

Signal regiment



❖ **The Signal Regiment is one of the largest and most diverse branches of the Army. Its mission is to provide worldwide information systems and networks for real-time command and control of Army, joint and combined forces.**

Today's Signal officers encounter unpredictable challenges that test their tactical and technical abilities. Along with these challenges, however, are tremendous opportunities for advancement and personal satisfaction. From the foxhole to the White House, Signal officers plan, install, integrate, operate and maintain the Army's strategic, operational and tactical information-systems infrastructure. This includes communications and computer systems and networks, as well as information services and resources

supporting wartime and peacetime operations.

As members of the Signal Regiment, Signal officers work hand in hand with Functional Area 24 (telecommunication-systems engineering) and FA 53 (information-systems management) officers to provide seamless, secure, continuous and dynamic information systems at all levels - from the fighting platform to the sustaining base - supporting Army, joint, Defense Department, combined and coalition warfighting missions with allied nations. Also key to the Regiment's work are its enlisted soldiers and warrant officers.

Signal officer's role

Signal officers command Signal units engaged in installing, operating, administering and maintaining wide-area networks and information systems supporting tactical, theater, strategic and sustaining base operations. As commanders, Signal officers plan, coordinate and supervise training, administration, operations, supply, maintenance, transportation, security activities and resource allocation for Signal units and facilities.

Signal officers also serve as technical advisers by providing detailed technical direction and advice to com-

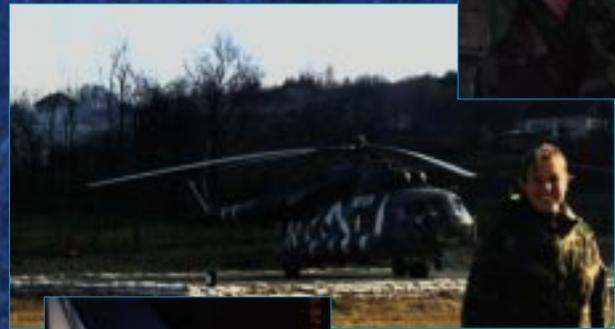
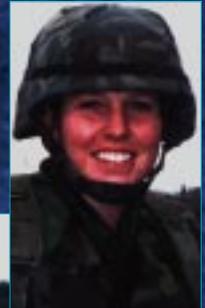
*CPT Kimberly Retchless
Reserve Officers' Training Corps
Western Maryland College
Bachelor of arts in biology
Site officer in charge
Operation Joint Guard
Sarajevo, Bosnia*

"I served as a tactical-satellite site officer-in-charge in Sarajevo from February to June 1998. Our site's responsibility was to provide secure communications for the Stabilization Forces commander and his subordinate commanders.

"During those four to five months, I faced daily problems in ensuring quality and 100-percent communications at all times. I was in charge of about 15-20 soldiers at my site, while also keeping track of soldiers' movements in two other outposts (Mostar and Banja Luka). My job entailed making sure the outsites were provided for logistically as well.

"My site accomplished 100-percent uninterrupted secure communications. I did this while also providing leadership to my soldiers. And I learned that when Signal officers are supporting combat arms, they must stay on their toes."

The Signal experience



A helicopter assisted in visiting distant communications sites throughout Bosnia.



Soldiers maintain a 20-foot satellite dish at night in Sarajevo.

manders, staffs and other command, control, communications and computer users at all echelons on installing, operating and maintaining distributed database systems, teleprocessing systems and data communications supporting battlefield automated systems.

Signal officers are typically assigned to maneuver units, such as infantry or armor battalions and brigades, as Signal platoon leaders and as primary staff and technical adviser (S-6) to the commander. With technology's advancements and the Army's initiatives - such as the digitized division, network-centric operations and the Army's transformation - the S-6's role has become increasingly critical in providing the right information to the right individuals at the right time.

The S-6 provides non-Signal units linkage to the WAN. As the S-6, Signal officers ensure that voice and data connectivity between higher, lower and adjacent units is secure and reliable. S-6s are also responsible for planning, employing and operating state-of-the-art digital voice, imagery and data distribution systems and networks from combat net radios, local-area networks and WANs to satellite systems that span the globe.



A Signal officer communicates via radio mounted in a high mobility, multipurpose wheeled vehicle, or humvee. Signal officers are responsible for state-of-the-art digital voice, imagery and data distribution systems and networks from combat net radios, local area networks and wide area networks to satellite systems that span the globe.

