managed Army Nuclear Weapons throughout their lifecycle--from concept through design, construction, test, deployment, maintenance and decommission. Project Manager Nuc had a small program office staffed mostly by qualified government civilians who managed personnel from the National labs (Los Alamos, Livermore and

Sandia) who actually did the work. Project Manager Nuc worked for an Army Program Executive Office and some other classified DOD agencies. All Army Nuclear Weapons were tactical weapons meant to be used on the battlefield to influence operations (e.g. artillery rounds). They were not strategic weapons (guided missiles with warheads)--those belonged to the Air Force and Navy. Eventually, the country made a decision that there was insufficient deterrence provided by tactical nuclear weapons and they were--essentially-- more trouble than they were worth. Of course, I have oversimplified the results of the policy decision, but you get the idea. So like any good project manager, when the scope of the project changed (bring them all home and decommission them), my Project Management office immediately set about planning the new mission. As you might guess, transporting nuclear weapons is not simple so we worked with the National labs to design transportation systems that could do the job. The fact that you never heard about it proves we were successful."<sup>79</sup>

Emery Chase's experience illustrates our classmates' involvement in the Army with nuclear weapons. After being awarded an Atomic Energy Fellowship in Nuclear Engineering, Emery attended MIT and received an MS in Nuclear Engineering. Following some troop time and service in Vietnam, he served as the Nuclear Power Staff Officer on the MH-1A Sturgis, the barge-mounted nuclear power station, on which Ken Yoshitani also served. He then taught in the physics department at the Air Force Academy. Emery wrote: "After CGSC and a return to troops, I ended up as the Special Assistant for Nuclear Power Applications in the office of the Assistant to the Secretary of Defense for Atomic Energy. My focus included tracking the ability of the Department of Energy nuclear weapons complex to meet DOD nuclear weapon requirements, monitoring DOD radioactive material in space, nuclear non-proliferation, and making initial decisions relating to export of depleted uranium munitions. I ended up being the OSD [Office of the Secretary of Defense] point of contact for the accident at the reactor at Three Mile Island." After commanding an engineer battalion in Germany, he worked at V Corps in Germany on the employment of atomic demolition munitions. Upon returning from Germany, he went to the Defense Nuclear Agency where he managed high explosive and thermal effects simulation for nuclear weapons. Then he became Director for Nuclear Assessments and Applications where he worked with the combatant commands on nuclear operational planning. He next went to the Office of the Assistant Secretary of Defense for Atomic Energy as Special Assistant for Theater Forces Security and Survivability. In years when much national and international discussions about nuclear policy occurred, he

worked on two bi-lateral working groups (including British and German) on theater nuclear warfare. From 1989 to 1992 he served as the Military Assistant to the Assistant to the Secretary of Defense for Atomic Energy, the senior DOD official charged with responsibility for the nation's nuclear stockpile. Among the issues with which he dealt were President Bush's decision in 1991 on eliminating surface-launched tactical nuclear systems (the end of the Army's nuclear weapons program) and assisting the states of the former Soviet Union in eliminating their weapons of mass destruction and meeting their obligations under the Strategic Arms Reduction Treaty (or START) which the U.S. and the Soviet Union had signed in July 1991.

After retiring from the Army, Emery continued working on nuclear issues. While working for Science Applications, Inc., corporation, he became involved in such issues as eliminating START Treaty limited items (strategic bombers, SLBM, and ICBM missiles and launchers) and providing security for nuclear materials and weapons. The high point, he said, was when Belarus, Ukraine, and Kazakhstan became nuclear free. He also provided support to the former Defense Nuclear Agency and to DOD nuclear defense efforts. He wrote, "I directed a number of senior-level table top exercises at the cabinet-level looking at federal response to a terrorist use of a nuclear device in an American city and was involved at every government level on the establishment of a national capability for technical nuclear forensics."<sup>80</sup>

As Emery's experience illustrates, our classmates witnessed the nuclear threat change from a massive nuclear exchange with the Soviet Union to a smaller but nonetheless deadly threat from the likes of Kim Jong Un in North Korea, Mahmoud Ahmadinejad in Iran, or an unknown international terrorist. Whatever our responsibilities, concerns about nuclear devices never disappeared completely.

#### SPECIAL OPERATIONS/SPECIAL FORCES

Like nuclear weapons, special operations remained on our personal radar scopes throughout our military service. In his excellent study of our classmates' contributions to special operations, Tim Thames listed 33 classmates who had served during the Vietnam War in special operations, special forces, psychological operations, or Ranger units. He also listed two classmates who had flown in USAF special operations squadrons.<sup>81</sup> Several of these classmates had multiple assignments in special operations units, including more than one assignment in the same unit.

Other classmates became involved with special operations after a series of bombings in Germany in the 1960s and 1970s

demonstrated the dangers of terrorism. Several attacks garnered world-wide media attention, most notably the killing of eleven Israeli hostages by the Palestinian terrorist group, Black September, in the 1972 Olympics. Coupled with the hijacking of more than 30 aircraft in the 1970s, these attacks convinced American leaders to establish a counter-terrorism capability in the U.S. armed forces.

The Army led this effort with the creation of the 1st and 2nd Infantry Battalions (Ranger) in 1974, the short-lived 5th Special Forces' "Blue Light" in the late 1970s, and Colonel Charlie Beckwith's Delta Force. Several classmates were assigned to the Rangers during these formative years. Wes Taylor, who would serve three tours with the Rangers, was S-3 of the 1/75 Infantry (Ranger) in 1976-1977. Jamie Bryan followed Wes as S-3, but Jamie was killed in September 1977 when a command and control aircraft carrying him during a training exercise crashed into the side of a mountain after taking off from Kirtland Air Force Base. Bob Guy was Executive Officer of the 1/75th in 1978 and 1979 as the Special Operations concept was developed further. Bob wrote: "We worked with Chargin' Charlie Beckwith on several operations in the early concept and training development days in 1978 and 1979. I remember one operation clearly where we conducted a mock airliner takedown at Fort Bragg in early 1979. Observers of that operation included Vice President [Walter] Mondale, CIA Director Stansfield Turner, and several other high-ranking government officials. The success of that operation really gave the green-light to the Special Operations concept and support for its growth."<sup>82</sup>

The requirement to enhance the American capability for special operations became most apparent in November 1979 when the Iranians scaled the walls of the U.S. Embassy in Tehran and kept 52 Americans as hostages. Sonny Arkangel accompanied U.S. forces in April 1980 in the ill-fated rescue mission code-named "Operation Eagle Claw." He wrote: "In my chief residency year, winter of 1979, a Medical Service Corps officer from the Office of the Surgeon General knocked on my quarters door at Fort Sam Houston. The Army Surgeon General was tasked to provide a medical team/unit for medical coverage for the planned Iran Hostage Rescue. I was lucky to be one of those selected. No hesitation giving me the okay by my chief of staff and wife, Judy, and certainly not from me. I was the Emergency Medicine guy that helped to form Delta Med for that rescue and took care of the most seriously burnt Air Force crew chief when we evacuated them from the desert."<sup>83</sup>

Sonny remained part of the Special Operations Command. He wrote: "I reported to Womack Army Community Hospital in September 1980 as Chief, Emergency Medical Services (EMS), a

position that I held until September 1984. During that time I had two masters--the hospital commander and, initially, the Delta Commander, then the Joint Special Operations (JSOC) Commander. I provided coverage for the Los Angeles Summer Olympics {1984} and the General Dozier Rescue in Italy [1981]. In September [1984], I became the first JSOC Surgeon; the medical student rescue from Grenada [October 1983] was my last operation.... I retired as JSOC Surgeon in July 1985...."<sup>84</sup>

Jim Hardin also contributed to Special Operations. He wrote: "When BG Dozier was captured by the Red Brigade terrorist group [in December 1981], I was the Director of Intelligence (J2) of the Special Operations Command Europe (SOCEUR) and Special Operations Intelligence Officer on the J3 staff at U.S. European Command (EUCOM). After notification that the General was captured, the Commander of SOCEUR, a SOCEUR J3 officer, and I flew to Italy. We collocated with the staff at Southern Task Force Italy (SETAF). The Joint Special Operations Command also sent a liaison officer. Operating from the SETAF Operations Center we coordinated the flow of information and intelligence from U.S. Agencies to Italian government elements. The Italian government was responsible for counter terrorist operations in their country so it was ultimately their efforts, primarily detailed police work, that eventually led to the location and successful rescue of the General. I went to the medical clinic for some last minute coordination before the general arrived and was surprised to see my D-1 company classmate Sonny Arkangel. He was the JSOC Medical Officer sent to examine the general. We had a mini reunion, and then I returned to EUCOM."<sup>85</sup>

Chris Needels played an important role in the development of special operations in the early 1980s. He wrote: "After I returned from a tour in Germany with the 3d Infantry Division (Mech) in 1983, I was recruited for a special operations unit which is not publicly acknowledged by DOD. The first year I served as a brigade-level XO; the second as a battalion-level commander. Since the command was command-designated position listed as special forces, I branch transferred from Infantry to Special Forces. I did have the honor of serving with Sonny Arkangel upon occasion. It was very comforting knowing we had the best trauma/ER guy in the business."<sup>86</sup>

Special Forces also continued to play a key role in the post-Cold War era. After the overthrow of Anastasia Somoza by the Sandanistas in Nicaragua in July 1979, for example, the United States became more concerned about the spread of communism in Central and South America. In nearby El Salvador, the Farabundo Marti National Liberation Front (FMLN) began a campaign in 1980 to overthrow the military dictatorship that ruled the country. Despite fears of El Salvador's becoming

"another Vietnam," the United States quickly began sending "advisors."

As a Special Forces officer, Fred Scruggs spent much of his career in Central and South America in the U.S. Southern Command, including command of the 3rd Battalion, 7th Special Forces Group and command of the 7th Special Forces Group. While Fred was commander of the 3/7 Battalion in 1982-1984, his unit provided training support to USSOUTHCOM for the expansion and operational enhancement of the El Salvadorian Army. Fred wrote: "The Battalion provided training for El Salvadorian Army battalions formed during this period, as well as conducted Officer Candidate and NCO Courses, and small unit tactical training for El Salvadorian military students. Also, the Battalion assessed, selected and trained an elite Long Range Reconnaissance Patrol unit for the Salvadorian Army and provided advisors to assist with the initial operations of this unit. The Battalion provided advisors to the El Salvadorian Army Brigades to coordinate the U.S. Security Assistance support to these units and to coordinate training and logistics support. While Commander, 7th Special Forces Group in the 1989-1991 time frame, the unit deployed to Panama immediately after the initial operations of JUST CAUSE to support the USSOUTHCOM efforts to maintain law and order throughout Panama and to reconstitute the Panamanian police forces. For nearly a year after [Operation] Just Cause, the 7th Special Forces Group had teams deployed in every police facility in Panama conducting combined patrolling, coordinating logistics and training support and providing advice to police detachment commanders."<sup>87</sup>

As an example of the "Civic Action missions" of the Special Forces, Fred described the 7th and 20th Special Forces Groups sending detachments into areas in El Salvador toward the end of that long war, 1980-1992. He wrote: "These highly successful deployments were accomplished by A Detachments (10-12 people) with a project plan, some tools, and funds for materials. The A Detachments lived on site; coordinated with the local officials for project support; and formed a team of local people, ES [El Salvadorian] Government personnel and the few SF soldiers to complete the project." The projects included building and stocking health clinics, restoring electricity/water service to communities, and assisting in the return of displaced people. Fred observed: "As the Peace Accords to end the conflict in El Salvador were being negotiated, the FMLN insisted that the Special Forces advisors remain with the El Salvadorian Immediate Reaction Action Battalions and Brigade Headquarters until these units were deactivated. My initial thought was that ending the advisory effort would be one of the immediate actions required by the Peace Accords. It turned out that the FMLN had developed

such respect for the professionalism, competence and discipline [of the SF soldiers] that they trusted them to assure the unit deactivations were accomplished in accordance with the Peace Accords."<sup>88</sup>

Chris Needels contributed to tying together the disparate elements (Special Operations, Special Forces, Contingency Operations, Counter-Terrorism, Military Assistance, et al) in the new era. After leaving "a" special operations unit, Chris worked on the National Security Council staff from 1989 to 1993. He wrote: "With Special Operations and Low Intensity Conflict gaining momentum, I managed to be recruited for the National Security Council to advise on these subjects."<sup>89</sup> He added: "For all but a few months of the G. H. W. Bush Administration, I was director of international programs on the national security council staff. My initial duty was actually counter-terrorism in the aftermath of the bombing of Pan Am 103 [in December 1988] and other nefarious deeds of the era. Our directorate was collectively responsible for counter-terrorism, counter-narcotics, refugees, public diplomacy and foreign military assistance. For the later part of my assignment I was responsible for interagency coordination of military assistance programs. Looking back on it all, I couldn't have been on the White House Staff at a better time in history. We ushered out the Cold War Era and brought in the new."<sup>90</sup>

#### URGENT FURY/JUST CAUSE

Some of the challenges we faced in the post-Cold War era were not new. Operation Urgent Fury in Grenada in October 1983 and Operation Just Cause in Panama in December 1989 occurred before the end of the Cold War. In an environment of considerable political instability in Grenada, a small island country in the southeastern Caribbean Sea, President Reagan became concerned about the safety of U.S. medical students at St. George's University and about the possibility of Grenada's becoming a forward base for the Soviets and Cubans, and he ordered an intervention. Although the subsequent operation revealed serious shortcomings in Joint capabilities and communications, it provided the 1st Battalion, 75th Infantry (Ranger), led by Wes Taylor, an opportunity to demonstrate what it could do. At the time the U.S. Army had only two ranger battalions, the 1/75 which was assigned to the Army's Special Operations Command in Fort Bragg (but based at Hunter Army Airfield in Savannah, Georgia) and the 2/75 which was based in Fort Lewis, Washington. The First Ranger Battalion was selected to lead the forced-entry incursion into Grenada and spearhead a special operations assault that was blended into a larger conventional operation following the initial assault. Wes'

battalion was directed to seize the airfield at Point Salinas, hold it for follow-on forces, and rescue U.S. medical students who were believed to be held just off the east end of the runway.

Wes wrote: "While initially planned as a night time, blacked-out, air land seizure, the mission was delayed until dawn to permit arrival of other forces. We also discovered that the Cuban security force had blocked the runway with vehicles and debris. These facts necessitated an in-flight change to our parachute assault. As this was a pre-planned contingency the drop altitude had been pre-selected as well. I requested a jump altitude of 500 feet AGL (above ground level), as this was prudently low enough to avoid lengthy exposure to anti-aircraft and ground fires. The assault drop zone was the airfield and terminal complex." Wes knew that normal training altitudes for U.S. Army static line parachuting were 1200 feet AGL and that most of the successful parachute assaults of World War II were executed at low altitudes of 600 feet AGL or lower. Wes also knew that the runway was located on a narrow spit of land surrounded on three sides by the ocean, that the runway could be covered easily by the Cuban defenders and that the rangers and their aircraft would be completely visible in a "post-dawn" insertion. Fortunately for Wes and his men, the low-jump altitude worked to their advantage, since the Cubans could not lower their anti-aircraft barrels enough to engage the aircraft at the low altitude.

Wes continued: "The assault began about 0520 [on October 25th] on a clear, sun-filled morning. The first lift of seven C-130 aircraft was able to drop most of their rangers, but a second pass was necessary. Anti-aircraft and ground fires were heavy but mostly ineffective. Once on the runway, my men and I began two important tasks: clearing the runway of debris and moving to initial assault objectives. Runway was cleared by 0730 and students had been secured by 0930. Most of the rest of the day was spent in sporadic fighting to secure the airhead and eliminate enemy resistance. The runway and terminal complex were secure by 1500 in preparation for follow-on air landing of elements of the 82d Airborne Division." Wes's battalion suffered 5 killed and 4 wounded in the daring operation.<sup>91</sup> Following the successful operation, the 75th Ranger Regiment was activated in 1985, and Wes served as its commander in 1987-1989.

Another significant operation occurred in December 1989 when U.S. forces seized control of Panama in Operation Just Cause. The operation occurred, following several years of increased tension, after the Panamanian National Assembly gave sweeping powers to General Manuel Noriega and declared Panama in a "state of war" against the United States. With plenty of

warning, the United States--unlike in Grenada--had time to prepare for the operation, and Frank Hennessee, who was the Executive Officer to CINCSOUTH, General Max Thurman, helped with those preparations.<sup>92</sup>

Frank wrote: "My role in Operation Just Cause was one of the most rewarding experiences of my military career. The planning and preparation required conceptual and detailed planning and coordination with all of the participating joint conventional and special operations forces, rehearsals of various force packages at U. S. bases inside and outside CONUS and in the Area of Responsibility, and approval at the highest military and political levels. All of this was done with great secrecy. Execution of the plan was ordered by the President when Noriega took actions that harmed U.S. citizens." Frank explained: "I had accompanied the CINC (General Max Thurman) on a quick trip back to Washington, arriving at Andrews AFB on a Saturday night. Thurman's aide and driver took him to his brother's house for the night, and I joined Cam [Frank's wife] for the night at our townhouse in Arlington. A couple of hours later I received a call from the Crisis Center in the Pentagon asking me to bring General Thurman ASAP to the NMCC for a meeting with CJCS (General Colin Powell). After a quick update on the crisis situation worsening in Panama, Thurman and I flew immediately back to Panama. OPLAN Blue Spoon was about to become Operation Just Cause."

Frank concluded: "The operation was swift and successful, overwhelming Noriega's forces and putting him on the run before he was cornered and captured a week later, and the priorities shifted to the task of standing up the lawfully elected government in Panama. Surprisingly, much of the work of standing up and supporting the new government fell to the U.S. military leadership because getting the U.S. Embassy robustly restored in country took months."<sup>93</sup>

Frank was not our only classmates involved with Operation Just Cause (OJC). Joe DeFrancisco commanded the Division Artillery in the 7th Infantry Division (Light).<sup>94</sup> Joe wrote: "I arrived at Fort Ord, California, in the summer of 1988 and OJC began in December 1989 so I was well entrenched. The 7th was the first of Chief of Staff of the Army John Wickham's light infantry divisions...and a leading part of an initiative to get the Army smaller, more agile and able to deploy more quickly. At the time of OJC we were enjoying extraordinary priority for personnel and equipment and a very high readiness rating. Recall that the 'Wall' had just come down and the Soviet Union and Warsaw Pact were dissolving. It was almost as if the U.S. was looking for other missions and Noriega provided us a handy mission."