Signal officers also serve in a variety of other positions such as:

- Platoon leaders, company commanders, supply and maintenance officers, operations officers, executive officers, other staff officers and battalion/brigade commanders within Signal units;
- Staff and joint duty officers at

major command, Department of the Army and Department of Defense levels, planning, managing and operating information systems around the world;

- Action officers, branch and division chiefs in Training and Doctrine Command to develop doctrine, organizations and equipment for the Signal mission area;
- Instructors and training developers at the Signal Center, other branch schools and combat training centers;
- Signal instructors at precommissioning programs such as Reserve Officers Training Corps, military academies and service Signal schools and service colleges; and
- Signal advisers to U.S. Army Reserve and Army National Guard organizations.

Signal Regiment in action

As mentioned earlier, Signal officers work closely with their Regimental counterparts (FA 24 and FA 53 officers) to provide seamless, secure, continuous and dynamic information systems at all levels - from the fighting platform to the sustaining base - supporting Army, joint and combined warfighting missions. In particular, Signal officers coordinate and plan



1LT Richard Kaiser checks PFC Amy Waugh's work in a 93d Signal Brigade training exercise at Fort Gordon, Ga. Signal officers serve in a variety of leadership and staff positions.

CPT Jonathan Long
Reserve Officers' Training Corps
Augusta State University
Bachelor of arts in communications

Assistant S-3 and battle captain
East Timor (Operation Stabilise)
Darwin, Australia, and Dili, East Timor

"I was battle captain for an echelons-above-corps unit deployed in support of international forces in East Timor. I monitored the communications network, directed troubleshooting, updated information to Pacific Command's J-6 and oversaw logistical coordinations between Australia and East Timor. I worked with tri-band and gained a broad base of experiences in communications.

"One of the problems I faced was ensuring priority of equipment in a multinational environment - for example, U.S. priority vs. French priority. Another problem was the possibility of being bumped off the satellite to provide more bandwidth for a warfighter exercise occurring at the same time.

"From this deployment I increased my knowledge of EAC and tactical communications systems. I did well in getting EAC support to people when they needed it, and I have a feeling of pride in supporting multinational forces aiding the development of a new democracy."

The Signal experience



A market wall at Suai Beach reflects East Timorese feelings about international intervention. The United States supported Australia, who had the lead for Operation Stabilise, with communications for international forces in East Timor.

the information-systems operations piece (installation, operation and maintenance) of the information exchange; FA 24 officers engineer the networks (telecommunication and data communication) portion of the information pipeline; and FA 53 officers manage the information systems (mostly computer systems and LANs) to ensure needed information is provided to the right decision-maker.

Signal Regiment officers combine technical and tactical expertise to provide decision-makers with communications, data and other multimedia instruments to gain information dominance on the battlefield. They integrate information systems (military and commercial) that provide real-time data to higher, lower and adjacent units almost simultaneously. Whether it's through videoteleconferencing, mobile subscriber equipment, fax, email or commercial access, Regimental officers

ensure the information gets to the right place at the right time.

Regiment's functional areas

FA 24 is a functional area in the information operations career field. Telecommunication-systems engineering officers provide the Army with a core of professional engineers to support the nation's full-spectrum-dominance strategy for the 21st century. FA 24 officers engineer, design, develop, install, implement, integrate, test, accept and upgrade telecommunication systems and networks supporting Army, joint, combined and DoD operations worldwide.

FA 24 officers must have a bachelor or master of science degree in electrical engineering, telecommunications engineering, math, physics or a related discipline.

FA 53 is also a functional area in the IO CF. Information-systems management officers provide the Army

with a core of professional managers and engineers to support the nation's full-spectrum-dominance strategy for the 21st century. FA 53 officers plan, manage, administer and maintain computer systems, computer networks and associated information-technology resources supporting Army, joint, combined and DoD operations worldwide. Also, IT officers may apply computer engineering, computer science and software engineering theory and principles to design, develop, install, implement, integrate, test and accept computer hardware, software, systems and networks.

Officers from all branches who meet specific undergraduate education requirements are eligible for FA designation into either FA 24 or FA 53 during their fifth year of service. After completing company command, officers may receive state-of-the-art training, followed by an assignment within their FA.



SPC Brian Gavin of 55th Combat Camera Company transmits digital images from Haiti to the Joint Combat Camera Center using an Inmarsat transceiver. The Signal Regiment's combat camera soldiers provide images to commanders-in-chief in the Pentagon for near-real-time information.



Operation Restore Hope in Somalia required 63d Signal Battalion to think "light" and stay mobile with pack radios; here soldiers take a short rest on a mission.