Joe continued: "The 7th had troops continuously deployed in Panama for approximately a year prior to OJC. I had made several visits to my artillery units and fire support structures who were in direct support of the rotating infantry brigades and aviation units in Panama. When the crisis occurred just prior to Christmas 1989 we were very familiar with the country and had been rehearsing pieces of the plan for some months. Our ready brigade and division TAC ["tactical" TOC] made an emergency deployment into a take-down/live fire environment a couple of days before Christmas. The rest of the division followed by echelon in the next few days. Because of our mission analysis, only one complete artillery battalion with howitzers deployed, but the total division fire support structure of forward observers and fire support coordination offices from company through division deployed. The howitzers executed some direct fire missions in buildings and strong holds, fired illumination missions and provided deterrence at check points and road blocks. The fire support structure coordinated air support from Army helicopters and some Air Force fixed wing and provided redundant command and control using our fire communications nets (this may have been their biggest contribution). In addition our battalion commanders and other field grades were frequently placed in command of various segments of terrain or maneuver troop formations--a lot like what took place in Iraq and Afghanistan. The fighting was over rather quickly but the U.S. did suffer a significant number of casualties for such a short operation. By the time the shooting stopped we had troops throughout the country securing the canal, ports on both coasts and all major cities including those in the far reaches of Panama.... I deployed on the 26th of December and stayed in country less than two weeks. Most of the division leadership returned within a month but we continued to keep a full brigade combat team with a direct support artillery battalion in country for many months."

Joe added that in the context of recent American operations in Afghanistan and Iraq, Operation Just Cause was a "small operation but it was significant at the time." He explained, "First, it was a truly joint operation with contributions from all Services. The Army was by far the largest contributor but we had marines, AF and Navy--as I recall we lost a number of SEALs attempting to take down Noriega's residence. XVIII Airborne Corps, under U.S. Southern Command, planned and executed the operation. The entire 82nd, the entire 7th ID(L) and a small element of 5th Mechanized Division out of Polk were the major units.... Of significance, these Army units along with the other Service contributors, met on the battlefield. We and the 82nd deployed from CONUS and went directly into combat

in Panama--at night. Second, we did not have the formalized family support structures we have today. Lynne [DeFrancisco] and the other division leader wives had 'telephone trees' and word of mouth to hold things together. Of course they all did a wonderful job, but they did it on the fly with no formal structure and no help from division or above. Back in 1989 emergency deployments were not an everyday occurrence. We had a Cold War Army with pretty much a Cold War mentality."<sup>95</sup>

#### OPERATION DESERT SHIELD

While operations such as Urgent Fury in Grenada in October 1983 and Just Cause in Panama in December 1989 demonstrated America's capability to conduct contingency operations in the final decade of the Cold War, the primary focus in the 1980s remained on the Cold War and the demands generated by the threat of the Soviet Union and the Warsaw Pact. The collapse of the Berlin Wall in November 1989 and the disintegration of the Soviet Union in 1991, however, marked the ending of the Cold War, and Iraq's invasion of Kuwait in August 1990 signaled the beginning of a new era. Unfortunately for Saddam Hussein and Iraq's armed forces, they invaded Kuwait before the United States had dismantled its highly capable Cold War forces and its ability to transport armored forces and project power over great distances.

Divided into Desert Shield and Desert Storm, the first Gulf War began in August 1990 and ended in February 1991. As the war unfolded, we had classmates who worked closely with the Secretary of the Army and the Chief of Staff. Joe DeFrancisco was Executive Officer to the Secretary of the Army, and Dan Benton served as Executive Officer to Army Chief of Staff. Dan wrote: "This position was an incredible vantage point to participate in the most significant military mobilization since World War II."<sup>96</sup>

The Gulf War had many unique challenges, including moving VII Corps from Europe to Saudi Arabia. Harry Dermody, who was Deputy Commander of V Corps COSCOM (Corps Support Command), played an important role in this successful move. Never outdone in the telling of a story, Harry said: "I got a call one afternoon saying, 'Hey, get down to Stuttgart. Get down to General Franks' office.' I get down there, and I find General [John] Shalikashvili and [General] Freddy Franks standing in the parking lot.... So I get over there, and they say..., 'You've got to get us out.'"

"[I said,] 'What do you mean I've got to get you out? Get you out to where?'"

"They look at me and say, 'Harry, you've got to get us out of here.' I said, 'What are you talking about?'"

"He said, 'Well, go back to General [John] Cowings [V Corps, COSCOM Commander] and tell him you guys are the ones--V Corps will move us.'"

"And I said, 'Sir, move you where?'"

"[He said,] 'We're moving into the desert--now.'"

"Now! All the ammunition, the missiles, all of V Corps, all their equipment, everything, has to go ahead and be shipped. To do this, I...took four Battalion Commanders and I created four DACGs--Departure Airfield Control Groups. They went to Nuremberg, Rhein-Main, Ramstein, etc., and they took a blank check, and they said..., 'When these planes start coming in, you load the troops from here, with their ammunition, in the bellies. That's the way it's got to go.'"

"So we...started this process--we got it all lined out. We had to go ahead and spend an awful lot of money to get the security that we needed and do what we had to do.... But every C-5 in the United States Air Force was literally assigned to it. I mean I saw C-5s stacked so deep that--but the point was to move all of VII Corps.... General Franks, when he finally got to the desert, commanded the largest Corps that this country has ever seen."<sup>97</sup>

The move of VII Corps also required using the Civilian Reserve Air Fleet to transport troops and personal equipment to the Middle East and using German trains to move ammunition and heavy equipment to Livorno, Italy, where ships were waiting to carry them to the Middle East. To complicate matters, the trains to Livorno had to pass from Germany, through France, into Italy, and they encountered some resistance from French authorities on the border. In his own inimitable fashion, Harry said, "Germany's one thing--then you run into the French. Dealing with the French is like dealing--Holy Peter!"<sup>98</sup>

Our classmates contributed in other ways to the successful liberation of Kuwait. Prior to the campaign John Longhouser played a particularly important role in the modernization of the Army's ground combat vehicles. This includes nine years in developing and fielding the Abrams tank. John wrote, "My time with the Abrams tank and stewardship of the Army's ground vehicles program was extremely enriching." He also emphasized that the Abrams tank "made our ground soldier dominant across the spectrum of conflict."<sup>99</sup> John Thompson served for a year and a half as the deputy director of operations at the National Command Center on the Joint Staff in Washington. That period included Operation Just Cause in Panama and operations Desert Shield and Desert Storm.<sup>100</sup>

Orlin Mullen enhanced the effectiveness of the Abrams tank. He served as Project Manager (PM) for Tank Main Armament Systems (TMAS) from 1987-1989 and then Program Executive Officer (PEO)

for Armaments in 1989-1990. During these three years, Orlin was in charge of the highly classified Armament Enhancement Initiative (AEI) which sought to overcome the inability of our tanks to defeat Soviet main battle tanks. He managed the development of advanced long rod penetrator kinetic energy munitions and shaped-charge chemical energy munitions from engineering development to full rate production, and he delivered 120mm tank guns and ammunition with accompanying new fire control systems for Abrams tanks to U.S. Army units in USAREUR and CONUS. Fortunately for American soldiers, he equipped the final tanks as they disembarked in Kuwait for the first Persian Gulf War in 1991.<sup>101</sup> Orlin concluded: "The resulting overwhelming performance of our Abrams tanks equipped with AEI ammunition sent shock waves through the Soviets and their Mid-East allies and has changed maneuver warfare."<sup>102</sup>

From 1989 to 1993 Dick Williams served as Project Manager for "Sense and Destroy Armor," which cost some \$6.3 billion. Dick wrote: "The SADARM program was ongoing when I took over from Bill Ervin, USMA'66. We had Alliant Tech Systems (Honeywell) and Aerojet as competitive prototyping competitors. We down-selected to Aerojet as lead and Alliant teaming on the final design development. The munitions were delivered in 155mm rounds and MLRS rockets. The munition was delivered over the battlefield, decelerated by a special parachute, then descended on a multi-paneled triangular parachute that imparted a turning motion describing a spiral scanning path on the ground for the sensor systems to find armored vehicle targets. When an appropriate target was found it would fire an explosively formed penetrator down on top of the vehicle. This weapon could defeat any known armor. It was a very technically challenging project. The system went into production and the munitions were used in Iraq."<sup>103</sup>

Walt Kulbacki served as Deputy Director of the Defense Information Systems Agency in 1990-1992. He wrote: "This included direct support to the President and also all the Satellite Communications for Desert Storm and [Desert] Shield where we had to actually move a major satellite to cover that geographical area where the war zone was. This was so critical because we were not sure the satellite would have enough fuel to make it to a different synchronous orbit.... Desert Storm was a satellite war in which communications were needed for all Command and Control since ground communications were not available or capable because of the terrain."<sup>104</sup>

Bill Hecker served from 1987 to 1991 as the Program Manager for the Multiple Launch Rocket System (MLRS). When he assumed his duties in 1987, he had a prioritized list of 100 items that were not performing as well as predicted, but he had one that

"significantly handicapped" the true firepower of the system: "the rubber-coated ablative panels that protected the launcher [from heat] during firing." After two hours of rapid firing, the launcher had to stand down for twenty-four hours for replacement of the ablative panels. By late spring 1990, the prime contractor had developed new panels that would withstand at least 1,500 rocket firings, but the launching of Operation Desert Shield in August 1990 in the Middle East brought new urgency to the upgrading of the launchers for possible use against Iraqi forces. Bill overcame significant hurdles in funding and had 200 plus sets manufactured, crated and ready to ship to the Middle East by mid-November. His next major challenge was finding the skilled engineers to install the panels. A world-wide search revealed that only the main Army depot in Germany had the skilled engineers available, but the engineers were German civilians, and Germany was not a participant in Operation Desert Shield. German and American defense leaders eventually agreed that the German engineers could go and do the installation if they volunteered. Bill wrote: "We easily recruited the 40 German depot engineers." The 200-plus launchers were upgraded by mid-January, just in time for the launching of Operation Desert Storm. Bill wrote: "The Iraqis, in awe of the firepower, referred to it as 'steel rain.' And the rest is history."<sup>105</sup>

#### OPERATION DESERT STORM

After VII Corps arrived in Saudi Arabia, it joined forces from more than 30 other countries, as well as additional forces from the United States, including the XVIII Airborne Corps. Dick Tragemann was the Corps artillery commander and arrived in Saudi Arabia on August 29.<sup>106</sup> The first ship carrying VII Corps equipment and weapons arrived in early December. General H. Norman Schwarzkopf, who commanded American forces and most of the coalition's forces, planned on launching a "one-two punch" with a "right jab" followed by a knockout blow from a "left hook." The first phase of the coalition's attack, the aerial attack, began on January 17, 1991, and the Allied ground assault against Iraqi forces began on February 24. In a 100-hour ground battle, coalition forces drove deep into Iraq, and as retreating Iraqi units rushed out of Kuwait into Iraq, hundreds of Iraqi vehicles and their occupants were attacked on Highway 80, the "Highway of Death," by American aircraft and ground forces on the night of February 26-27. Hostilities ceased on February 28.

Bob Higgins commanded the 2nd Brigade, 3rd Armored Division in Desert Storm which was on the right side of the left hook. He wrote, "Based in Gelnhausen, Germany, we were very fortunate to have just come off of six months of strenuous training in the

Grafenwoehr and Hohenfels training centers when we were selected to go to the Gulf. In November and December 1990 we went through a very complicated deployment that included shipping our entire Brigade equipment with attachments by rail, barge, and convoys to the various ports of embarkation. Personnel arrived in Saudi Arabia in December and we assembled our units, rehearsed, and crossed into Iraq on February 24, 1991, in the middle of a sand storm which presented unique command and control issues. As the division's lead brigade we followed the VIIth Corps covering force which was the 2nd Armored Cavalry Regiment (2ACR). During February 25, we eventually passed through the 2ACR, who swung east, and we continued our advance north into Iraq. During the period of 25 and 26 February 23 we had direct contact with the Iraqi units. In the afternoon of February 26 we received some indirect enemy artillery fire as well as direct tank fire which continued through the night and into the morning of February 27. In the morning our 3rd Brigade passed through us and went east into Kuwait while we continued due north in Iraq. We eventually ended up near Basra, Iraq, and assumed a 20-mile guard mission on a major highway after the cease fire was declared. I cannot say enough that would adequately credit the superb way our soldiers performed and conducted themselves. It was an honor to be part of a great team and was the highlight of my career."<sup>107</sup>

The ubiquitous Sonny Arkangel accompanied the 24th Infantry Division as it spearheaded the drive deep in the Iraqis' rear. A physician, Sonny was sent initially to a support battalion, but he talked his way into the trauma team that accompanied the division commander as he led his division from the forward edge of the battle line.<sup>108</sup> Sonny wrote: "It was an honor to work with General Barry McCaffrey, the CG. I formed a forward surgical team with a general surgeon, two 91B medics/drivers, and a 91C medic. I got a 5-ton truck ready to be a resuscitation platform and a Humvee ambulance which accompanied the CG in his jump CP. I brought the Division rear back home."<sup>109</sup>

Other classmates contributed to the war effort even though they were not present in Saudi Arabia or Kuwait. Joe Koz worked in the Defense Intelligence Agency during the Kuwait war.<sup>110</sup> As a member of the U.S. Army Reserves, Jim Peters volunteered for Desert Storm but spent six months at Fort Benjamin Harrison instead.<sup>111</sup> Steve Harman was the Deputy Chief of Staff for Operations (G3) in the Information Systems Command (ISC) during the Gulf War. Steve wrote: "A major part of my job was to get communications equipment into the theater from resources around the world. Early in the conflict we had to get a commercial satellite ground terminal from Alaska to Saudi Arabia. When Air

Force assets were not available to move the terminal, we used a Russian aircraft to fly the equipment. Of course the AF did not like that move. Bottom line--we got it there and it provided the first significant communications capacity from the theater back to CONUS."<sup>112</sup> Kent Brown wrote: "While serving as a Division Chief on the Joint Staff, I was instrumental in obtaining approval for the deployment of the Joint Stars system to support operation Desert Storm. This airborne radar system was still in R & D and the Air Force had decided not to deploy it. In response to a request from Dr. Jay Sculley (I had served as his XO when he was the Assistant Secretary of the Army for RDA.), I set up a series of briefings that resulted in a decision by the Chairman of JCS, General Colin Powell, overruling the Air Force and deploying the system. Detection of the Iraqi army fleeing Kuwait City by this system enabled us to destroy those forces in the famous, 'Highway of Death.'"<sup>113</sup>

Several of our classmates became involved with the rebuilding of Iraq. Working for Bechtel, John Pickler contributed to the Infrastructure Reconstruction project in Iraq.<sup>114</sup> Sandy Hallenbeck went into Iraq "with the first wave of contractors to re-build the Iraqi Media Network, which included a newspaper publishing house in Baghdad and more than 25 radio and TV stations spread throughout Iraq (from Basrah to Ramadi to Mosul and Suliemaneha)." Sandy said, "This job enabled me to see almost all of Iraq and to interface with Iraqis from all walks of life. It also enabled me to meet with officials from many other countries in the region."<sup>115</sup> Reg Dryzga went to Baghdad at the end of 2003 to assemble a development team to build low-cost housing in a suburb of Baghdad.<sup>116</sup> He spent two years in Baghdad and Fallujah rebuilding housing for the Iraqi poor. Thanks to Reg's efforts, our Class contributed to improving the well-being of a U.S. Marine Corps company in Iraq. Funding from the Class enabled the company to enjoy New Year's Eve and Super Bowl parties and to purchase electronics for the company's day room.<sup>117</sup>

Following operations Desert Shield and Desert Storm, Operation Provide Comfort provided aid to Kurdish refugees in southeastern Turkey and northern Iraq. The aftermath of the war proved longer than the build-up for the war or the war itself. Working with Kurdish refugees, Preston Hughes played a role in the humanitarian intervention by American and other forces to assist the Kurds who had revolted against Saddam Hussein in the aftermath of Operation Desert Storm.<sup>118</sup> Preston wrote: "In April 1991, I went from Ankara, Turkey (where I was NATO Liaison to Turkish General Staff), to Hakkâri province (extreme SE Turkey) to assist in operations in support of U.S. and Turkish efforts to provide assistance to the Iraqi Kurds who had fled into an

area along the Iraqi-Turkish border. This was the same area (and the same Kurds) which was the focus of Operation Provide Comfort. I worked in this capacity for about one month, including accompanying General [John] Shalikashvili [commander of Operation Provide Comfort] during one of his meetings with then Turkish President Turgut Ozal."<sup>119</sup>

As commander of Kuwait Emergency Reconstruction Ralph Locurcio was responsible for rebuilding Kuwait.<sup>120</sup> With a mission to "repair Kuwait," Ralph deployed in Kuwait City, Kuwait, with his 150-person engineering and construction management team immediately after the Gulf War. Ralph wrote: "[We] designed, awarded, and constructed more than 350 project orders valued at over \$425 million in 11 months [and \$650 million when completed]. These projects included the \$68 million restoration of the National Parliament in nine months; the repair of 5,000 kilometers of power lines for more than 200 major government buildings and 156 schools; the reopening of the international airport, two military airfields, and 250 kilometers of highways and eight bridges; the reopening of the national water pumping station, repair of eight water mains and two billion gallons of storage; construction of a 5,000-man U.S. cantonment; and the repair of two major Kuwaiti military airfields."<sup>121</sup> More than 90% of Kuwait's population had fled to other countries after the Iraqi invasion of August 1990, and Ralph and his team's efforts made their return possible.