PFC Robert Siddell of 1st Signal Brigade checks a commander-in-charge virtual office system he just finished setting up at Camp Casey, Korea, during Exercise Foal Eagle. The CINC virtual office, an example of Signal Regiment automation support on the battlefield, is a secure communications device capable of sending secure messages and telephone calls anywhere in the world.



Officers may career-field designate as a FA 24 or a FA 53 officer upon selection for promotion to major. FA 24 and FA 53 officers will then compete only against other officers in the IO CF for promotion to lieutenant colonel and colonel. Officers who CFD as an FA 24 or FA 53 officer will single-track in the IO CF and receive successive follow-on assignments within their FA. Only officers assigned to the operations career field will be eligible to command at battalion level or higher, with the exception of Army Acquisition Corps commands.



The Signal experience

*CPT John Transue
Reserve Officers' Training Corps
Wheaton College
Bachelor of science in computer science/mathematics*

*Company executive officer for 1B/121st Signal Battalion
Kosovo forces
Kosovo*



Signaleers maintain communications in spite of the harsh Kosovo winter. Signal equipment and shelters get a "ride" into place in Kosovo hooked to Chinook helicopters.

❖ The challenges are real; the mission is global; the opportunities are limitless.

"On arrival in Kosovo, we had to first set up the military communications. I had deployed with around 190 pieces of equipment - the highest from a single unit in our division. We set up the small extension nodes and node centers on the base camps and in five off-sites (Russians, Greeks, Poles, etc.). We connected them with line-of-sight shots, and the two base camps - BondSteel and Monteith - were connected by a dual troposcatter shot for redundancy.

"Task Force Signal was also called to go on many contingency missions to provide communications to different sectors of Kosovo. For instance, when American troops went to Mitroveka in the French sector, we had to send a communications detachment.

"After arrival I was temporarily sent to Monteith to act as G-6 and officer-in-charge for Signal at the base camp. That was a fantastic experience, as I got to see how the contracting process worked, and coordinated with engineers, mayor and contractors. We were essentially building a small city; we were the phone company and Internet service provider. We'd constantly meet with the mayor to establish the work priority and plan the next phase of the installation. We set up civilian communications for about 2,000 users. We installed the phone drops, Internet and satellite link back to the 'real world.'

"Also, we assisted the local phone company in repairing its service. Working with the interpreters and local people was fantastic. They were very happy to have us there, and that was nice to see as it's a great feeling knowing that our training and hard work was helping people.

"After civilian communications were established in Monteith, I returned to BondSteel to resume my company XO duties. It was a challenge keeping everything maintained, since the Kosovo winter weather was quite harsh. I worked quite a bit on getting commercial generators for future rotations, and I oversaw the three separate property books we had to keep.

"Being the company XO for a deployed Signal unit is definitely a challenging experience, but the opportunity to do a real-world mission and to accomplish different objectives was extremely rewarding. It was an experience in communications networking that you can't get in the civilian world or in other branches."

❖ ***“Regardless of your academic major, you’ll find the Signal Regiment to be a rewarding, challenging branch. The skills you’ll develop in professional schools and on the job are more critical today than ever before as the Army enters the Knowledge Age.”***
-- LTC Steve Bullock, former Signal Corps branch representative, U.S. Military Academy, West Point, N.Y.

Career as a Signal officer

Most Signal lieutenants attend the Signal Officer Basic Course located at Fort Gordon, Ga., then are assigned to Signal battalions at company level to gain troop-leading experience and to enhance technical and tactical competence. How-

ever, due to a shortage of Signal officers at the grades of captain and major, the Army assigns some lieutenants to captain positions as battalion Signal officers (S-6s) in combat arms, combat support and combat service support units.

Lieutenants should expect to serve in company-level positions to develop leadership and Signal skills and, when appropriate, to complement this with staff experience at battalion level. Typical jobs include platoon leader, company executive officer, company operations officer, Signal battalion staff officer and Signal officer (S-6) of a non-Signal battalion.

The focus during this phase should be on acquiring and refining troop-leading, coordination, logistics, technical and administrative skills, as well as the branch-unique technical skills required to plan, install, operate and maintain Signal equipment and systems. In addition to branch-unique tasks, Signal lieutenants should also become proficient in common core tasks. Before promotion to captain, officers should possess an excellent knowledge of the Signal branch and a basic knowledge of combined arms principles. This includes practical experience in

*CPT Maya Filbert
Reserve Officers’ Training Corps
University of Hawaii
Bachelor of business administration in finance*