#### NEW WORLD ORDER

As the threat of the Warsaw Pact faded away, our classmates confronted reduced defense budgets and fewer forces and worked hard to reshape U.S. forces for the new strategic environment. While we welcomed the "peace dividend," we did not welcome the personnel turbulence and tough decisions that came with it. Dick Tragemann assumed command of the U.S. Army TRADOC Analysis Center (TRAC) in November 1990, just as the Cold War was ending and the Defense budget reduced. With significant resource reductions in FY 1991 and FY 1992, Dick had to make hard decisions about where to make personnel cuts while continuing to produce high-quality studies and analysis for the Army. In announcing his decision, he wrote: "I am fully aware that the mandated cuts enumerated herein will cause TRAC to lose in the next few months immensely talented, dedicated professionals who have served the Army with distinction and earned reputations as leaders in their career fields. The decisions reflected in this memorandum are the most difficult that I have had to make in over 25 years of service. Please convey to the work force my pledge to do as much as I can to assist any member of TRAC who loses his or her position."<sup>122</sup>

Clair Gill, who served in Heidelberg as the USAREUR Deputy Chief of Staff Engineer in 1991-1993 and who helped shape the reductions in Europe, wrote: "USAREUR was in a draw-down mode at the time, but we did not have a good idea of how deep or how fast it was going to be. Owning the Installations Support (Facilities and Housing) and Real Estate functions, I became fully engaged in dismantling that which we had labored so long and hard to build up. It could have been a real downer, except that we were kept so busy and knew we had to do this professionally and responsibly. In my two-year tour, we closed over 300 (of the roughly 850) installations across Europe."<sup>123</sup> From Heidelberg, Clair moved to Atlanta as the Deputy Chief of Staff for Resources Management for U.S. Army Forces Command. He wrote: "So now [1993-1995] I was on the receptor side of all of those units, soldiers and families returning from Europe."<sup>124</sup>

Clair witnessed another dimension of the reduction in forces when he moved from Forces Command to Fort Leonard Wood in 1995 as the Installation Commander and Commandant of the Engineer School. Here he became directly involved with the Base Realignment and Closure (BRAC) Commission which consolidated units on some "bases" and closed others. The BRAC Commission aimed to reshape the Department of Defense's infrastructure and force structure and, as one decision among many, decided to close Fort McClellan, Alabama, and move the Military Police and Chemical schools to Missouri. Speaking of his two years (1995-1997) at Fort Leonard Wood, Clair wrote: "I understood that I had the additional mission of enabling this to happen and getting construction started within two years [1995-1997]. It was a daunting challenge to overcome the foot dragging by those not wanting the Army to leave Alabama, and the environmental and legal roadblocks they put in our way, but two years later--as I was leaving--the contracts were let and bulldozers were moving earth."<sup>125</sup>

Our classmates who commanded divisions also faced significant challenges associated with the downsizing. Ric Shinseki and Joe DeFrancisco took command of divisions at about the same time and commanded in 1994-1996. Joe wrote, "Neither the pace nor the excitement slackened much over my two plus years in command." He explained: "Commanding the 24<sup>th</sup> Infantry Division (Mechanized) was a great source of pride and satisfaction. It was an opportunity to see the diversity of talent, commitment to excellence and patriotism of our wonderful soldiers and the overall quality of our Army. With our headquarters at Fort Stewart and major elements at Hunter Army Air Field and Fort Benning, the Division had oversight or command of nearly 50,000 troops including assigned, attached and resident units." He added, "In April 1996, toward the end of my

command tour, we were directed to re-flag the [24th] Division to become the 3<sup>rd</sup> Infantry Division (Mechanized). Faced with a requirement to downsize, the Army decided to inactivate a number of divisions based on unit longevity and other factors. It selected the 24<sup>th</sup> ID as one of the units to case its colors. Re-flagging is a highly emotional event but in very short order we held a ceremony changing not only the Division colors but also the flags of all brigade and many battalion size units. We changed unit patches, renamed streets and buildings and repainted the logo on the Fort Stewart water tower--the definitive sign of change. By the time I relinquished command three months later we were firmly situated as the 'Rock of the Marne' Division."<sup>126</sup>

Amidst these considerable changes, the United States continued to deploy forces abroad. Ric Shinseki pointed out in 1999 that in the previous ten years the Army had participated in 35 major deployments, many of which were small-scale contingencies. During that same period the Army, including active and reserve, was cut more than a third and experienced considerable turbulence from reorganizing and moving units.<sup>127</sup> Joe DeFrancisco wrote: "I took command in June 1994 and by October we had significant presence in Saudi Arabia and Kuwait as part of Operation Vigilant Warrior to counter Saddam Hussein's first saber-rattling after the Gulf War, in Guantanamo Bay and Suriname to handle refugee issues, in Haiti as part of Uphold Democracy, and [in Fort Irwin] at the National Training Center."<sup>128</sup>

A complex "peace enforcement" operation occurred in the former Yugoslavia which had dissolved in the brutal wars of the 1990s, leaving thousands dead and millions homeless. In an attempt to halt "ethnic cleansing" and to prevent additional massacres such as the one that occurred in Srebrenica in July 1995, NATO launched an aerial bombing campaign against Bosnia targets in August and September 1995. After the belligerents accepted a peace treaty, NATO, augmented by non-NATO countries such as the Russian Federation, sent an Implementation Force composed of peacekeepers from 32 countries into Bosnia. The deployment of U.S. forces began with a difficult crossing in December 1995 of the flooded Sava River, which constituted the border between Bosnia-Herzegovina and Croatia. Clair Gill wrote: "During my Fort Leonard Wood tenure [the home of the U.S. Army engineers], the United States decided to move into Bosnia with NATO, crossing the Sava River from Hungary in the dead of winter. I had done some earlier planning for Bosnia while in USAREUR, but we never contemplated entering from any place other than the Adriatic coastline. This was a super bowl level challenge, in which I can proudly say we were successful, for

many, many reasons.... Once inside Bosnia, finding, marking and recording minefields became another huge challenge that our engineers met with success."<sup>129</sup> A year after American forces crossed over the Sava River, they reported they had removed some 45,000 land mines and booby traps. At the time of the report, estimates suggested as many as 350,000 remained in the American sector.<sup>130</sup> Getting the Serbs, Bosniaks, and Croats to stop killing one another and to build a viable political regime, however, proved as challenging as finding and removing the mines.

We had several classmates directly involved in the complex events in Bosnia-Herzegovina that Secretary of State Warren Christopher described as "the problem from hell"<sup>131</sup> and that became NATO's first "out-of-sector" deployment. Dan Benton was Chief of Staff of USAREUR in 1995-1996 and Chief of Staff of the European Command from August 1996 to August 1998. He wrote: "In this [latter] position I had oversight of all United States military operations in 89 nations in central and eastern Europe, Africa, part of the Middle East, and the Central Asian Republics. I dealt regularly with senior Consular officials, with foreign and American businesses, and with foreign military and governmental officials throughout the European Command area."<sup>132</sup> Ric Shinseki also became involved, first in Washington, D.C., as the U.S. Army Assistant Deputy Chief of Operations, Plans, and Strategy (ADCSOPS) in July 1995 and then as the U.S. Army DCSOPS in August 1996. In June 1997 Ric took command of the NATO Stabilization Force (SFOR) that had succeeded the Implementation Force and attempted to bring stability and security to Bosnia-Herzegovina so democracy could take root in a region torn by internecine ethnic conflict. Commanding the complex multinational force required much tact and diplomacy and great faith in the skills and professionalism of small-unit commanders, and Ric proved ideal for the position. He remained as Commander of the NATO Stabilization Force in Bosnia until he became Vice Chief of Staff of the Army in November 1998.

In retrospect, when we graduated in 1965, we could not have foreseen U.S. forces attempting to "stabilize" the region where the assassination of Archduke Franz Ferdinand had sparked the beginning of the First World War. Nor could we have foreseen the "war on drugs." In 1991-1993 John Pickler served as the commander of Joint Task Force 6. In testimony before Congress John explained, "The mission of Joint Task Force 6 is to plan and coordinate DOD Title X support to federal, state, and local drug-related law enforcement agencies within the southwest border region."<sup>133</sup> In essence, the task force provided support for federal law enforcement in the "war on drugs." As the new

century began, we wondered what new challenges would face the small number of classmates who remained in uniform.

#### RIC SHINSEKI AND THE "WAR ON TERROR"

The answer came on September 11, 2001, when al Qaeda terrorists hijacked four commercial American jetliners and crashed two of them against the Twin Towers in New York City and one against the Pentagon. To prevent passengers and crew members from regaining control of the fourth airliner, the terrorists crashed it into an empty field in Western Pennsylvania.

Several classmates witnessed the attacks. Joe Barkley described what he experienced on September 11, 2001: "I was in the World Trade Center PATH station, having just gotten off of the train. I stopped to use the bathroom in the station and that saved me, because had I not done that I would have been walking out of the door of the WTC that was just underneath where the plane hit at 0846. As it was, I heard a loud rumble and explosion. I thought that there had been a train wreck below. By the time I got up to ground level, about 3 minutes because the escalator is so long and so high, the evacuation was organized, shops were closing, and people were moving, actually in a somewhat orderly fashion, to the exits."

"When I got outside," Joe said, "I saw the ground littered with paper and building debris, and a crowd of people across the street looking up. I stopped and looked up and saw the hole and the flames. I wondered what could have caused that because I know that there was no natural gas or explosive fuel in the building. I still had no idea what had happened. I began to walk over to my office building, about a quarter mile away. While I was on the street, I heard the roar of the second plane as it accelerated into the building and I heard the explosion. I still had no idea what happened, and did not until I reached my office."

Joe continued, "Then I watched everything unfold. Most of the people on my floor left. I stayed because I did not know where to go. I actually talked to my wife by phone three times and she kept urging me to leave. I watched both of the buildings come down.... About 11 AM I left the building and began walking up town toward Penn Station, about 4 miles away. Once I moved away from the disaster area, people were moving fairly orderly. It was like being in a war movie with people walking to escape a combat zone. It was eerily quiet except for the sirens. As I walked along I made a recording of what I was seeing and hearing on my Dictaphone.... I remember thinking as I watched the South Tower fall, 'Oh! I wonder how they will put the top back on the building.' Little did I know!!."<sup>134</sup>

When asked where he was on 9/11, Dan Christman replied: "In lower Manhattan, watching the south tower collapse. Just south of Washington Square...." Retired from the Army, Dan was scheduled to attend a board meeting that day and the board had considered holding its meeting in Windows of the World, a restaurant at the top of the World Trade Center. Fortunately for Dan and the others, they chose another restaurant. Dan and Tosh Barron (Tom's wife who also was a member of the board) had just gotten off the subway and were walking up the stairs in Lower Manhattan when they encountered the smoke from the Twin Towers. Dan said, "And I'll never forget this--the most dramatic thing to me was watching the South Tower burn, and then maybe 30 seconds before it collapsed, there was this river of molten metal that cascaded down the north-facing side of the South Tower...."<sup>135</sup>

Frank Probst, while working on the Pentagon Renovation Project, was walking near the heliport when American Airlines Flight 77 flew close overhead and then crashed into the Pentagon. Frank had to run to escape the fireball. Herb Smith's wife Carole was working in the Office of the Secretary of Defense at the time and escaped unharmed.<sup>136</sup> Martha Cardin, Gil Gilchrist's wife, was working in the Office of the U.S. Army Deputy Chief of Staff for Personnel and barely made it out the Pentagon alive. With the lights out and the air filled with the odor of jet fuel, an MP got her and others down on their hands and knees, and holding on to the person in front, they made their way out of the building safely.<sup>137</sup>

Fortunately for the United States, Ric Shinseki was the U.S. Army Chief of Staff in September 2001; his integrity, fortitude, and seasoned judgment helped the American armed services respond appropriately and capably to the new strategic environment. Arriving in Washington in 1998 as Vice Chief of Staff of the Army and bringing with him his experience in Bosnia, Ric became the 34th Chief of Staff in June 1999 and immediately initiated "fundamental and comprehensive change" in the Army. He sought not only a more versatile and deployable force but also one that was led by innovative leaders and was imbued with the values of loyalty, duty, respect, selfless service, honor, integrity, and personal courage. He often told Army audiences, "If you don't like change, you'll like irrelevance even less."<sup>138</sup> Ric had been Chief of Staff for almost two years when the terrorist strike occurred, and he had done much to transform the U.S. Army and prepare it for the war on terror.

The demands on the Army while Ric was Chief of Staff seemed remarkable at the time and even more remarkable in retrospect. Beyond the transformation effort, Ric, at the time of his

retirement in June 2003, had some 370,000 soldiers in 120 countries, including those in Afghanistan, Iraq, the Balkans, the Sinai, Kuwait, the Philippines, and South Korea, as well as Central and South America.<sup>139</sup> Patty Shinseki proved to be as farsighted and compassionate as Ric. When accompanying him on visits to units, she focused on family issues confronting soldiers by visiting hospitals, commissaries, post exchanges, schools, daycare facilities, etc. She and Ric recognized that attracting and retaining quality soldiers depended on the soldier and his/her family being satisfied.<sup>140</sup>

Much ado was made by the press about tensions between Ric and Secretary of Defense Donald Rumsfeld. The quintessential professional, Ric never hinted, publicly or privately, that such tensions existed. One point of contention, however, pertained to the number of soldiers required to occupy Iraq after an invasion. Rick was first asked the question in an appearance before the Senate Armed Services Committee in February 2003, before the invasion in March, and he responded "something on the order of several hundred thousand soldiers." This number differed substantially from the smaller number preferred by the Secretary of Defense. Subsequent events proved that, as the slogan on Ross Wollen's hat stated, "Ric was right."

As a Class we are proud of Ric and all he accomplished. Some 240 classmates and their spouses attended his retirement ceremony on June 11, 2003.<sup>141</sup> Denny Coll wrote: "I don't think that I have ever seen so many of the Strength and Drive segment of the Long Gray Line stand so tall and feel so proud as we did that Wednesday morning in June, 38 years almost to the day since we raised our right hands and accepted the oath of office to our chosen profession--the profession of arms!"<sup>142</sup>

## FOREIGN SERVICE

When we took our oath of office, we anticipated service overseas, primarily in Western Europe and South Korea, but very few of us anticipated spending as many years as we did overseas. Art Hester wrote: "My active duty assignments included service in both airborne divisions, an armored division, an infantry division, a separate airborne brigade, and an armored cavalry regiment. In addition to numerous locations in the United States, I also served tours in Germany, Vietnam, Saudi Arabia, and South Korea."<sup>143</sup> During his 33 years in uniform, Dan Benton, who speaks both French and German, spent 50% of his military service abroad. Counting his time as a student, he spent 17 years in Europe.<sup>144</sup> Given the world-wide interests of the United States, we were exposed to many different cultures and often were challenged by the complexities of performing our duties in foreign countries. Those cultures and complexities opened our

eyes and our minds in ways we could not have anticipated in 1965.

Bob Frank served as the Deputy G-5 in V Corps in 1980-1982. Located in downtown Frankfurt in the I. G. Farben building which was later renamed the "Abrams Building," the V Corps G-5, which had both wartime and peacetime missions, had the peacetime mission of building relationships that would strengthen wartime relationships, should that situation arise. Bob wrote: "Civil-Military relations were a top priority, especially when rambunctious soldiers disturbed the peaceful ways of German daily living." Frequent issues came from noise pollution, maneuver damage, and German civilians encroaching or trespassing on local training areas. American housing in and among German communities presented occasional problems, especially the raising of security for "high-value targets" after the kidnaping of Brigadier General Dozier in Italy and the Baader-Meinhof Gang attack against General Frederick Kroesen and his wife while being driven from their quarters to USAREUR headquarters in Heidelberg. The V Corps G-5 also worked on the "social component" of partnership efforts with German and French units. This included sending American soldiers to German and French units for training and social interaction.

One of the most interesting events for Bob and his wife Mary was the reopening of the Frankfurt Opera House which had been destroyed in World War II but rebuilt and reopened in 1982. A local German supporter contributed \$40,000 worth of tickets so American soldiers in their dress uniforms could participate. Despite such actions, Bob found the attitude of Germans toward Americans to be mixed. He explained, "Those old enough to remember WWII and its aftermath (especially the Marshall Plan) were generally supportive and even grateful for the American presence. This was even more true in the villages than in the larger cities. The cities reflected a diversity of attitudes.... [M]any citizens...were truly concerned about the 1979 NATO decision to deploy [nuclear armed] Pershing II missiles to counter the Warsaw Pact threat."<sup>145</sup>

Rick Kuzman served in Tehran, Iran, from June 1976 to June 1978, and departed about a year before the seizing of 52 American hostages. Rick observed: "All assigned military personnel and their families lived on the economy. And because of the constant terror threats had to remain vigilant, particularly when traveling.... Before I left Iran, demonstrations against the Shah had already begun and once I departed, my successor had most of the telecommunications facilities destroyed to prevent equipment from falling into the hands of the Revolutionary Guards who now occupied portions of

Tehran." Rick concluded, "It was the most interesting and challenging assignment I had."<sup>146</sup>

Tom Mushovic also served in Iran. He wrote: "I was with the MAAG [Military Assistance Advisory Group] in Iran from 1976 to 1978. I was a logistical advisor to the Imperial Iranian Ground Forces as well as in charge of the military sales of Quartermaster items and munitions to the government. My family lived on the outskirts of Teheran in the home of a fairly wealthy Iranian. We had the third floor of his estate. We got to meet and know lots of Iranian folks and my general impression was the farther you got from Teheran (Qom excepted) the more likable the folks. In fact when I hunted wild boar along the Russian-Iranian border, the folks living in the area were living as they did hundreds of years ago. Loved them, trusted them. All in all the normal Iranian was very friendly and likable."<sup>147</sup>

John Malpass was "seconded" to the Nigerian Army as a Nigerian Army major in 1981-1982. He explained that "seconding" was a carryover from the British Army, and he was actually considered to be a major in the Nigerian Army. He explained: "I don't believe it was anything 'official' as far as the embassy was concerned. I was asked if I minded and I said 'no.' No one considered it a big deal, so I went along with it. I was issued a Nigerian Army ID card. The uniform I wore, however, was not a Nigerian Army uniform. I wore white shorts, a white Izod polo with red, white, and blue trim, white socks and white tennis shoes. (My job was to get some officers and NCOs in shape enough to be able to pass the U.S. Army PT Test at Fort Benning.) The Department of Defence (as they spell it) wanted to start an elite unit (Airborne/Ranger/Special Forces) and no one had been able to pass the test. My Nigerian boss was the Secretary of Defence, a Brigadier General. Of the 35 officers and NCOs I started with, 32 passed the test (three failed swimming). My biggest accomplishment though, was getting the Sec/Def to allow NCOs in my training group. I explained how you couldn't have an elite unit if you didn't let the NCOs run it (the way it is with us)!"<sup>148</sup>

Les Hagie served as a Foreign Area Officer. After receiving a Masters Degree at the University of North Carolina, he spent much of his time in Garmisch, Germany, as Dean of Academics at the U.S. Army Russian Institute. Les wrote: "My final assignment before retiring was as Chief of the Strategic Studies Committee at the Command and General Staff College, where my first contact with students was as a 'visiting Soviet professor' who explained to the students why America was responsible for instigating and continuing the Cold War. I actually had several students walk out in protest which was rather embarrassing to them when I showed up the next day as

their instructor as a lieutenant colonel in the U.S. Army."<sup>149</sup> He did not always perform flawlessly. Though Les was an accomplished linguist, he made a grammatical error on a trip to Russia and told a Russia customs official that, instead of pomegranates, he had a "grenade" in the bag he was carrying.<sup>150</sup>

Preston Hughes wrote: "I became involved with Turkey thanks to the Army's old Foreign Area Specialist Training Program (FAST Program, now called the Foreign Area Officer Program). Once accepted into the program in 1970, I spent a year at the Defense Language Institute in Monterey, CA, learning Turkish, and spent another year at the University of Utah's Middle East Center, getting a Masters Degree in Middle East Area Studies. Then I went directly to Turkey, where for the first 1 1/2 years (out of 13 1/2 years in country) I was a student at the Turkish General Staff College. At the Staff College, in 1972-73, I was still a captain, joined my Turkish classmates who were captains and a few majors. Made some good friends, most of whom made flag rank and most of whom I remained in touch with. With some [of them] I developed very close friendships. The last of my Staff College classmates to leave active duty retired last August [2010] after two years as Chief of the Turkish General Staff, thus commander of the entire military."

Preston concluded: "As for my contribution, I served in Turkey as the Liaison Officer for CINCSOUTH and SACEUR for 8 years, working as the only foreign officer in the Turkish General Staff Headquarters. Worked with some interesting generals and admirals (including SACEUR Generals Rogers, Shalikasvili, Joulwan, CINCSOUTH Admirals Crowe, Howe, Boorda). I believe they found my access to Turkish senior Military and my counsel useful. Also, when the Turkish general they were visiting didn't speak English, I translated for the meetings."<sup>151</sup>

John Concannon received special recognition for his many contributions as a military intelligence officer and military attaché. A gifted linguist who was fluent in Finnish, Russian, and French, John provided translation support on several occasions to the Vice President of the U.S., Chairman of the Joint Chiefs of Staff, and the U.S. Army Chief of Staff. He was inducted into the Defense Attaché Hall of Fame and the MI Corps Hall of Fame; he also received the Military Intelligence Knowlton Award, which is like the Infantry Order of Saint Maurice, given for distinguished contributions to the branch.

The citation for the Defense Attaché Hall of Fame reads: "Colonel John F. Concannon's attaché service took place during one of the most historical periods in east-west relations. Between 1985 and 1987, as the Assistant and later Acting Army Attaché in Moscow, he served during a time which coincided with the apex of the Cold War and the nadir of US-Soviet relations.

His greatest contribution to U.S. national interests was his comprehensive and timely reporting on Moscow's leadership protection facilities. Colonel Concannon's final attaché assignment from 1990 to 1994 was as the Defense and Army Attaché to Hungary. This period of Hungarian history was marked by the withdrawal of Hungary from the Warsaw Pact and the withdrawal of Soviet Forces from that country. His reporting on these events has been described as 'far exceeding even his critically important Moscow reporting'.... Colonel Concannon's final Army assignment was with the Defense Intelligence Agency's Office of the Inspector General. He retired recently after a distinguished 30-year Army career of which nearly one-third was spent in the Defense Attaché System."<sup>152</sup>

When Tom Fergusson was inducted into the MI Hall of Fame in June 2014, the citation mentioned many of his accomplishments that took place overseas. The citation noted his being assigned to the 131st Aviation Company (Aerial Surveillance) 131st Aviation Company near Hué, Vietnam in 1966, where he led the imagery analysis platoon, and his participating in more than 100 combat reconnaissance missions over North Vietnam and Laos aboard an OV-1 Mohawk. It also noted his assignment in 1971 to Laos where he served as executive officer to a "unique" MI unit providing all-source analysis and targeting support to the U.S. Ambassador and Country Team.

The citation read: "From 1978 to 1984 he served back-to-back tours as S2, 3rd Armored Cavalry Regiment at Fort Bliss, Texas, and G2, 3rd Infantry Division at Wurzburg, Germany. As Senior Intelligence Officer of these two major combat units, he played a vital role in implementing and evaluating the Army's new Combat Electronic Warfare and Intelligence (CEWI) doctrine and fielding new tactical CEWI systems. While a Division G2, Lieutenant Colonel Fergusson developed an operations and organizational concept for a long range reconnaissance unit. In 1983, the 3rd Reconnaissance Company (Provisional) was activated as the U.S. Army, Europe test-bed for divisional long range reconnaissance units, a groundbreaking effort that led to the fielding of long range surveillance (LRS) units in all active Army divisions."

The citation continued: "He was the first commander of the 532nd MI Battalion (Operations), 501st MI Brigade, activated in Korea in 1986. In 1990, after a year as Army Senior Fellow at Harvard University's Center for International Affairs, Colonel Fergusson took command of the 500th MI Brigade, the Army's Pacific Theater MI brigade, at Camp Zama, Japan. While accomplishing its challenging intelligence and counterintelligence missions under Fergusson's command at the strategic and operational levels, the 500th played a leading

role in developing the new Army Intelligence and Security Command force structure in the Pacific Theater. Colonel Fergusson retired in 1995 after 30 years of Army service and has continued to contribute to the Intelligence Community as a defense consultant. Since 2009, he has taught courses on critical thinking and intelligence analysis to thousands of young men and women from all 16 agencies of the Intelligence Community."<sup>153</sup>

Perhaps the most notable aspect of our experiences with foreign cultures in the performance of our duties was the wide variety of those experiences. Bill Fields, who was in the Air Force, was a flight test engineering student at France's Test Pilot School. Prior to this assignment he attended the Defense Language Institute at Anacostia Naval Support Facility in Washington, D. C. His wife, Rita, also sat in on some of the classes to help them adapt to living on the French economy. In 1970-1972 he attended the test pilot school, which was located in Istres, France, west of Marseille and whose official title was École du Personnel Navigant d'Essais et de Réception. The class had four French teams, two German, one British, one Swiss, and one U.S. Each team consisted of a flight test engineer, test pilot, flight test mechanic, and instrumentation specialist. The school assigned Bill's team a French student as flight test mechanic and a member of the staff as an instrumentation specialist. The course consisted of academic classes in the morning and flying in the afternoon. It was not a "gentleman's course" as demonstrated by one of the German teams' failing the course and not graduating. Bill observed: "It was a very interesting year for my entire family: (1) no telephone or television for an entire year; (2) learning the customs and traditions of a beautiful part of Europe; and (3) becoming a welcomed part of the French community in a quaint town."<sup>154</sup>

Some of us attended foreign staff colleges or war colleges. Pat Kenny wrote: "Perhaps the most interesting tour of duty was the 14 months spent as a student at the British Army Staff College, October 1980 to December 1981. The 180 member class was one-third foreign students, to include the other two U.S. Army officers and me. Associating with a large group of officers from all over the world was an unforgettable experience. It was a multifaceted experience for me as well as my family. In addition to normal staff college work the class traveled extensively, to include going into the bowels of a coal mine, visiting BBC studios, making a European trip with stops in Belgium and Berlin, and enjoying a two-day educational tour of the Arnhem battle area of 'A Bridge to Far' fame. Our children attended British schools, a marvelous educational experience in

every way, and we traveled extensively as a family. We probably recall incidents from those 14 months more than any other family moments."<sup>155</sup>

#### PEACEKEEPING

Amidst the turbulent events in the Middle East, some of us became involved in international efforts to preserve peace in that volatile region. Several classmates served as observers with the United Nations Truce Supervision Organization (UNTSO) which included 21 countries. The United Nations created UNTSO in 1948 to supervise the Arab-Israeli truce, thereby making it the first and longest-running U.N. peacekeeping mission. U.S. participation increased after the 1973 Yom Kippur War, as did Soviet participation. With its headquarters in Jerusalem, the UNTSO operation covered five Middle Eastern countries (Israel, Lebanon, Syria, Jordan, and Egypt). The unarmed observers had unlimited access to the five countries by U.N. air or auto at all times and formed multi-national teams, so any observations would always be confirmed by at least two observers from different nations. Don Parrish served as an unarmed observer in 1975-1976. He wrote: "From Jerusalem, we mainly worked the Sinai and Lebanese border for treaty violations. Americans were given all the key jobs that had to be done well and reliably. The difference between the quality of American serviceman and the military of other countries was profound to include the Russians."<sup>156</sup> Hugh Kelley served with UNTSO from August 1976 through July 1977 and wrote: "Based out of Jerusalem, I spent the first half of the tour patrolling the Sinai buffer zone and the last half in southern Lebanon. The Sinai--a dramatic piece of terrain--was peaceful. Southern Lebanon was like the Wild West. I did not enjoy being unarmed."<sup>157</sup>

Dean Loftin described his experiences while he was part of the UNTSO on Observation Post (OP) Khiyam in Southern Lebanon in April 1978. After having spent a week on an Observation Post and witnessing PLO artillery fire falling into a Lebanese Christian village, watching Israeli artillery fire from self-propelled Howitzers, and receiving some 105mm artillery on his own OP, Dean and another American observer were relieved by two replacement observers. As the Americans proceeded down a dirt path, their vehicle hit a mine and Dean was knocked unconscious. He was evacuated to an Israeli hospital but was released when it became apparent he had no serious injuries. He wrote: "Now for the rest of the story. This was an unaccompanied tour, but you could bring your dependents. I had brought my wife and daughter. So I arrived home, shaky and with my trousers in tatters, to my wife, daughter and in-laws who happened to be visiting. Diana, my wife, spent the next several hours bathing

me to get the crankcase oil off and picking debris out of my body. Luckily, there was only a minor bone broken, contusions, abrasions and hearing loss. I'm unsure that I deserve the Purple Heart, but I know Diana deserves a medal."<sup>158</sup>

Beginning in March 1982, U.S. Army battalions began six-month deployments to the Sinai Peninsula as part of the "Multinational Force and Observers." This organization of international peacekeepers was established in 1981 outside the framework of the United Nations. When the U.N. Security Council refused to establish a force to supervise and verify the 1978 Camp David Accords, the United States, Israel, and Egypt agreed to establish a multinational force which included three maneuver battalions and some support units. The three maneuver battalions initially came from the United States, Colombia, and Fiji. The organization's goal was to ensure that Israel and Egypt abided by the provisions of the 1979 peace treaty regarding military build-up along the border between the two countries. The presence of the multinational force obviously reassured Israel and Egypt.

Tragedy befell Marv Jeffcoat in December 1985 as he and his battalion were returning from a six-month deployment in the Sinai as part of the U.S. Middle East Peacekeeping Force. Seven months before, in May, he had proudly led his troops down LaSalle Street in Chicago for the Armed Forces Day Parade,<sup>159</sup> but Marv, along with 247 of his soldiers, died when a chartered Douglas DC-8 jetliner crashed shortly after takeoff in Gander, Newfoundland. It was the largest single-day loss of life in the history of the 101st Airborne Division. President Ronald Reagan and his wife Nancy traveled to Fort Campbell to comfort grieving family members. Marv was buried at the West Point cemetery with the commanding general of the division presiding over the ceremony and soldiers of the 101st participating. Those of us who attended the funeral service for Marv will long remember that sad day, as well as the praise the commanding general had for Marv and his soldiers. A memorial to Marv and the other 247 soldiers who died in the crash was erected at Fort Campbell. One of its plaques included a Bible verse from Matthew, chapter 5: "Blessed are the peacekeepers."<sup>160</sup>

Other classmates became involved in American efforts to maintain peace in the Middle East. While assistant to the Chairman of the Joint Chiefs of Staff from 1994 to 1996, Dan Christman provided advice to the Secretary of State and, as a member of the U.S. Middle East peace team, was deeply involved in negotiations between Israel and Syria. He was responsible for orchestrating a dialogue between the defense chiefs of Israel and Syria, the first time the two militaries had met in face-to-face negotiations, and for "making substantial progress"

with Yasser Arafat who was the leader of the Palestine Liberation Organization. He later said, "It was an exciting, even exhilarating experience, shuttling between Damascus, Jerusalem, Gaza, Jericho, and Tel Aviv."<sup>161</sup> Dan also described "dining and chatting with former Israeli Prime Minister Itzak Rabin and his wife in their apartment in Tel Aviv, one month [October 1995] before he was assassinated. The visit took place while I was a member of the Middle East peace team; the meeting exposed me to the brilliance of a visionary leader whose death expunged hopes for peace in the region that persists to this day."<sup>162</sup>

Mark Walsh contributed in a variety of ways to peacekeeping and humanitarian affairs. An intelligence officer, Mark served as a military observer for the United Nations, pol-mil advisor to the U.S. Commandant in Berlin, and Secretary of Defense Exchange Officer to the Department of State. His duties in Berlin in 1984-1985 resulted in his providing military advice and assistance during thirteen incidents of hijacked commercial aircraft from Warsaw to Berlin's Tempelhof Airport. After serving on the faculty at the Army War College, Mark retired from active duty in 1993 and joined the U.S. Army Peacekeeping Institute at Carlisle Barracks which was eventually renamed the U.S. Army Peacekeeping and Stability Operations Institute. In a reflection of the changing international situation, peacekeeping operations became more visible as some countries in the final decade of the twentieth century attempted to maintain peace and security in regions ripped apart by violence and destruction. Mark contributed to this effort by serving in Port-au-Prince, Haiti; Luanda, Angola; and Sarajevo, Bosnia-Herzegovina. In 2001-2003 he served as the representative of the U.N. Office for the Coordination of Humanitarian Affairs in U.S. Central Command's forward headquarters for the emergency phase of Operation Enduring Freedom, the official name for the War in Afghanistan, as well as a number of smaller military actions under the umbrella of the Global War on Terror. Mark was especially proud of his having constructed and conducted "a 47-day regional reconciliation assembly of 158 representatives (including eight women) of the 23 clans in Southern Somalia, that, for a brief moment, offered an improved quality of life for the 800,000 Somalis" for whom he was responsible during U.N. operations in Somalia in the summer of 2003. He also wrote: "During intense ground and air-combat operations, over the period of three weeks, I contributed to the coordination of 198 overland convoys, the off-loading of 46 maritime vessels, and 25 air missions into and around Lebanon (with no loss of life, equipment, or humanitarian cargo) during the 2006 Second Israel-Lebanon War."<sup>163</sup>

## SPACE EXPLORATION/ASTRONAUTS

As a Class, we missed the window of opportunity to be an astronaut on one of the manned Apollo missions. Like others of our generation, the possibility of space flight sparked our imagination and interested us greatly. In February 1962, while we were plebes, John Glenn became the first American astronaut to orbit Earth. When we were Second Class cadets Frank Borman (USMA 1950) gave us a presentation in our Mechanics class and challenged one of us to come forward and drink a beaker of water while he discussed astronaut food and equipment. Mike Berdy answered the challenge, and as he was chugging the water, Borman explained that water was too heavy to bring on board a flight so equipment on the spacecraft recycled their urine. Mike covered the first two rows of cadets as he spit out what he believed to be reconstituted urine.<sup>164</sup> That presentation made us particularly interested in Apollo 8 when Borman and two other astronauts made the first manned lunar flight in December 1968 and made ten orbits around the moon. Many of us were in Vietnam when Apollo 11 made the first lunar landing in July 1969, and a few of us got to watch on television the two astronauts walk on the moon. The possibility of our becoming an astronaut, however, was small.