*Commander, A Company
1110th Signal Battalion
Fort Detrick, Maryland*

“The Signal Regiment has provided me unequalled opportunities to remain on the cutting edge of technology. During Operation Desert Storm, I provided division communications support in Southwest Asia. While stationed in South Korea, I was in charge of communications for Patriot missile batteries protecting U.S. and allied airbases. Currently I am a company commander in a strategic Signal battalion at Fort Detrick. This unit provides 24-hour continuous communications support through the Defense Satellite Communications System to the National Command Authority, Department of Defense and Joint

Chiefs of Staff. Also, we have the JCS-directed contingency mission in the event of catastrophic failure to any satellite terminal around the world. These assignments have all contributed to keeping me well-rounded by allowing me to tap into continuously changing technologies. Soon I will be getting another opportunity to expand my knowledge and experience when I take command of the Army’s only active combat camera company. I am excited to be moving into the field of visual information, providing warfighting commanders-in-chief tactical visual information documenting ground, sea and air operations. I look forward to more challenges as the Signal Regiment takes huge strides into the 21st century.”

The Signal experience

CPT Maya Filbert’s Signal unit uses satellite assets ranging from mobile to larger, longer-range terminals.



Signal activities and missions and in tactics and combined arms operations.

After returning to the Signal Regiment, branch-detailed officers must attend the Signal Branch Qualification Course and obtain one year of experience in an operational Signal assignment before being considered branch-qualified as a lieutenant. After completing SBQC, the Army develops detailed officers in the same manner as their non-detailed counterparts.

Most Signal captains return to Fort Gordon for the branch-training phase of the Signal Captains Career Course. After completing the branch-training phase, officers go to Fort Leavenworth, Kan., for the SCCC's staff-process phase. For branch qualification, a Signal captain must successfully complete both branch training and serve at least 12 months as a company, detachment or rear detachment commander.

According to its needs, the Army may assign branch-qualified captains to jobs such as branch/functional area generalist positions (U.S. Army Recruiting Command staff, Reserve Officers Training Corps instructor or Active Component/Reserve Component duty); functional area positions; and advanced civil schooling (based on branch, FA or overall Army requirements).

Captains should continue to gain an in-depth understanding of combined arms operations and become proficient in both Signal branch and common core tasks. These skills provide the foundation required to effectively serve in the branch as a leader at company and battalion level in all aspects of Signal operations and in leading Signal soldiers. Captains gain a working knowledge of command principles; battalion-level staff operations and combined arms; and Signal operations at battalion to brigade levels.

Most captains undergo FA designation between their fifth and sixth years of service. The formal designation of FA is based upon the Army's needs, the officer's preference, his or her military experience and his or her civilian schooling. After achieving



CPT Stephanie Allen, right, and 1LT Glenn Kim, both of 93d Signal Brigade, brief their deputy brigade commander, LTC Janet Zimmerman, on communications' status in a line-of-sight radio van.

branch qualification as a captain, an officer may want to seek training and an assignment in his or her FA. Doing this before selection for promotion to major will help the officer be competitive for designation into a specific FA and career field.

All promotable captains will undergo a career-field designation board upon selection for major. This board will decide in which career field each officer is best suited to serve. Signal majors may seek assignment into one of the four career fields under the Officer Professional Management System: operations, institutional support, information operations and operational support. After promotion to major, officers will develop in and compete for promotion only within their designated career field.

All Signal majors must complete Command and General Staff Officer College and successfully serve in one or more of the following to be branch-qualified and competitive for promotion to lieutenant colonel: brigade/group/Regimental Signal officer (S-6); battalion executive officer; battalion or brigade operations officer (S-3); major-level command; assistant division Signal officer; or deputy G-6 (deputy division Signal officer).

Officers can expect to spend up to three years on station and should

strive to serve 18 months in one or more of the critical branch-qualifying positions. Twelve months' aggregate time is considered the minimum for major-level branch qualification.

Critical Signal branch-qualifying assignments for lieutenant colonels include battalion command; brigade S-3/deputy commander; or division G-6/deputy corps G-6. Typical developmental assignments include battalion command; Signal brigade S-3/deputy commander; division G-6/deputy corps G-6; theater Signal command staff; major command/joint/multinational/Defense Department/Army staff; service Signal school staff; Reserve Component support; or Reserve Officers' Training Corps battalion command (professor of military science).

Critical Signal branch-qualifying assignments for colonels include brigade command; Training and Doctrine Command system manager; garrison command; or corps G-6.

Generalist assignments

Officers above the rank of lieutenant can expect to serve in assignments that may or may not be directly related to the Signal branch but which are important to the Army. These positions are used to fill Army requirements as well as to integrate

officers into the total Army concept. Examples of such positions are inspector general; ROTC assistant professor of military science; or aide-de-camp.