No American astronauts were chosen between August 1969 and January 1978. In August 1969 Jon Thompson received a Daedalian Scholarship for aerospace engineering and chose to attend graduate school at the University of Texas. While he was in school, he was told that General Westmoreland had secured a promise from NASA to choose an Army aviator for the next class of astronauts and that, if Jon graduated, he had an inside track as an astronaut candidate since General Westmoreland knew him.<sup>165</sup> That opportunity never appeared, however, since Jon left the Army in 1973 and no additional astronauts were chosen until January 1978. Don Parrish was nominated by the Army in July 1977 for one of the mission specialist positions in 1978, but none of the five Army nominees were interviewed. Don wrote: "It was a Navy and Air Force dominated process. As I understood, the Army was somewhat miffed by the obvious bias. The next year's selection did, in fact, select the first Army guys for the space program."<sup>166</sup> Bill Fields, an Air Force officer, was one of 200 finalists out of 20,000 NASA applicants for 12 pilots and eight mission specialists in the 1978 selection. After applying Bill was told he had been recommended by the Air Force for the Mission Specialist Program. He went to Houston to undergo the physical, psychological, and personal interviews and exams. He wrote, "It was an interesting time, being probed, questioned, tested, and overall having experienced some of the

life of an astronaut.... Unfortunately, I was not one of the eight."<sup>167</sup>

We had classmates, almost all of whom were in the Air Force, involved in other aspects of the space program. John Bell served at Patrick Air Force Base in Florida from August 1965 until August 1967. He monitored the performance of civilian contractors in the USAF Eastern Test Range which extended from Florida to Pretoria, South Africa. Using data collection facilities (tracking stations) and data interpretation sites, the civilian contractors gathered data from missiles, satellites, and spacecraft. In this position John witnessed numerous satellite and ICBM (Minuteman) launches, but the most exciting, he said, were the manned Gemini Program missions. The Gemini Program launched 2-man capsules into low-earth orbit using USAF Titan II ICBMs and was an intermediate program between Project Mercury and the Apollo lunar landings. John said, "It was a great time to work at the test range and experience the various launches."<sup>168</sup> Also an Air Force officer, Ed Zabka was involved with the space program, too. He wrote: "I participated in the launches of Voyager 1 and 2 in late 1977, while with the Eastern Test Range at the Grand Bahama Island Air Force site. These two spacecraft are still active and are approaching interstellar space as we speak."<sup>169</sup>

T. J. Kelly's first assignment in the USAF was at the Rocket Propulsion Laboratory at Edwards Air Force Base, California. He wrote: "I was a Research and Development Engineer and project manager in charge of completing the installation and operation of an environmental chamber that was 30 feet in diameter and simulated a space environment equivalent to 600,000 feet of altitude. We performed propellant storage experiments to measure the heat transfer characteristics of cryogenic propellants. These propellants would later be used to power the rocket engines that led to the U.S. putting men in space and on the moon. Exciting things were going on at Edwards AFB at this time. Chuck Yeager was flying the Bell-X1, the lifting body was being dropped from airplanes to evaluate the characteristics of reentry from outer space and the B-70 was being flight tested. I witnessed the crash of one of the only two planes manufactured."<sup>170</sup>

T. J. later served as a Launch Director at Vandenberg AFB, California, during the Strategic Arms Limitation Talks with Russia. He wrote: "We were launching research and development payloads on Minuteman 1 missiles down range to Kwajalein missile range in the Pacific. These payloads were the first maneuverable reentry vehicles ever launched, and we were launching a system that had three independently targeted warheads on each missile. My job was to monitor the missile

preparation prior to launch, then lead the launch process including the launch sequence culminating with commanding the launch. I had seven launches. The Russians would station their trawlers near the impact area and monitor the launch and collect electronic data regarding the success. We of course monitored their transmissions back home and the first time they observed multiple warheads simultaneously targeting different targets they were extremely surprised to say the least. Prior to that the SALT talks had been stalled and shortly thereafter they were restarted and an agreement was reached."<sup>171</sup>

Tommy Thompson, who also went Air Force, wrote: "I guess technically you could call me a 'Rocket Scientist.'" He continued: "I could not be a pilot due to my vision, but got into some very interesting Aerospace programs at the Air Force Space and Missile Systems Organization. Some oldies like Atlas, Thor and Titan (General Dynamics) plus the Minuteman program with Boeing. Got involved in Rocket Motors at Rocketdyne, Inc. Used to test the Saturn Engines at their Santa Susana Range in the Valley. Saturn was the power for the Moon Shots. The engines did not lift the Rocket, they pushed the earth away.... Also got into some Air-to-Surface, Air-to-Air and other type weapon systems at Hughes Aircraft in Culver City and Tucson Arizona. Maverick, Phoenix, TOW missiles primarily. Got involved with a lot of high tech stuff including satellites, radar and other very interesting technology. Ran an engine overhaul AF Station at Dallas Love Field. Eventually worked at Rockwell International in Richardson Texas before I retired from the Federal Government...."<sup>172</sup>

#### CORPS OF ENGINEERS

A number of our classmates were District Engineers for the U.S. Army Corps of Engineers: Duncan Brown (Huntington), Kent Brown (New Orleans), Dan Christman (Savannah), Stan Genega (Savannah), Ralph Locurcio (Philadelphia and Savannah), Chuck McCloskey (Little Rock), Tad Ono (Los Angeles), Emory Pylant (Albuquerque), Wayne Scholl (Sacramento), and Frank Skidmore (Vicksburg). Three of our classmates (Christman, Genega, and Locurcio) commanded in succession the Savannah District, a large district with both military and civil works missions. Clair Gill, Stan Genega, and Ralph Locurcio commanded Engineer Divisions, which are the higher headquarters for Districts. Stan served as the Director of Civil Works, the highest position in the Civil Works side of the Corps of Engineers.<sup>173</sup>

The duties of our classmates who served in U.S. Army Engineer Districts or Divisions varied widely. Some of the districts were small and commanded by lieutenant colonels; others were large and commanded by colonels. Some had a civil

works only mission (flood control, navigation, and permits); others had both civil works and military construction missions. And some had an additional "work for others" mission, usually for other federal agencies. By policy, the U.S. Army Corps of Engineers executed the military construction programs for the Army and Air Force, while the Navy did such programs through its own Naval Facilities Engineering Command.

Kent Brown, who served as the Commander and District Engineer in New Orleans in 1986-1988, described the New Orleans district as "the Corps of Engineer's premier Civil Works District." His major missions were navigation and flood control of the Mississippi River, hurricane protection in south Louisiana, and coastal restoration. He wrote: "On my watch we placed over \$500M worth of construction including completing the Alternate Control Structure at Old River and saved the water supply for New Orleans that was threatened by a salt water wedge that was coming up the Mississippi River as a result of historic low water levels on the Mississippi."<sup>174</sup>

Chuck McCloskey served during two major floods in two different Engineer Districts. He wrote: "The first was Hurricane Agnes in 1972. This storm lingered over the northeast for several days and caused heavy flooding in New York, Pennsylvania, Maryland and Virginia. I was stationed in Baltimore but soon was sent on a small team to Wilkes-Barre, Pennsylvania, which was the most hard-hit area. Soon about ten other engineer officers (including classmate Emory Pylant) from the East Coast and from Fort Belvoir joined us. My assignment was to 'turn on the lights in Kingston', a town on the west side of the Susquehanna River that had lost all electric power. Nearby Naval Reserve Seabee units, local unions, commercial electrical suppliers and others were mobilized for this task and in two weeks had power restored. My involvement with flood recovery lasted six weeks in all." Chuck also served in a second major flood in 1990 while he was in command of the Little Rock District of the Corps of Engineers. He wrote: "This major storm flooded three rivers simultaneously--the Arkansas River in Oklahoma and central Arkansas, the White River in southern Missouri and northern Arkansas, and the Red River in southern Arkansas. Major damage due to flooding was incurred and recovery consisted of emergency operations followed by sustained cleanup and reconstruction. The Corps of Engineers, as operator of the navigable waterways through locks and dams, came under pressure for their water management procedures; however, [the procedures] performed [according] to plan and minimized personal injury and property losses."<sup>175</sup>

Frank Skidmore wrote: "Early in 1988 I was assigned as District Engineer at Vicksburg--a Corps district with a large

civil works mission. Among the \$300 million/year construction program was a flood control program in the Upper Yazoo Basin with projects planned that almost simultaneously with my arrival became the number one target of the National Wildlife Federation--allied with Ducks Unlimited. The opposition during my tour included considerable attention from the media and litigation regarding our compliance with the National Environmental Policy Act (which the courts ultimately resolved in our favor). Following Vicksburg, I was offered a position with the Council on Environmental Quality, the Office in the White House with oversight for the National Environmental Policy Act. This was an interesting exposure to environmental policy at the National level." In subsequent years, including after he retired from the Army, Frank was involved with dozens of tasks related to compliance with the National Environmental Policy Act.<sup>176</sup>

Tad Ono commanded the Los Angeles District (LAD) in 1987-1989. He wrote: "LAD had a large civil works mission consisting primarily of navigation (ports and harbors) from Morro Bay to San Diego, including 2 of the largest ports in the U.S., Ports of Long Beach and Los Angeles. It also had one of the largest flood control programs in the nation, including designing and building a large flood control dam in a very highly seismic area near San Bernardino, named Seven Oaks Dam, to control the Santa Ana River. I believe this was the largest flood control program in the nation at the time--Santa Ana Mainstream Flood Control Program. LAD did not have a military design capability, which was performed by its sister Sacramento District, but it had a robust military construction program for several Army installations--Fort Irwin, Fort Huachuca and Yuma Proving Ground--and many Air Force Bases in California, Nevada and Arizona--Norton, March, Edwards, Vandenberg, Nellis, Luke, Williams and Davis-Monthan. Annual military construction program probably exceeded \$250 million. In addition to these installations, LAD provided design and construction support to the Department of Energy at Nevada Test Site, near Las Vegas and to NASA at Vandenberg at its alternate launch site, Space Launch Complex-6. The Air Force customers were particularly demanding, as every commanding general seemed to take personal interest in every last detail, particularly of those quality of life related projects such as dorms and recreational facilities. USAF was ahead of the other services in providing high quality facilities to the troops and their families and demanded top quality work for their military construction dollars. The Army was busy building up Fort Irwin, as its premier training site, so LAD was very busy building family housing, operations, admin and medical facilities. LAD employed a contracting scheme which was

relatively new, known as 'design-build', to quickly build hundreds of new housing units there."<sup>177</sup>

Emory Pylant wrote: "When I took command of the Albuquerque District in June of 1981, I was in the first group of LTC's taking over selected smaller Districts that were being reconfigured to depend on larger Districts for some administrative support functions and for major project development resources. That expected reduction in scope would have left the District with little more than a planning function and some reservoir operations responsibilities. This was not something I understood until after assuming command and getting my internal orientation briefings. During the next few months while some administrative consolidations with Fort Worth District were underway, and before technical capabilities were eroded, Albuquerque's senior managers for Planning, Engineering, Construction and I started looking for logical and cost effective services we could provide other federal agencies in the region. In less than a year we were part of the Department of Energy's WIPP (Waste Isolation Pilot Project) team with the construction management role over what is still an extremely complex and politically sensitive initiative to demonstrate safe long term storage of nuclear waste. Negotiating that work contributed to the District's actually expanding its technical capabilities by attracting returnees from the major construction mission that was winding down in Saudi Arabia. Success with the WIPP led to other DOE work including at Los Alamos, and to a modest ongoing military construction mission. When I left Albuquerque after the only three year assignment in my career, my going away plaque from DOE cited the Waste Isolation "Pylant" Project..."<sup>178</sup>

After having served as the Commander and District Engineer of the Savannah and Philadelphia districts, Ralph Locurcio served as the commander of the Pacific Ocean Division (1992-1994) and the South Atlantic Division (1994-1996) for the U.S. Army Corps of Engineers. In the Savannah and Philadelphia districts, his contributions included his directing the widening of harbors in Brunswick Harbor and Savannah, Georgia; his directing the design and construction of four 105,000 horsepower reversible hydropower turbines at Richard B. Russell Dam in Georgia; and his managing major repairs to four high-level steel truss highway bridges over the C&D Canal connecting the Delaware River and Chesapeake Bay. In the Pacific Ocean and South Atlantic Divisions, his contributions included his managing the design of the \$250 million Fort Bragg Medical Center; his managing planning for the multi-agency Everglades Environmental Restoration Project in South Florida; and his supporting military operations in Suriname, Haiti, and Panama. He also

directed the \$32 million federal engineering recovery from Hurricane Iniki and assisted American and Philippine officials on civil recovery from the Mount Pinatubo eruption. He was commended for "Leadership during Iniki Recovery Operations" by the state of Hawaii Assembly and for "Outstanding Leadership and Humanitarian Assistance during Hurricane Iniki Recovery" by the U.S. Senate.<sup>179</sup>

Our classmates in the U.S. Air Force also excelled as engineers. Tony Pyrz commanded an Air Force civil engineering squadron in 1983-1986. He was especially proud of the squadron's receiving a "Best in Tactical Air Command" rating in an operational readiness inspection. He wrote: "A couple of months after I took over the Civil Engineering at Nellis, we had an Operational Readiness Inspection (ORI) drop in from Tactical Air Command. We did not do well. A couple of days later, I held a Commander's Call and explained to the troops the bad performance was my fault and would absolutely not happen again. They would not be allowed to be less than totally READY. Six months later, after we practiced our heads off and did a substantial amount of self-help improvement to our shops and offices, we were retested. The troops knocked it out of the park. Best in Tactical Air Command didn't come easily. The people wanted it badly enough to go get it. I've never been prouder of a group of guys and gals."<sup>180</sup>

Tony had some other interesting responsibilities as an Air Force engineer. He managed preparation of the first Air Force Environmental Impact Statement prepared for a non-CONUS location. He also was the Project Manager for Pacific Cratering Experiments on Eniwetok Atoll in the Marshall Islands. He investigated "anomalously-sized, multi-megaton, nuclear craters at Eniwetok to determine applicability of their sizes to predictions for crater sizes to be expected from multi-megaton yield nuclear detonations in other geologies."<sup>181</sup> He also led the engineering and services personnel and activities in the Air Force Sustainment Center. He wrote: "Led a work force of more than 8,000 military and civilian personnel and managed an annual budget of more than \$25 million across 7 major installations in the CONUS."<sup>182</sup>

Three of our classmates received the Academy of Fellows Golden Eagle Award from the Society for American Military Engineers. Ric Shinseki received his award in March 2010 for contributions to national security, Ralph Locurcio received his award in March 2012 for contributions to the engineering profession,<sup>183</sup> and Dan Christman received his in March 2013 for contributions to national security.<sup>184</sup>

NATIONAL SECURITY POLICY

All of us at one time or the other had responsibilities relating to American national security policy, but a few of us helped shape that policy. One of the "highlights" of Dan Christman's career was "being a member of Doctor [Henry] Kissinger's staff in the office of the President" in 1974-1975. He next served as a staff officer in 1976-1978 in the Office of the Deputy Chief of Staff for Operations on the Department of the Army staff and, among his responsibilities, worked on the Strategic Arms Limitations Talks with the Soviet Union. In November 1988, a year before the collapse of the Berlin Wall, Dan Christman became the first of our classmates to be promoted to brigadier general.<sup>185</sup> He served in the Staff Group for the Chairman of the Joint Chiefs from 1986 to 1988 and then as Director of Strategy, Plans, and Policy on the Department of the Army staff from 1988 to 1991. His duties focused on negotiations relating to the Conventional Forces in Europe arms control talks between NATO and the Warsaw Pact. After serving two years as the commanding general at the Engineer Center and Engineer School at Fort Leonard Wood, he served as the U.S. Military Representative to NATO in Brussels from 1993 to 1994 and then as Assistant to the Chairman of the Joint Chiefs from 1994 to 1996. During this latter period, he orchestrated the first-ever meeting between Syrian and Israeli military chiefs of defense to discuss "modalities for returning Golan Heights to Syria."<sup>186</sup> In August 1995 Dan accompanied Secretary of State Warren Christopher to Hanoi for raising of an American flag over the newly established American embassy and marking the beginning of a new chapter in relations between the United States and Vietnam. Dan's role was to meet with a Vietnamese three-star general with regard to Joint Task Force Full Accounting, the effort to achieve the fullest possible accounting of all Americans missing in the Southeast Asian war.<sup>187</sup>

Jim Golden earned a well-deserved national reputation in the subject of economics of national security. He wrote: "While on the faculty at USMA, I spent five summers working as a Senior Staff Economist on the President's Council of Economic Advisors (CEA) under presidents Nixon, Ford and Carter. That connection started because General George (Abe) Lincoln had retired from the Department of Social Sciences to run the Office of Emergency Preparedness, and his office had the responsibility for administering the wage and price controls initiated in 1971. My initial role was to assess the impact of the controls in different economic sectors, particularly in agriculture, using econometric models I developed. I then returned in future summers to take on other tasks, including the analysis of proposals for deregulation in the airline and maritime sectors. In the summer of 1976 I chaired a multi-agency presidential task

force that examined the administration of export controls that limited sales of sensitive defense-related technologies. I briefed the results to President Ford in the Oval Office and subsequently testified before the House Subcommittee on International Economic Policy and Trade of the Committee on Foreign Affairs about ways to streamline the export controls process. During my last summer at the CEA my work on regulation extended into the areas of ambient air quality standards and carcinogens in the workplace."<sup>188</sup> While serving in 1981 to 1982 as a Fullbright Professor at a German Research Institute (Stiftung Wissenschaft und Politik), Jim wrote a book on NATO Burden Sharing and subsequently authored or co-authored several books on economics and national security.<sup>189</sup>

Rick Sinnreich worked on the National Security Council staff twice during a time of turmoil in Washington. The first time was during one summer while he was an instructor in the Department of Social Sciences at the Military Academy, and the second was in the interval between his leaving West Point and arriving at a subsequent troop assignment. Rick wrote: "It was an odd and sad time to be working at the White House. The Watergate crisis was approaching its climax, and other business, if not altogether halted, at least was sharply curtailed. I was in the East Room for Nixon's emotional farewell to the staff and, with other NSC staffers, was called to Kissinger's office almost immediately thereafter to be reminded that time hadn't stopped and the nation's business needed to move forward. Both events, needless to say, remain welded in my memory."<sup>190</sup>

Sandy Hallenbeck became one of our nation's foremost experts on arms control and nuclear policy. He became involved with the Strategic Arms Limitations Talks between the U.S. and Soviet Union while working in the Department of State's Bureau of Politico Military Affairs in the late 1970s. As a staff officer, he assisted in the SALT II negotiations in Geneva that ultimately were signed by President Jimmy Carter and General Secretary Leonid Brezhnev of the Soviet Union in June 1979 but not ratified by the U.S. Senate. After a year at Harvard in lieu of the War College, he served as the DOD representative to the Department of State's Bureau of Politico Military Affairs. He worked initially as the deputy to the Assistant Secretary for Arms Control and then was appointed Acting Deputy Assistant Secretary. Sandy also represented the Department of State in interagency meetings on these arms control efforts, oversaw the preparation of State Department positions and white papers, and met periodically with the U.S. Delegations as they returned to Washington.<sup>191</sup>

In 1986-1987 Sandy was reassigned to Department of the Army's ODCSOPS as Chief of the Army's Strategic Plans and Policy

Division. Here he was responsible for planning and managing Army implementation of the Strategic Arms Reduction Talks and Intermediate Nuclear Force treaties, which included the destruction of the Army's Pershing II Intermediate Nuclear Force missiles and hosting Soviet inspectors on selected Army installations (e.g., Redstone Arsenal). In mid-1987, he attended a conference in Great Britain in which a Soviet representative proposed a very substantial reduction in Warsaw Pact forces and the withdrawal of most of the remaining Soviet forces to the Soviet Union. Not long thereafter the U.S. and USSR entered the very important Conventional Forces in Europe (CFE) negotiations, and Sandy became head of a new division in DCSOPS to deal with the negotiations. He remained in this position until he retired in 1990. He wrote: "I was--I believe--able to play an important role in what became the CFE Treaty. Upon my retirement from the Army, I was asked by the Senate to serve as the advisor expert to Senator [Joe] Biden's Foreign Relations Committee CFE Treaty ratification hearings.... After joining Science Applications International Corporation in 1990, I continued to work on lingering arms control issues (e.g., treaty implementation issues) for the Army, Defense Threat Reduction Agency, and other customers for several more years. However, by the mid-1990s, I had pretty much moved on to other national security issues."<sup>192</sup>

Ed Abesamis served in the Philippine Army from 1965 to 1981 and contributed in a variety of ways to make the Philippine government more efficient. He wrote: "From mid-1974 to mid-1975, I served as special staff to the 'Executive Secretary' to the President of the Philippines. These were in the early years of Martial Law (declared in Sept 1972), when the regime was generally accepted, and had not yet encountered the widespread opposition of the early 1980's that led to the 'people power revolution' in 1986. Working in a staff office that served the President gave me, at that time a captain, several occasions to see the persons who wielded power in the country: Mr. Marcos, his cabinet members, the armed forces generals, and of course, Mrs. Marcos. Part of the work, at some point, involved physical preparation of the cabinet meeting room, the transcription of the minutes of the meetings and other small errands related to the overall functions of my boss, the Executive Secretary. I got a view of how the government was run at that level. Later on, I was moved to a staff group that kept track of infrastructure projects, to keep the President 'on top' of the projects. Still later, from 1977 to 1981, I ran a small office that supported the export of construction services and manpower services, a special government program. These were 'civilian' jobs, but military officers were employed partly because it was

a preference of the Executive Secretary (who was a Navy officer, an Annapolis graduate) and because in the Philippines in those times, it was accepted that military officers in general were competent, reliable, and honest. And those of us in that staff office, military and civilian, certainly were. We belonged to a class called 'technocrats' at the time--functionaries who were competent, reliable, honest, and non-political. We thought we were working to improve the country and doing good for its people; being non-political, our general view was that Martial Law was good for the country--it was efficient and got things done. Together with most of my colleagues I did not recognize the disadvantages, especially as it was supposed to be a temporary solution."<sup>193</sup>

#### IDEAS AND WEAPONS: SENIOR EXECUTIVE SERVICE

Seven of our classmates made significant contributions to our nation's defense as members of the Senior Executive Service (SES). Those classmates were: Jim Dyer, Tony Gamboa, Doug Kline, Ed Knauf, Ken Moorefield, Ray Pollard, and Bob Wolff. Created in the Civil Service Reform Act of 1978, the SES was designed to be a corps of executives selected for their leadership qualifications and for their being capable of providing continuity and improving effectiveness of large, complex organizations. As members of the SES, whose positions correspond in protocol to those of general officers, our classmates served in key positions just below top Presidential appointees.