Joint assignments

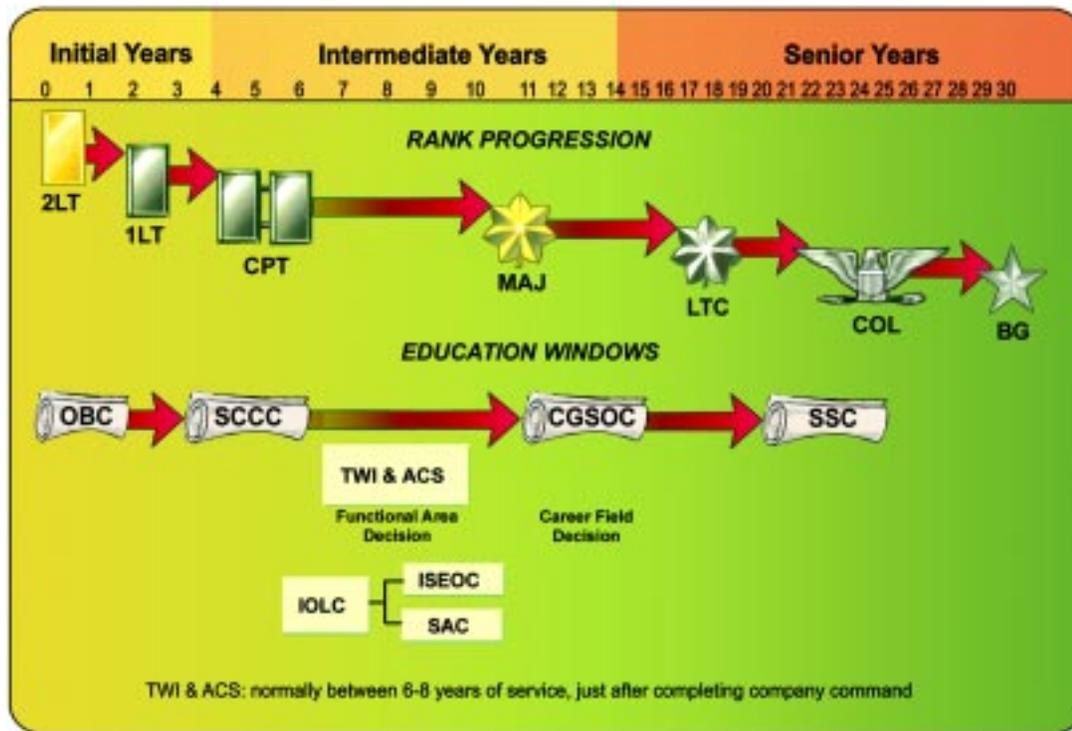
Signal officers can expect to be considered for joint duty assignments worldwide. Joint experience is im-

portant to the Army and is essential to individual officers for their advancement into senior leadership positions.

Special assignments

Signal officers may be assigned to organizations and duties beyond those indicated earlier. These other assignments may include White House Fellows; duty with the National Secu-

rity Council or United Nations; as well as Signal branch representatives at allied service Signal schools. The spectrum of possible assignments is large, but these assignments can all be characterized as highly responsible and important, requiring mature, skilled officers.



Windows for a Signal officer's career. Timeframes for promotions shown at top of chart, while windows for attending Signal officer Basic Course, Signal Captain Career Course, Command and General Staff Officer College and Senior Service College are shown below. Between six and eight years of service fall opportunities to attend Training with Industry and advanced civilian schooling. At the fifth year of service, officers make a decision on whether to become Functional Area 53 or 24 officers. If so, they attend Information Operations Leveler Course, then another course depending on FA.

Signal officer training

To accomplish its mission, the Signal Regiment provides newly assigned Signal lieutenants the military leadership and technical training they need to fulfill the communications and operational requirements of their first several assignments.

Most of this training is conducted at the Signal Center, Fort Gordon, Ga., in the Signal Officer Basic Course. SOBC lasts 18 weeks and covers Army common core subjects: military leadership, combat operations, organizational logistics and maintenance support. The course also includes Signal-specific instruction in electronics, information technology, tactical radio operations, tactical satellite, digital group multiplexing and mobile subscriber equipment. In addition to class-

room instruction, officers participate in a field training exercise to reinforce Signal platoon leader and S-6 staff officer-related training. The FTX is a culminating event and "Rite of Passage" tailored to make lieutenants employ the combat and Signal operational concepts and skills they learned throughout SOBC.