The first member of our class to join the SES was Jim Dyer who exercised a remarkable influence over the development of Command and Control Warfare (C2W) when it was still in its embryonic stage. In 1983 he left the U.S. Army's Security Agency and went to the Pentagon as an OSD civilian (GS-15). For three years he provided OSD oversight of the Tactical Cryptologic Program, which included all the services and National Security Agency tactical intelligence resources. In 1986 he took over a new position in the staff of the Command, Control, Communications, and Intelligence (C3I) to promote something then known as known as Command, Control, and Communications Countermeasures (C3CM). In September 1986 he was promoted to the new SES position, thereby becoming the first in our Class to achieve Flag rank (O-8 equivalent). Jim discovered much confusion in the military services and defense agencies about C3CM. He wrote, "Even the name itself (C3CM) tended to divert focus from the essence of the strategy--that being to disrupt an enemy's ability to command and control his troops and preserving our own ability to accomplish the same. So I renamed the strategy as Command and Control Warfare, with the blessing

of all concerned." Jim and his people made rapid strides in getting people interested in Command and Control Warfare (C2W) and developing the means to wage it. His success was amply demonstrated during Operation Desert Storm when a special targeting cell was placed in the basement of the Pentagon to suggest targets to General Norm Schwarzkopf's command. Jim concluded, "The overall results are well known--Saddam [Hussein] and his commanders had virtually no control of their troops."<sup>194</sup>

With the potential of C2W confirmed in Desert Storm, Jim moved to Special Access Programs "roughly related to C2W that needed some leadership." In one of these programs the NSA and CIA had spent several years and \$100,000,000 to provide a "certain capability" and had concluded the "capability" was not achievable. Jim assumed responsibility for the program, took a different approach, and, after briefing members of Congress who provided oversight, assembled a technical team. He wrote: "About one year later we were able to produce the capability...."<sup>195</sup> Jim's contributions thus shaped important aspects of information warfare at a crucial point in its development.

Ray Pollard also made important contributions as a member of the SES. Ray joined the U.S. Army Materiel Systems Analysis Activity in 1976 and in subsequent years served as Chief of Infantry Warfare Analysis Branch; technical advisor to the U.S. State Department in the Conventional Arms Conference in Geneva, Switzerland; lead analyst for the live-fire test and analysis of the Bradley Fighting Vehicle; and Director of Test and Evaluation at the U.S. Army Test and Evaluation Command.<sup>196</sup> As an SES at Aberdeen Proving Ground, he served as the chief science advisor and then civilian deputy while our classmates Dick Tragemann and John Longhouser commanded there.<sup>197</sup> Counting his 22 years of civil service and four years at West Point, he served our nation a total of 38 years before he retired as an SES-5 in December 1998.<sup>198</sup> In November 2011 he was selected to be a member of the Army's Operations Research and Systems Analysis Hall of Fame, which--with his induction--had only sixteen members.<sup>199</sup>

Bob Wolff joined the U.S. Army Corps of Engineers as a civilian in 1974 and in 1992 became the Chief, Engineering Division, in the Baltimore District of the Corps of Engineers. According to Bob, this was "the best experience" in his career since he was "leading and managing a large engineering organization of 260 professionals." Bob wrote: "In three years, we designed many military construction projects, including the Defense Logistics Agency (DLA) HQ at Fort Belvoir, Virginia, an Army Research Laboratory at Aberdeen Proving Ground, many civil works projects including the Wyoming Valley Flood Control

Project, a new master plan for Arlington National Cemetery and the first major design contract for the Pentagon Renovation. I was proud to select some key individuals during the three years--always satisfying to see your hires get promoted again and become successful."<sup>200</sup>

In 1994 Bob became a member of the SES and served for three years as Deputy Civil Engineer in Headquarters, U.S. Air Force. Bob wrote: "I had to have a one-on-one meeting with the Chief of Staff of the Air Force before being approved for the position--he was not sure about bringing an Army civilian into this top job in the Air Force." In 1997 Bob became Chief of Plans and Integration in the Office of the Assistant Chief of Staff for Installations and Logistics, Headquarters U.S. Air Force.<sup>201</sup> Reflecting on his experience as a member of the SES, he wrote: "As the Deputy Civil Engineer for the Air Force, I primarily backed up my boss, the 2-Star Air Force Civil Engineer.... It was an absolute thrill to be a part of the top Air Force Leadership team--my boss traveled a lot so I filled in at staff meetings. We had two meetings a week with the Chief of Staff of the Air Force...and two meetings a week with the Vice Chief of Staff..., both of whom were outstanding leaders. I sat on the Air Force Board which included the deputies from all the major functional areas. The Board did the first cut of the POM and budgets--a very tedious process. I also Chaired the Policy Council for the Air Force Civilians in the civil engineering career field. We worked a lot on getting high performers to grad school and provided career ladders for the civilian workforce. Although I attempted to move some of the GS-15s around to better develop them, the moves were fought by the general officers so I was not very successful. The generals looked at their GS-15 deputies as their security blankets and continuity. My most exciting time was when OSD attempted to form a Military Housing Authority, comparable to one that was formed in Australia, to privatize all military family housing and put it under one roof. The Air Force vigorously fought this move and I was the point man. Privatization moved forward with Congressional legislation paving the way, but it was kept within each service so that the service could dictate the standards by which the housing was constructed and maintained. A very successful program. One of the other contentious issues while I was in the Pentagon was renovation of General Officer quarters. Always under a microscope from Congress. I also sat on the Air Force Base Realignment and Closure Commission (BRAC) working group that was briefed on the analysis of every Air Force Base in order for the Air Force to make its recommendations for realignment and closure to the Sec Air Force. Another very

tedious process that resulted in the 2005 BRAC."<sup>202</sup> Bob retired in 1998.<sup>203</sup>

Tony Gamboa went from Armor branch to the Judge Advocate General's Corps and graduated from the University of Maryland School of Law in 1972. After serving in the Army for eight years as a lawyer, he resigned his commission and became a civilian attorney in the Office of the Army General Counsel. Tony wrote: "During my tenure in the Office of the General Counsel of the Army, I worked on the legal issues surrounding the Army's major systems acquisitions such as the M-1, the Apache, the Blackhawk, MLRS and many others. I also served as legal member of many Army teams negotiating International Cooperative R&D programs with our NATO allies. In 1987 I was selected as Deputy General Counsel for Acquisition, an SES position, head of the office I previously belonged to, responsible for advising the Army Secretariat on acquisition legal matters and providing technical oversight of the Army Acquisition law community."

Tony continued, "In 1996, I was selected by the Comptroller General to head his Bid Protest function as Deputy General Counsel for Procurement. In this capacity I oversaw an office of 40 attorneys who adjudicated bid protests brought against federal procurements. In 2000 I was selected by the Comptroller General to be General Counsel of the GAO (Government Accountability Office, named changed from General Accounting Office). I headed an office of approximately 130 attorneys and was responsible for the legal support to GAO and for responding to legal questions submitted by members and committees of Congress. In addition, I served as one of the four members of the GAO Executive Committee responsible for advising the Comptroller General on all matters concerning the management of the agency. I retired from federal service in 2006 after serving in the Government for 45 years."<sup>204</sup>

Ken Moorefield spent over 30 years in the United States' foreign, military, and civil services before becoming the Deputy Inspector General for the Department of Defense. While with the departments of State and Commerce, he held political, economic, consular and commercial officer positions at U.S. embassies in Vietnam, Peru, Venezuela, the U.K., the U.S. Mission to the European Union, and France. Ken also served as ambassador to Gabon (a small country in west central Africa) and São Tomé and Príncipe (a tiny two-island country adjacent to Gabon) in 2002-2004. After joining the Office of the Inspector General for the Department of Defense, he became the Deputy Inspector General for Special Plans and Operations. He said, "I have inspected our military forces at their operating bases across Iraq and Afghanistan, and come to admire their fighting spirit that has

so remarkably endured. But, sustained military operations in these long wars has exacted a price." He added, "Enabling the long-term recovery of our forces and veterans presents a historically unique challenge." He also added, "Early recovery and a normal life for the veterans of these wars will depend on whether they receive quick and sustained support. We do not want to repeat the neglect experienced by too many veterans of the Vietnam War."<sup>205</sup>

After receiving an MS in Physics, Doug Kline became a research associate at Los Alamos National Laboratory in New Mexico. Doug wrote: "I had the privilege to work with world-class scientists on important and cutting edge projects. I am the co-holder of a patent for a 'Covert Laser Listening Device' at Los Alamos Lab granted in 1972." Upon leaving Los Alamos but still wearing a uniform, Doug served in the Army High Energy Laser Systems Project Office, Army Test and Evaluation Command, Defense Advanced Research Projects Agency, and the Strategic Defense Initiative Organization (SDIO). Doug retired in 1986 and began working at W. J. Schafer as one of two Senior Vice Presidents. Here he managed about half of Schafer's business with a professional staff of more than 100 senior engineers and scientists. He then moved to the Office of the Secretary of Defense where he served as the Architecture Integrator for the Ballistic Missile Defense Organization (BMDO), which was the successor to SDIO. He held this position as a Senior Executive Service level six (SES-6) from 1993 until 1997.

In 1997, Doug left the Office of the Secretary of Defense and joined Photon Research Associates (PRA). Three years later he co-founded and became the Chief Operating Officer of Systems, Technology, and Science. Among his projects at PRA was providing support to the BMDO Lead System Integration program. In essence, Boeing took over from the Army the management of the National Missile Defense System and Doug provided support as Boeing accomplished this task. In 2002 BMDO was renamed the Missile Defense Agency and the Secretary of Defense directed the MDA to develop a single integrated ballistic missile defense system to protect the United States, its deployed forces, and its allies against ballistic missiles in all phases of flight. Doug participated in evaluating the expected performance of current and future systems for providing such a capability. He saw our country's development of missile defense from all sides (as student, research scientist, combatant, and civilian) and in military, industry, politics, and government. This gave him a unique perspective of our nation's role in establishing and ensuring a peaceful future for the U.S. and its allies. He truly left a Class of 1965 imprint on the entire area of missile defense.<sup>206</sup>

After leaving the Air Force in 1973, where he made remarkable contributions in strategic weapon targeting, Ed Knauf made even more remarkable contributions in his civilian career. After joining Science Applications, Inc., he became a member of an IBM/SAI systems integrator team addressing vulnerabilities in command and control capabilities for the Worldwide Military Command and Control System (WWMCCS). He became the lead intelligence and satellite architect for WWMCCS and then was recruited to fill a Senior Executive Service Level III position in the Office of the Secretary of Defense as the Deputy WWMCCS System Engineer. He ran the General War Review to fix vulnerabilities in the systems and procedures controlling our nuclear weapons in a nuclear environment. In 1979 Ed left the government to become the East Coast Manager for Horizons Technologies where he led efforts to develop the ground control system for the MX intercontinental ballistic missile which was eventually deployed in 1986. In 1981 Ed and another individual founded Titan Systems in order to provide technical support to some of our nation's most important national security projects. With Ed as the chairman of the new corporation's board, Titan grew rapidly and won important contracts focusing on emerging technologies that materially improved U.S. security. Examples of Titan's early accomplishments include the development of air and space-based electro-optic systems and the application of advanced optical sensors to strategic and tactical defense.

Ed became the driving force behind special programs that significantly enhanced U.S. strategic capabilities and contributed to President Ronald Reagan's goal of ending the Cold War with the Soviet Union. R. James Woolsey, Jr., former Director of Central Intelligence, said, "The programs literally resulted in a changing of the World order." Titan, which was planned on a restaurant napkin and launched in the basement of Ed's home in 1981, grew to over 15,000 people and \$2.5 billion in annual revenue.<sup>207</sup> Ed left the fingerprints of the Class of 1965 on numerous strategically important projects, but those fingerprints are hidden beneath many levels of classification and compartmentalization.

#### IDEAS AND WEAPONS: AT THE CUTTING EDGE

While still in uniform, our classmates contributed ideas that shaped the United States' quest for the best possible weapons, equipment, and doctrine. Ten years after attending CGSC and creating the Dunn-Kempf Game, Steve Kempf returned to Fort Leavenworth in the late 1980s to develop what was known as "AirLand Battle-Future." By late 1980s the ideas of AirLand Battle already had permeated many Army and Air Force programs, so Steve's mission was "develop and chart the course

conceptually as to the way the Army's combined arms operations will be executed now and in the future." Steve wrote, "Luckily, I had a small group of actual geniuses who were classic over-achievers and fanatics in their areas of expertise (plus some that weren't even invented yet)." Over the next six years his organization and command structure changed twice at Fort Leavenworth, but he remained responsible for developing the "umbrella concept...to project AirLand Battle 15-20 years into the future..." Needless to say, Steve spent much of his time briefing general officers of all the Services and giving classes to U.S. and foreign officers on future warfare.<sup>208</sup> Steve had other responsibilities during those six years including his being the proponent for Army battlefield nuclear warfare, and he wrote and had approved by the TRADOC commander FM 100-30, Nuclear Operations in Support of AirLand Battle.<sup>209</sup>

Jim Hardin served two tours with the Concepts Analysis Agency and also as Deputy Chief of Staff for Intelligence for the Army Material Command (AMC) in 1990-1991. While in AMC, he had three subordinate staff offices: Foreign Intelligence, Security, and Special Access Programs. He wrote: "We also had command and control of the Science and Technology Center Europe (STCEUR), the Science and Technology Center Far East (STCFE), and an Intelligence Research Detachment. STCEUR and STCFE provided open source collection of information from their area of responsibility. The Research Detachment developed specialized intelligence equipment. During the reorganization of the Intelligence and Security Command we were assigned a Special Security Office which then came under our direct control. We provided intelligence, security, and special access program support to the Commander and Staff of AMC as well as policy and guidance in these areas to AMC subordinate commands."<sup>210</sup>

Roger Griffin made important contributions in computer and information management. He began working at the U.S. Army Computer Systems Command Support Group at Fort Lee in 1981, the year the IBM PC was first introduced. After serving there for three years, he moved to NATO's Integrated Communications Systems Software Maintenance and Development Center in Brussels, and then returned in 1986 to the U.S. Army Information Systems Software Development Center at Fort Lee. He took command of the Software Development Center in 1988 and remained in command until he retired in 1992. Roger wrote: "The Center was a subordinate software development center of the Information Systems Engineering Command under the Information Systems Command [a Major Command of the U.S. Army] headquartered at Fort Huachuca, Arizona. The Center consisted of an 850-member technical staff of military, DA civilian and contractor

personnel."<sup>211</sup> In an understatement he said, "The 1980's were years of great change in Army automation."<sup>212</sup> Newly available desktop computers provided more computing power than previously existing mainframe computers had provided and enabled computer wizards such as Roger to replace large centralized systems with decentralized systems. Instead of using reels of magnetic tape, the replacement systems used internal computer memory and hard drives, were menu driven and data-base supported, and kept applications and data permanently on the computer. The emerging systems also integrated newly available technologies such as bar codes and radio frequency tags and chips.

As the computer revolution swept across the armed services, Roger's Software Development Center had the mission of analyzing, designing, developing, testing, fielding, etc., 35 "Standard Army" information management Systems. Roger wrote: "Some of the major systems assigned were the Standard Army Intermediate Level Supply System, Standard Army Retail Supply System, Department of Army Movements Management System, Standard Army Ammunition System, Standard Property Book System, Army Food Management System, Army Store and Commissary System, Department of Army Standard Port System--Expanded, Standard Army Maintenance System, and Unit Level Logistics System."<sup>213</sup> These systems ran across all Army Installations and units. The Center also contributed to Desert Storm. Fifty-three personnel were dispatched to the Middle East and provided valuable assistance to end users, thereby playing an important role in the enormously complex but highly successful logistical effort.<sup>214</sup> Without the capabilities provided by Roger and his center, that task would have been far more difficult.

The revolution personified by the computer also occurred in electronics and communications. Ben Whitehouse took part in transforming the telephone system at Fort Bragg and introducing Voice Over Internet Protocol (VOIP). He wrote: "We cut over to the new \$15 million system one evening in two hours so that the entire post went to work the next morning with a completely new system." While the old system was not World War II vintage technology, it definitely was not new. Ben also participated in the changes associated with the breakup of AT&T which previously had had a monopoly on telephone services in the United States. Ben wrote: "With the pending breakup of AT&T, the government had concerns about how National Security/Emergency Preparedness telecommunications coordination and implementation would occur. How would emergency circuits be established across multiple companies with different numbering systems? The National Communication System was established to sort this out and create the framework as to how all these companies would work together in an NS/EP [National Security and Emergency Preparedness]

environment. A presidential commission was established with the CEOs of all the companies to advise the president on the solution. As a project officer in NCS [National Communication System] it was my job to develop the circuit numbering and priority system so that government NS/EP requirements could be met. As a result I briefed the president and the CEOs on the recommended solution in Cheyenne Mountain, CO. All recommendations were accepted."<sup>215</sup>

Mike Applin served as Chief of Theater Missile Defense actions in the Army's DCSOPS from the late 1980s until 1990. In this position he was the "leader" of what he called a "very unpopular program" named Patriot Advanced Capability-2. Unlike previous Patriot missiles which were designed as anti-aircraft weapons, the PAC-2 missile was the first Patriot missile "optimized" for ballistic missile engagements. Mike wrote: "During this period Classmate Tom Johnson was crucial to the decision to go ahead with a non-nuclear hit-to-kill anti-missile weapon. Tom's contribution was brilliant bordering on hysterical...sitting on [Brigadier General] George Joulwan's desk, looking like a rag bag, lecturing an incredulous one star on the physics of destroying or defeating a SCUD [armed] with a nuclear warhead by a 1960s era Patriot with improved warhead fragments and modified engagement angle."<sup>216</sup> Thanks to the efforts of Mike, Tom, and many others, the PAC-2 missile achieved success (though the level of success is somewhat controversial) in the 1991 Gulf War by shooting down about 70% of the Iraqi Scuds fired at Saudi Arabia and 40% of those fired at Israel. Sandy Hallenbeck echoed Mike Applin's comments about the role of Tom Johnson on "things like nuclear physics and free electron lasers" in the Strategic Defense Initiative: "I often relied on Tom for advice and brought him in as my subject matter expert every time I got in over my head. He had an uncanny ability to explain the most arcane subjects in ways that were understandable and absolutely authoritative."<sup>217</sup>

Tom Johnson died in 1990 but not before he distinguished himself as a scientist and poet. Throughout his military service, he played an important role in computational and plasma physics, the area in which he received his Ph.D. from the University of California, Davis Livermore. His obituary in the journal *Science and Global Security* read: "In 1975 Tom became the chief of the physics section of the Air Force Weapons Research Laboratory, where he did theoretical and computational studies of high-altitude ionospheric striation phenomena, which occurs both naturally and from high-altitude nuclear explosions. During this time he produced a number of fast-running kinetics codes for deuterium fluoride and deuterium fluoride-carbon dioxide transfer lasers. He also produced the first

comprehensive theoretical model describing the laser kinetics of krypton fluoride lasers. This code has so far predicted the performance of every high-power krypton fluoride laser experiment to within 15 percent and remains the standard predictive code in use today."<sup>218</sup> Perhaps most remarkable, he was a highly regarded poet and returned to West Point in 1977 as an associate professor of English. After transferring from the Air Force to the Army, he became head of the Science Research Laboratory at West Point and special assistant to the President's science adviser, executive director of the White House Science Council, and special assistant for military systems to the Secretary of Energy. While making important contributions in science, he continued teaching poetry to cadets.

#### IDEAS AND WEAPONS: MANAGING COMPLEX PROJECTS

Some of us managed programs that outwardly may have appeared simple but in fact were very complex. From 1985 to 1989 Dick Williams served as Project Manager for the 9mm pistol program, which became a very controversial program after an Italian Beretta was chosen rather than a well-known American brand. Dick wrote: "There had been at least three tests of pistols before I came to the job. In all of these the Beretta had beaten all other pistols, but politicians continued to direct the Army to rerun the tests. Even the GAO was influenced to report that the earlier tests had been done incorrectly and they recommended another series of tests be conducted. So, when I took the office, my first goal was to set up a new test that would be unquestioned in the final analysis. The program was a multi-service program, with participation by the Army, Navy, Marine Corps, Air Force and Coast Guard. We also coordinated closely with the Secret Service and the FBI. As the test was completed the evaluation was briefed to the military hierarchy, the service secretariats and the congress. The bottom line was that the Beretta surpassed all candidates and the result was accepted." As a part of the contract requirements, however, the Beretta Corporation had to build a plant inside the United States (Accokeek, Maryland) to produce the M9. Dick added, "Another interesting aspect was working with Fort Benning on the training plan and the weapons qualification requirements. When the pistol was fired for qualification, a very high proportion of Experts were achieved. The Training Division at Benning wanted to raise the qualification requirements which I opposed. My rationale was the qualifications should be based on a mission profile and defined outcome. This had been established by Benning years earlier with the .45. Ultimately I won and the established standards were applied to the M9 [pistol]."<sup>219</sup>

Some of us managed complex programs that included "systems of systems." From June 1991 to August 1994, Orlin Mullen served as Project Manager for the RAH-66 Comanche, a light reconnaissance helicopter which incorporated stealth technologies and featured a number of previously untried designs including the employment of advanced sensors. Orlin led the Comanche's development at a time when new technologies yielded startling advances, but reduced defense budgets in the post-Cold War environment forced the armed forces to make hard choices about funding. Orlin wrote: "In a program like the Comanche, the Army's largest at the time, the Project Manager is perhaps more critical for keeping the program on track, and he is less critical as the inventor or contributor of specific accomplishments. My real contribution to the Comanche program was to keep it on schedule, keep it sold and fully funded for its first three years on contract with the Boeing and Sikorsky joint venture. During those first three years on contract I had to take the program through at least four reprogramming actions which were horrendous, but successful." Orlin continued: "Notwithstanding the ultimate failure of the Comanche to go into full rate production as an operational aviation scout platform that we are still [in 2012] struggling to replace, the program made an unprecedented number of technical and operational contributions that continue to contribute to modernizing aviation, Army Combat Battle Command, and many battle-field survivability programs."<sup>220</sup>

As an example of these contributions, Orlin wrote: "The Comanche's fully integrated digital electronic system demonstrated significant accomplishments for maneuvering the aircraft, managing command and control coordination, and executing ground attack, anti-aircraft, and other weapons system attacks from any source able to engage. In this systems integrated environment, there were no black boxes or federated systems; everything was centrally managed on the data-bus by dual, real-time tracking core computers equipped with common cards hosting miniaturized processors processing real time sensor, external situational awareness inputs, and network communications. This enabled instantaneous and fully integrated on-board digital operations and coordination of engagement actions with other aircraft and ground systems. This system of systems approach exceeded anything ever contemplated for air or ground combat systems and was the true product of the computer age."<sup>221</sup>

While on the Army staff from 1983-1987 in the Office of the Deputy Chief of Staff for Research, Development, and Acquisition, Ron Williams played a key role in the Army's modernizing its CH-47 fleet and abandoning the JVX, later known

as the V-22 Osprey. He wrote: "As for the Osprey, it started out as an Army program, but quickly became too expensive, with our need to fund LHX (Commanche) development and purchase Blackhawks, Apaches and Chinooks, which were all just going into production. So we successfully moved the Osprey (or JVX as it was called then) to the Navy's budget with a promise that we would stay in it and buy a large number of them.... Quickly, the marines put their own peculiar requirements on the program, and it became less and less useful to the Army. One day in the Pentagon I walked into the office of the Under Secretary of the Army (Mr. Ambrose) and made the argument that the Army's need was for an aircraft that could carry a lot (the 155mm gun) a short distance (20 miles) just a little faster than a truck could tow it. The Osprey in contrast, can fly a long distance at very high speeds but cannot carry a heavy load. In fact it is a very small, light craft. The Chinook was designed to do just what the Army needed: carry heavy things around the corps area, which is really very short distances and great speed is not essential. The Army part of Osprey was dead as I walked out of the office."<sup>222</sup>

Some projects proved more valuable than expected. Jay Vaughn said: "I was the Army TRADOC System Manager for Unmanned Aerial Vehicles (UAV) during the period from 1986 to 1989 when the Army UAV program was just getting started. During that period, I represented the Army's needs as DOD formed a Joint UAV program, began the Joint UAV training center at Fort Huachuca, and participated in multiple 'fly-offs' as the Army sought to acquire off-the-shelf systems that would meet Army needs. My primary role was to define and defend Army requirements in the joint acquisition process, plan for Army UAV logistical and training support systems, and generally represent the reconnaissance, surveillance, and target acquisition needs of soldiers in combat." Jay added, "My role...consisted of lots of frustrating days trying to sell the Army leadership on this seemingly new idea that required allocating scarce assets but did not involve pilots with their flowing scarves defying death and danger to gather battlefield intelligence. There was a lot of resistance from our Army Aviator brethren and the Air Force jet jockeys. My involvement was during the period of transition from a Cold War mentality to what we thought the needs of the Army would be after no longer worrying about the Soviet Union steam rolling across the plains of Europe. We were mostly right, but did not foresee how valuable these little birds would be in the war against terrorism."<sup>223</sup>

Chuck Nichols wrote: "The assignment that had possibly the most lasting impact on the Army was as the TRADOC Commercial Construction Equipment project officer. I was responsible for

writing the requirements for the conversion of the engineering equipment used by the Army Corps of Engineers from military specific equipment that was not maintainable to commercial off-the-shelf equipment that relied on the commercial supply chain for repair parts. It required a major mind-set change for the Army Materiel Command staff responsible for equipment acquisition as well as the test community. During my tenure I was able to replace every major piece of earth moving equipment and all the engineering specific wheeled vehicles in the Army inventory with commercial off-the-shelf hardware."<sup>224</sup>

Chuck's "most interesting" tour, however, was his time as the "Commander and Director of the Corps of Engineers Cold Regions Research and Engineering Laboratory (CRREL)." He wrote: "During my 5-year tour I got to know and learn from some of the top scientists in cold region engineering. Some of the problems we addressed do not appear in text books and are not even mentioned in engineering schools. I spent time on the North Slope of Alaska, in Greenland, and in Iceland as well as most of the northern tier of the United States to see first-hand the issues caused by the cold. The laboratory had unique capabilities that enabled us to replicate environmental conditions of just about anything you could imagine. We could produce snow in the middle of July to test helicopter rotor icing problems and solutions or replicate highway frost heave to test mitigation measures. The lab developed new engineering guidelines for the Corps [of Engineers] for operation of the inland water navigation system in the northern tier as well as applying practical knowledge to repair the fractured base ring of the South Pole Station. I was able to secure MCA funding for a new Technical Information Analysis Center as well as a Child Development Center to provide day care for CRREL employees."<sup>225</sup>

None of these programs could have existed without the many hours expended by our classmates on the Department of the Army Staff and the Joint Staff. Kent Brown wrote: "As Chief of the Requirements, Programming, and Priorities Division, ODCSOPS, I supervised the preparation of the Army's submission for Research, Development, and Acquisition of weapons systems (\$20 B/yr) for FY86 & 87 DOD budget and for the FY88 Five Year Program."<sup>226</sup> Many of our classmates trod the hallways of the Pentagon, and other buildings, searching for an elusive signature, coordinating complex details of operational and technical matters, and warding off bad ideas from a multitude of sources.

#### IDEAS AND WEAPONS: TECOM

In an era of many new ideas and systems, some of our classmates' most important contributions occurred at the Test

and Evaluation Command (TECOM) at Aberdeen Proving Ground. Dick Tragemann served as the Commanding General of TECOM from 1992-1996, and John Longhouser followed him as CG in 1996-1997. Before arriving in Aberdeen Dick had served as the commanding general of TRADOC's Analysis Command from 1990-1992, and John had served in 1987-1990 as program manager of the Abrams Tank Systems and in 1993-1996 as program executive officer for Armored Systems Modernization. Additionally, Ray Pollard served as the Technical Director at TECOM from 1987-1996 and as Civilian Deputy and Chief Engineer in 1996-1998.

For more than a decade, these three classmates exerted an extraordinarily positive influence over the world-wide testing and evaluation of the full range of military equipment from the Army and all the armed services. In essence, in a time of great technological change, TECOM checked whether a newly developed piece of equipment worked. Was it reliable and operational? Was its form acceptable? Did it fit with other equipment? As an example of the cost effectiveness and value of TECOM, as well as the wide variety of its tests, Ray recalled the construction of a \$33 million test facility especially built for the Navy Seawolf submarine program. The first test in the facility, which consisted of a very large and deep pool at Aberdeen, examined a minesweeper for the Navy. Enough money was saved on the test of the minesweeper to pay for building the entire testing facility.

While Dick and John commanded TECOM, they brought to fruition the idea of a "Virtual Proving Ground" which was initially conceived in the 1980s. Using simulations and predictive mathematics, TECOM could test equipment or weapon systems without physically testing them. For example, units did not have to be assembled, and tanks or infantry fighting vehicles did not have to go down range. And legions of observers did not have to collect and analyze reams of data. The number of personnel involved and the costs of testing thus dropped dramatically. According to Ray, the Army led the other services in virtual testing and shortened the time it took to develop new equipment and weapons.<sup>227</sup>

Other classmates also worked in the testing and evaluation of different systems. While still in uniform, Frank O'Brien worked in the Combat Development Activities at Fort Leavenworth, in the Office of the U.S. Army Deputy Chief of Staff for Research, Development, and Acquisitions in the Pentagon, and in the U.S. Army Operational Test and Evaluation Agency in Falls Church, Virginia. Most notably, he participated in the testing and evaluation of a number of major weapon systems. In particular, he played a role in evaluating the High Mobility Multipurpose Wheeled Vehicle (HMMWV) and the M1A1 Abrams tank.

After retiring from the Army he worked as a consultant for BDM, then for TRW, and finally for Northrop Grumman. He wrote: "While I show three companies, I actually stayed with the same organization--it was just bought twice."<sup>228</sup>

#### IDEAS AND WEAPONS: DEFENSE INDUSTRY

Whether after four or five years or many decades after graduation, some of us moved as civilians into the defense industry where our knowledge of military technology, organizations, and ideas provided a strong foundation for success. After retiring from the Army, Lee Hewitt continued to be associated with the Department of Defense as a systems engineering and technical assistance contractor for Ares Corporation supporting the Ballistic Missile Defense Organization. He worked in Theater Missile Defense which, after the liberation of Kuwait and the use of Patriot missiles against SCUDs, was a high priority endeavor. He wrote: "My job with BMDO was to work on a C2 architecture that would join the Army's Patriot and THAAD missiles, the Navy's AEGIS ships, and the Air Force AWACS and Airborne Laser systems and tie them all back to national command centers. Much of the early engineering work we did now exists as real operating systems."<sup>229</sup> He then moved to Boeing where he worked on the Army Future Combat Systems program. Lee wrote: "Bill Hecker and I were roommates our cow and firstie years. Almost 35 years later, I was hired by Boeing.... My first day I was told I would have to share an office with another West Pointer. When I entered the office, there was Bill--roommates again."<sup>230</sup>

After retiring from the Army, Steve Harman spent fourteen years in DOD industrial firms focusing on systems engineering and integration of tactical and strategic information systems. He held positions with General Electric, Martin Marietta, Computer Sciences Corporation, Unisys, Logicon, and Northrop Grumman. He wrote: "In my first assignment (1991-1993) as an employee of General Electric I worked at Fort Leavenworth, Kansas, supporting the Army effort to define requirements for automating the battlefield. At the outset the Army had computers in tanks that could not communicate with other computers on the battlefield. We fixed that problem and many others. Looking back from 2011 it is unbelievable how far we have advanced in communications and computer interoperability in 20 years. I am proud to have played a small role in advancing that effort."<sup>231</sup>

Bob Clover, who was Technical Director of the Simulation Center in the Institute for Defense Analyses, a federally funded research and development corporation, contributed to the simulation of the Battle of 73 Easting in the First Iraq War.