Signal officers normally return to the Signal Center for advanced training after they complete their first or second assignment (between 3½ and five years of service). To build on skills learned as lieutenants, officers attend the Signal Captain Career Course. SCCC is taught in two phases: 18 weeks at Fort Gordon and six weeks at Fort Leavenworth, Kan. At Fort Gordon, officers receive training that prepares them for command and staff

positions at Signal battalion, brigade and higher levels. At Fort Leavenworth, students learn the skills necessary to be successful staff officers.

The Signal Center also provides advanced technical training to officers (captains and majors) and Army civilians selected to work in Functional Area 24 (telecommunications-systems engineering) and FA 53 (information-systems management). Officers selected for an initial FA 24 or FA 53 assignment must attend the Information Systems Operations Leveler Course before attending their career course. The career course for FA 24 officers is the Telecommunications Systems Engineering Course, and for FA 53 officers it's the Systems Automation Course.

In addition to attending career

courses, officers may achieve their master of science degree in a discipline related to their FA. As officers progress through their careers, they may receive other FA and Army-unique educational opportunities based on their performance of duties, educational background and the Army's needs.

The Army is looking at restructuring CGSOC to provide resident education for officers selected for major. This program would consist of a common-core curriculum coupled with a masters degree program tailored for FA 24 and FA 53 officers.

Optional training

At different times during their careers, Signal officers get the opportunity to further develop leadership and combat functional skills in the three-week Airborne course and/or nine-week Ranger course. Currently a Signal officer must be slated for a Ranger assignment to be eligible for the Ranger course. Officers are also eligible to attend the Special Forces

Qualification Course, Air Assault Course and/or Jumpmaster Course when assigned to units that use this specialized training.

Functional training

All Signal officers are eligible to attend more training to prepare them for jobs requiring extensive knowledge of specific systems or disciplines. Some of the courses available are:

- Battlefield Spectrum Management Course - 10 weeks of training designed to teach future frequency spectrum managers a variety of skills required for allocating and regulating management of the radio frequency spectrum.



A Signal officer refreshes her skills in training at the Signal Center.

- Joint Task Force Systems Course - nine weeks of training on planning and managing communications-computer support networks for joint warfighters.

- Director of Information Management Operations Officer Course - two weeks of training on the six functional areas of information management as they pertain to systems within garrison, sustaining base, power projection and split-based operations.

- RBECS/Joint CEOI Course - two weeks of training on standardized instructions and associated computer hardware required to manage the joint battlefield electronic CEOI system used in joint operations.

- Joint Tactical Automated Switching Network Supervisors Course - nine weeks of training on designing, managing and troubleshooting joint tactical communications switched networks.

- Mobile Subscriber Equipment Systems Control Center Operator Course - five weeks of training on operating and maintaining the MSE system control center effectively.

- Standardized Communications Security Custodian Course - two weeks of certification training on safeguarding, accounting and controlling communications-security material.

- Tactical Signal S-3 Course - two weeks of training that prepares people for assignment as the S-3 or member of the S-3 staff within a tactical Signal organization.

1LT Cora Henry
Reserve Officers' Training Corps
University of South Carolina
Bachelor of arts in sociology
Assistant brigade personnel officer
Headquarters and
Headquarters Company, 93d
Signal Brigade
Joint Task Force Aguila
(Hurricane Mitch disaster relief), El Salvador

"It was an excellent mission. Even though we're Signal, we had the opportunity to go on some food-distribution missions. El Salvador wasn't hit as badly as Nicaragua and Guatemala, but there were some villages flooded out and some families experiencing tragic conditions. I realized that everything we did there was the same as we do when we go to the field. We really do train as we fight. It was like clockwork."



1LT Cora Henry makes friends on a food-distribution mission with El Salvadoran children left orphaned by Hurricane Mitch.

The Signal experience

Signal officers, FA 24s and FA 53s are eligible to attend more training to prepare them for jobs requiring knowledge of specific systems or disciplines. Courses available are:

- Local-area networks: concepts and configuration - two weeks' basic knowledge of network terminology, devices and configurations.

- Introduction to routers - one week of training on the fundamental concepts of routers and routing, including communication protocols and interfaces to WANs; configuring routers; and connecting LANs and WANs with routers.

- Introduction to webpage design - four days of webpage design and administration basics.

- Network manager (Internet protocol networks) - one week of training designed to train soldiers in the fundamental concepts of managing a network consisting of LANs and interfaces to WANs.

- System administration Solaris - one week of training on the knowledge and skills required to perform the duties of a systems administrator within a tactical Internet working environment.

- Systems administration NT - one week of training on the "core" knowledge for supporting Microsoft Windows NT operating system version 4.0.