The battle occurred on February 26, 1991, when E Troop, 2nd Squadron, 2nd Armored Cavalry Regiment fought a fierce battle at 73 Easting (or north/south kilometer line) against the flank of the Tawakalna Division of the Iraqi Republican National Guard. Supported by Army Chief of Staff General Gordon Sullivan and funded by the Defense Advanced Research Projects Agency (DARPA), the Institute for Defense Analysis began collecting detailed information about the battle shortly after the cease-fire on February 28, only 100 hours after the start of the campaign. Bob noted, "By the time the research effort was complete, the IDA team knew more about the battle of 73 Easting than the rest of the participants combined."<sup>232</sup>

Bill Browder worked for 29 years as a civilian engineer for Department of the Army. He wrote: "I made significant contributions supporting Army Combat Engineer equipment Developments and Acquisitions (M9 ACE, Mines, Countermines, Demolitions, Construction equip, Bridging equip, and Mobile Electric Generators). I also revived the Army's Explosive Ordnance Disposal equipment program, the Sets, Kits and Outfits management and the Physical Security Equipment program."<sup>233</sup>

Skip O'Donnell wrote: "I spent ten years working under a Westinghouse contract with Naval Reactors/NAVSEA 08 at the Naval Reactors Facility (NRF), which was one of two national training sites for the U.S. Navy sailors and officers in the nuclear navy. It was located 50 miles west of Idaho Falls, Idaho at the Idaho National Engineering Laboratory. We had two submarine and one aircraft carrier nuclear power system prototypes for these navy guys to train on in order to qualify for naval nuclear service. My job was to keep these old nuclear power plants running. I was a maintenance engineer coordinating repair work on secondary steam piping, turbines, condensers as well as the reactor piping, pumps and water cooling systems. The coordinating work included working with welders, pipe fitters, quality control inspectors as well as electrical engineers. I went through three reactor plant overhauls and refuelings--two as the lead maintenance engineer and one as the maintenance manager--on these prototypes where there was at least a year's worth of the work explained above.... My last ten years were spent at the Westinghouse/Bechtel Bettis Atomic Power lab in Pittsburgh reviewing and approving the work and monies for a lot of the maintenance work back at NRF. I was also involved in reviewing the reactor plant designs and spare parts for the new aircraft carrier work provided by the Newport News Shipbuilding company."<sup>234</sup>

Bruce Clarke, after retiring from the Army in 1995, worked for four years as a real estate account executive in Carlisle, Pennsylvania, and then became the Training Manager at the Royal

Saudi Land Forces Armored Institute. After the Gulf War, the Saudis purchased 315 M-1 tanks, and Bruce helped train Saudi officers and soldiers on the tanks. He returned to the United States in 1998 and joined QuVis, a start-up technology company, and was responsible for introducing the company's unique image compression technology to military and government officials. In 2000 he founded Bruce Clarke Consultants to assist defense contractors on technology integration issues. Beginning in 2005 he served as an advisor to Rockhill Partners, a venture capital partnership. At one point he served as an advisor to incoming Kansas governor Bill Graves.<sup>235</sup>

Pat Kenny became a project manager at Fort Benning. He wrote: "The Federal Government, in an effort to bring greater efficiency to tasks that could be performed by contractors, initiated the A-76 program, a program administered by the Office of Management and Budget. Fort Benning, one of the largest DOD installations, out-sourced Logistics and Public Works support services to a civilian company in 2002, Shaw Environmental and Infrastructure, Inc., a company within Shaw Group, Inc. I served as the Project Manager for Shaw at Fort Benning. We began work in January 2003 with some 550 employees just at the start of the build-up for the Iraq War and established a tempo that did not slow down for years. It was a rather monumental task to mold a team necessary to perform the numerous public works and logistic tasks, but we started strong and continuously got better. We did so well that Fort Benning kept giving us more and more tasks to perform because we constantly delivered a good product at a reasonable price. The Shaw staff grew to over 1200 employees before the end of the contract period. While obviously it was a team effort I'm proud of having been the leader of a project team that performed well."<sup>236</sup>

Ron Walter retired from the Army in 1985 and went to work with a defense contractor. He worked in telecommunications primarily doing intelligence work. Recognizing he needed a better understanding of telecommunications, he also studied telecommunications management with Golden Gate University which offered an MBA program at Fort Huachuca. He spent the next few years working for defense contractors and then decided to go into business on his own. In 1999 he and his wife Janice established Integrated Systems Improvement Services, Inc. (ISIS). He wrote: "As a civilian, my most memorable experience is that of 'taking the leap of faith' to start our business 'on a shoestring' and to stay with it long enough to see it grow to become a substantial contributor to our nation's defense, providing quality jobs for a quality workforce and, eventually, a quality retirement for my wife and myself." He explained that ISIS provided "information technology, technical and training

support services to Government prime contractors and Department of Defense agencies. Grew business to 175 employees in Southwest Asia and CONUS. Sold business and retired in 2010."<sup>237</sup> The story, of course, is more complicated than that, but Ron and Janice created their company just as technology began to dominate the intelligence field. Much of his effort went into training people to use complex telecommunications equipment used by the armed services and defense contractors.<sup>238</sup>

Leo Kennedy worked for Science Applications International Corporation (SAIC) as an analyst, then became a Project Manager, Assistant Division Manager, Division Manager, and then Deputy Operations Manager." Leo wrote, "Best job was Division Manager. I managed about 170 employees in offices around the country. As Operations Deputy I assisted in managing about 1500 employees, but Division Manager was a far better job. I retired from SAIC as a Vice-President."<sup>239</sup>

After retiring from his position at the Defense Information Systems Agency, Walt Kulbacki was selected for a Senior Director position at I-Net which was a systems integrator and Information Technology provider for the Department of Defense. Walt wrote: "In that role I headed up a strategic business unit and was responsible for growing that organization from \$5 million to \$30 million dollars in two years. I was then promoted to Vice President for Business Development and helped the company grow from \$90 million to \$350 million in 4 years, thereby helping the company to be purchased. I was then selected to Vice President Business Development at CSC, a large systems integrator, where over a 5 year period I helped them grow their revenue from \$3 Billion to \$4.5 Billion. From this position, I was recruited by several other major integrators, L-3 and SAIC, that supported the Federal and DOD space. Over this period including I-Net, I won over \$8 Billion in contracts. Shortly after completing my position at SAIC, I decided to start my own company, WK Global Solutions, LLC, which focuses on strategic planning, business development, and helping companies grow their revenue and win contract opportunities. I am also involved with Mergers and Acquisitions and Due Diligence. I have been doing this for the past 8 years and am currently the CEO and President."<sup>240</sup>

Frank Birdsong (x-65) wrote: "I designed, built, and fielded the first-ever, remotely controlled unmanned airborne Intelligence, Surveillance and Reconnaissance (ISR) system. Starting in 1968 it flew ISR missions over the Ho Chi Minh trail on a low-altitude unmanned drone aircraft."<sup>241</sup> Frank continued working in the field of unmanned aerial vehicles and became "chief engineer" on the Global Hawk. In 2000, he, as well as other team members from Northrop Grumman, Rolls-Royce, and Raytheon, were awarded the Robert J. Collier Trophy "for the

greatest achievement in aeronautics or astronautics in America."<sup>242</sup> Known as the Global Hawk, the UAV demonstrated its worth in the Iraq War of 2003 and in the global war against terrorism. Frank wrote, "I can't express how privileged I feel to have been able to have played such a significant role in the development of this historic aircraft, its ISR [intelligence, surveillance, and reconnaissance] and Comm[unication]s capabilities, and the operational value we enabled for our troops."<sup>243</sup>

From 2003 to 2008, John Longhouser served as president of MTC Technologies, a provider of professional services, logistics, and aircraft modernization to the armed services. When describing his most notable achievement in his civilian career, John wrote, "Growing MTC Technologies Inc., a publicly traded company from \$100 million to \$500 million and selling company to BAE in 2008." When the company was sold to BAE North America, he became a consultant to the defense industry.<sup>244</sup>

After retiring from the Army in late 1998, Joe DeFrancisco occupied several defense industry marketing positions in the Washington, D.C., area. He spent five years with Lockheed Martin's Washington Operations as Vice President of Army Systems, two years with Honeywell International as their Vice President of Military Markets, and then nearly two years with the Spectrum Group, a consulting firm in Alexandria, Virginia. In December 2007 Joe was named Senior Vice President and Army Strategic Account Executive for Science Applications International Corporation (SAIC). In this position he sustained and strengthened relationships for SAIC with the Army, as well as ensured SAIC understood the Army's priorities and concerns so it could respond to them. Joe also ensured SAIC had a consistent message with Senior Army officials. As SAIC's senior Account Executive he oversaw the activities of the Account Executives for the other services, as well as the activities of nearly 50 Account Managers facing the Army customer. His influence helped SAIC focus better its efforts in support of our soldiers as they engaged in the full spectrum of military operations--from peace keeping and humanitarian missions to major conflicts.<sup>245</sup>

#### MILITARY EDUCATION

Those of us who remained in uniform in the decades after the Vietnam War spent a lot of time as students in civilian and military schools. We also spent considerable time as staff and faculty in military schools. Several broad changes affected military education in the last decades of the twentieth century. The first came from two doctrinal revolutions, one in the post-Vietnam years and another in the post-Cold war years. In the

post-Vietnam years the U.S. shifted from unconventional to conventional doctrine and in the post-Cold War years the U.S. placed greater emphasis on contingency, stability, and anti-terror operations. The second broad change came from the Goldwater-Nichols Department of Defense Reorganization Act of 1986 which streamlined the chain of command and placed great emphasis on "Joint" operations and doctrine instead of service-specific doctrine. And the third came from changes in technology and the need for greater technical expertise, including those related to information warfare.

As the effect of these broad changes swept through the military education system, all the services' staff colleges and war colleges expanded their elective offerings and, while keeping a core curriculum, provided opportunities for officers to take an increasing number of electives. All the services also created new schools to train military personnel for specialized, highly technical fields. With the maturing of computer systems, sophisticated war games became even more important than they had been in the past. Meanwhile, operations research and systems analysis (ORSA) dominated the thinking of many officers, and in an attempt to provide balance and inject real world considerations, all the services placed greater emphasis on military history. During the same period an ever-increasing emphasis on "Joint" education brought a sprinkling of officers from other services in all military schools. Thus, many exciting, important changes occurred in military education during our years of wearing the uniform. Outside the Military Academy, which will be discussed in a subsequent chapter, our classmates played an active role in these important changes.

Rick Sinnreich played a key role in establishing the Advanced Military Studies Program (AMSP) at Fort Leavenworth, a program that emphasized the operational level of war. He joined the program in 1984 after the first pilot class, under the leadership of Huba Wass de Czege (USMA 1964), had graduated, and he served as its director from 1985 to 1987. Rick wrote: "Our first task was to regularize the curriculum, which, for the pilot class, had been assembled more or less on the fly. Along the way, we decided that, since we were preparing to manage three programs--AMSP, a war college-equivalent Advanced Operational Studies Fellowship (essentially a feeder program for future seminar leaders), and a doctrinal development effort (we were assigned both the re-write of FM 100-5 and development of a new leadership manual), we would call ourselves a school. No one really gave us permission--we just did it and no one objected (our real motive, of course, was to assert curricular independence from CGSC's departments, in which effort we were happily successful). By the end of that academic year, the

School of Advanced Military Studies [SAMS) was officially recognized as one of the College's subordinate schools (at that time CGSC, CAS3 [Combined Arms and Services Staff School], and SAMS, and although its curricular focus has shifted over the years (not entirely for the better, in my biased view), it has remained so ever since."<sup>246</sup>

Barrie Zais and Tom Fergusson also served on the SAMS faculty from 1984 to 1986. Tom wrote: "The SAMS course was designed to fill a gap in the U.S. military education between CGSC's focus on tactics and the Army War College's focus on grand strategy and national security policy."<sup>247</sup> He continued: "I was...a Seminar Leader and Course Director.... I was completing three years as G2 of the 3rd Infantry Division in Germany in the summer of 1984 and had orders for the Pentagon (Army Staff). Then everything changed quite suddenly.... It turned out to be a wonderful assignment.... The students, all of whom had been selected after seeking admission to the SAMS program were among the Army's best and brightest majors."<sup>248</sup>

Several of our classmates (John Pickler, Stan Genega, Tim Timmerman, and Don Nowland) had their "war college" experience at Fort Leavenworth in the Advanced Operational Studies Fellowship.<sup>249</sup> Mike Shaver spent the last ten years of his Army career as an instructor at the Command and General Staff College in Fort Leavenworth, Professor of Military Science at the University of Wisconsin in La Crosse, and Brigade Commander of ROTC Region II.<sup>250</sup> Also at Fort Leavenworth, Tim Timmerman served as editor and chief of *Military Review*. As he assumed his new duties in late 1985, he aimed to make the journal a "sounding board" for the exchange of professional ideas.<sup>251</sup> Tim later became the Director of the Center for Army Leadership at Fort Leavenworth and served there from 1987-1989.<sup>252</sup> Also at Fort Leavenworth, Bob Frank and Bob Doughty served on the faculty and played leading roles in creating the Combat Studies Institute, which offered military history classes in CGSC and conducted research on operational and tactical subjects. In 1986 Bob Doughty served as a supporting member of the Dougherty Review Board that followed the Goldwater-Nichols legislation of 1986 and examined the facilities, curriculum, and faculty of all the armed forces' staff colleges and war colleges. He wrote: "I was surprised at the parochialism of the service schools and the lack of substance at the National War College and the Joint Forces Staff College."<sup>253</sup>

Barrie Zais succeeded in "dual tracking" in the academic and infantry worlds. He taught at West Point for three years, at the School of Advanced Military Studies (CGSC) for two years, and the U.S. Army War College for three years. Barrie wrote: "One third of my career (plus a year in CGSC) was in an academic

setting. At the same time I was able to command infantry units from platoon through regiment as well as be an infantry division chief of staff. I know of no one else who was able to come close to this sequence."<sup>254</sup> After retiring in 1995 Barrie remained on the faculty of the Army War College for nine years, six as a contract instructor and three as a Professor of National Security Studies. In 1999 he was awarded the George C. Marshall Chair of Military Studies at the War College.<sup>255</sup>

After teaching at West Point and at the Command and General Staff College, Bob Frank spent a number of years on the Army staff working on officer education programs. This was a time when American political and military leaders placed great pressure on the Services to operate more effectively and efficiently together. He became the staff authority on Joint Professional Military Education, implementing portions of the 1986 Goldwater-Nichols DOD Reorganization. He worked with the Joint Staff, Army War College, Command and General Staff College, National Defense University, and other Service colleges to create and implement a joint education curriculum approved and certified by the Chairman of the Joint Chiefs of Staff. He also worked with the Army DCSPER to ensure the Army complied with the requirements for joint service for field grade and general officers. Additionally, Bob developed and stood up a new functional area, Strategic Plans and Policy, for officers under the new Officer Personnel Management System, which was a major overhaul of the Army's approach to personnel development and utilization. As part of the emphasis on educating Army strategists, Bob ran the DCSOPS Harvard Strategic Program for ten years. The program identified two to four combat arms officers every year who showed potential for senior officer rank, sent them to the Kennedy School of Government for a Masters Degree, then brought them to ODCSOPS on the Army Staff for two years of practical application. These individuals invariably rose to higher rank in the combat arms, and were able to bring their high-level staff experiences to bear on problems faced by field units. Most went on to become colonels, some even General Officers. Bob concluded, "Working on officer education programs while on the Army Staff (1982-84 and 1989-99) strengthened my conviction of the importance of education (civil and military) in the continued development of officers. The officers who were most effective in providing for the national defense were those who were technically proficient AND had a greater understanding of the role of the military in our society. Supporting the programs which enabled officers to develop these attributes was my most significant contribution to the Army and the country."<sup>256</sup>

Our classmates held a variety of leadership positions in military education. Joe Koz served as the commandant in 1993 of

the U.S. Air Force Institute of Technology.<sup>257</sup> After serving on the faculty at the Army War College, Mark Walsh retired from active duty in 1993 and joined the U.S. Army Peacekeeping Institute at Carlisle Barracks which was eventually renamed the U.S. Army Peacekeeping and Stability Operations Institute. John Thompson was the Director of the Inter-American Defense College from 1996 to 2000. He wrote: "I invited Hugo Chavez [President of Venezuela from 1999 to 2013] to speak at the school, and we had a great time, playing ball and disagreeing."<sup>258</sup> After retiring from the Army, John became the Dean of Students, Administration and Outreach of the William J. Perry Center for Hemispheric Defense Studies at the National Defense University.<sup>259</sup>

In the early 1990s, Andy Zaleski, while still on active duty with the Air Force, served as the dean and Air Force element commander at the Defense Systems Management College in Fort Belvoir, Virginia. He was the college's key implementer of the Defense Acquisition Workforce Improvement Act and worked closely with the newly established Defense Acquisition University (DAU). After retiring from the Air Force in 1995, he worked in the defense industry for five years and then began work at DAU. He served as DAU's first director of strategic planning and then in 2001 became Dean of the West Region. In January 2004 Andy officially opened the West Region campus in San Diego. The new campus had 50 faculty and staff members who offered courses in program management, contract management, systems engineering, logistics, financial management, etc., and provided support (consulting, targeted training, etc.) to regional organizations throughout 13 western states, including Hawaii and Alaska.<sup>260</sup> Andy described the "job" as "truly...the best of my career."<sup>261</sup>

John Alger became one of the leading advocates of information warfare; he skillfully used the classroom and lecture hall to increase understanding of its potential effect on both personal freedom and national security. Before many others, he recognized the military's heavy dependence on information and information systems, and he foresaw previously unimaginable challenges arising from the new computer and networking technology of the "Information Age." The vulnerability of those systems had become most apparent in the 1991 Gulf War when hackers stole information pertaining to the movement of U.S. troops to the Middle East and attempted to sell that information to the Iraqis. John worked in the defense industry from 1989 to 1992 and served from 1994 to 1995 as chair of the Information-Based Warfare Department in the Information Resources Management College of the National Defense University. He then served from 1995 to 1997 as the Dean of the School of

Information Warfare and Strategy at the NDU. In one of his public presentations in 1995 he observed that information warfare seeks to destroy all that is precious to modern societies: money, utilities, communications, etc. Yet, its only weapon is a "computer with a modem."<sup>262</sup> In an era of massive defense cuts, the School of Information Warfare and Strategy at NDU was one of the few new initiatives in the defense establishment.<sup>263</sup> Clearly, the profession of arms, and its study, had changed enormously since we arrived at West Point in July 1961.

#### CONCLUSION

Ric Shinseki struck the right note at his retirement when he said, "My name is Shinseki, and I am a Soldier--an American Soldier, who was born in the midst of World War II, began his service in Vietnam 37 years ago, and retires today in the midst of war in Afghanistan and Iraq. The strategic environment remains dangerous, and we, in the military, serve our Nation by providing the very best capabilities to restore order in a troubled world. Soldiering is an honorable profession, and I am privileged to have served every day for the past 38 years as a Soldier."<sup>264</sup>

Like Ric, we of the Class of 1965 consider it a privilege to have served our country. In the course of that service, our "soldiering" followed many different paths. We led and took care of American soldiers in the United States, Germany, Korea, Vietnam, Grenada, Panama, El Salvador, Bosnia-Herzegovina, Iraq, and numerous other places. We helped transform amazing ideas and astonishing technology into something soldiers could use successfully. We helped our nation's armed forces make the transition to new strategic environments in the post-Vietnam, post-Cold War, and post-September 11 years. And we helped our nation respond to floods and other natural disasters. While serving as commanders, staff officers, intelligence officers, logisticians, linguists, peacekeepers, special operators, engineers, physicians, dentists, lawyers, project managers, educators, and defense contractors, we left our boot prints in countries around the world and our finger prints on many of the weapons and much of the equipment used by our soldiers. A significant portion of those fingerprints came from classmates who were no longer wearing a uniform. Our "soldiering" involved challenges we could not have imagined in June 1965.

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