Signal officers are also eligible to attend a variety of information-technology subcourses when assigned to positions that require more specialized training.

Civilian education and Training with Industry

Not only are Signal officers provided many opportunities to serve in highly visible positions, they are also offered opportunities to attend fully funded graduate school and to train with civilian industry to enhance their skills in information systems operations.

Advanced civilian schooling

Opportunities for selection to the Army's fully funded graduate-level educational program are available to officers interested in pursuing advanced degrees. Graduate degrees are

normally offered in areas that fill Army needs as well as support an officer's professional-development requirements.

Graduate degrees that support the Signal Regiment include information-systems management; telecommunications management; information-technology management; joint command, control and communications; computer science; electrical engineering; computer-systems engineering; and software engineering. A limited number of advanced degrees are offered in other disciplines based on Army requirements.

The Army's cooperative degree program enables selected officers to complete degree requirements concurrent with and following attendance at certain military courses. After completing a military course that qualifies for graduate credit, participating officers are granted up to six months of permissive temporary duty to complete degree requirements as a full-time student.

Officers who pursue advanced degrees on their own may apply for the Army's degree completion program, which allows up to 12 months to complete the degree at no cost to the

The Signal experience

*CPT Jennifer Salinas
Reserve Officers' Training Corps
University of Guam
Bachelor of arts in psychology*

*Communications-electronics systems engineer
U.S. Army Signal Command
Fort Huachuca, Ariz.*



"I was a member of the 51st class (Class 98-99) to graduate from the Training with Industry program at Boeing's Information Space and Defense Systems, Seattle, Wash. TWI is one of the best and most diverse Army education programs available. This is a unique opportunity for officers and civilians to work with an industry leader like Boeing in the effort to improve understanding and communications.

"Each student departs the program enroute to a job that will use his or her newly gained knowledge and experience. But while in TWI, one key to success and an enjoyable time in the program is involvement. You are part of the firm and your ideas, assistance and contributions are important. The reward for your efforts will be the knowledge and experience you gain through working with a highly competitive company. TWI gave me the opportunity to expand my knowledge and experience in data and networking technologies. I took more than 40 hands-on technical classes on data and network concepts, methodologies and technical specifications. Boeing paid for all the educational costs, plus any travel done for Boeing business purposes.

"TWI's main purpose is for the student to gain practical knowledge and experience about industrial procedures, processes and practices unavailable through formal civilian or military courses. During your TWI assignment, you could be involved in many different jobs/projects, depending on factors such as depth of the job, your experience level and an understanding between you, your mentor and your job sponsor.

"The Army can further assist you to enhance and broaden career opportunities for training credit and possible technical certifications with distance learning and computer-based training. Opportunity is out there. Now that you know where to look, don't wait for opportunity to knock on your door! Talk with your Signal representative/professor of military science."

government.

Web-based graduate program

The Signal Center also offers a web-based graduate education program for all Signal Regiment members. The site's intent is to provide Branch 25, FA 24 and FA 53 officers; military-occupation specialty 250 and 251 series warrant officers; enlisted soldiers; and civilians with information on the various IT-related graduate degrees at various universities.

University of Maryland University College is the first university included in the program. UMUC offers on-line master of science degrees in information technology, software engineering, computer-systems management, telecommunications management and technology management.

For officers in the field, the standard on-line graduate courses from UMUC are available from any location in the world. UMUC offers full student services on-line, so students may complete the admissions and registration process through the UMUC website. Courses are asynchronous, so time zones don't matter. All

that's needed to participate is a personal computer with a web browser and a network connection or modem to the worldwide web.

Training with Industry

The Training with Industry program was initiated in the 1970s in response to the Army's critical need for officers with state-of-the-art skills in industrial practices and procedures not available through military or civilian education programs. The first students participated exclusively in programs supporting the development of material-acquisition and logistics-management related skills. Today the TWI program has evolved to include training programs supporting marketing, public affairs, artificial intelligence, physical security, finance, computer science, IT, tactical Internet and many other fields.

The Army's main objective in sponsoring TWI is to develop a group of soldiers experienced in higher-level managerial techniques and with an understanding of how their industry relates to specific functions of the Army. Once the TWI student is inte-

grated back into an Army organization, he or she can use this information to improve the Army's ability to interact and conduct business with industry. Participants may also be exposed to innovative industrial management practices, techniques or procedures that may apply to and benefit the Army. A prime example of this would be the Signal Regiment's Warfighter Information Network, an architecture designed to use commercial-off-the-shelf equipment in fielding the 21st century's tactical and strategic communications systems.

Currently the Signal Regiment has 10 officers participating in TWI at Air Force Space Command in Colorado; Army Spectrum Management Office, Alexandria, Va.; ITT, Fort Wayne, Ind.; TRW, Carson, Calif.; Boeing Computer Services, Seattle, Wash.; Armed Forces Communications and Electronics Association, Washington, D.C.; Rockwell International, Richardson, Texas; AT&T, Holmdel, N.J.; EDS, Plano, Texas; and Raytheon, Fort Wayne.



A rainbow over East Timor greets Signaleers serving on the international forces during Operation Stabilise.



A comms van and antenna can change an empty spot into a communications relay. The Signal Regiment's mobile communications capability can create comms links anywhere in the world.

❖ *The challenges are real; the mission is global; the opportunities are limitless.*

1LT Jeff Au
U.S. Military Academy, West Point, N.Y.
Bachelor of science in electrical engineering

Task force communications officer
Task Force Justinien
Cap Haitien, Haiti

"The mission was a New Horizons mission in which a group of 10 soldiers from 93d Signal Brigade provided communications for a task force consisting of active Army soldiers, Army National Guard soldiers, Army Reserve soldiers, active-duty Marines and active-duty Navy corpsmen. The mission was titled Operation Justinien Cause and was divided into several phases.

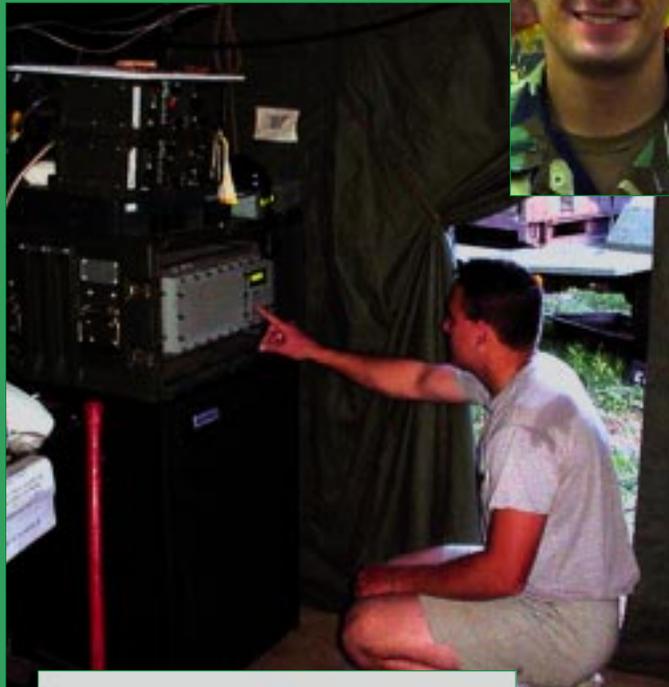
"The mission's focus was to provide humanitarian support for the local population in and around the city of Cap Haitien, the second largest city in Haiti. This support consisted of adding rooms and latrine facilities to a school; rewiring and installing back-up power generators at the hospital; and providing free medical care to about 25,000 Haitians. Army medical personnel treated everything from dental problems to Acquired Immune Deficiency Syndrome to diarrhea - and everything in-between.

"The 10 Signal soldiers from 93d Signal Brigade came from four different companies. We provided tactical-satellite connectivity and distributed both secure and non-secure methods of transmitting voices and data messages from a cow pasture in Haiti to anywhere in the world.

"We slept in tents and ate Army T-rations and meals-ready-to-eat for about four months during a summer (May-September 2000) in which the norm was Heat Category 5 by 9 a.m. We professionally and successfully performed all tasks from fixing computer problems to guard duty to waste burning. We also acted as the task force's morale officers by building a make-shift volleyball court, tables for card-playing, a professional morale, welfare and recreation phone-call tent and many other services which made the experience pass more quickly and enjoyably for all the task force's soldiers.

"Everyone on the base camp viewed the Signal detachment as the most squared-away section. This started with the first morning when, as the rest of the task force was pulling on-site, we had worked through the night and already established all communications services while providing our own security in the midst of about 50 curious local Haitians. We held true to the label of first in, last out, and provided

The Signal experience



A soldier in Haiti resets the FCC-100. American soldiers enjoy their morale, welfare and recreation calls 93d Signal Brigade soldiers set up for them.

seamless communications support to the task force from the first day through the scare of Hurricane Debby to the last day.

"In spite of our sparse surroundings, we came out of the deployment with many new experiences and friendships that will last a lifetime."

Warrant officer opportunities

Warrant officers are a small, elite and specialized corps of military professionals. Commanders rely on warrant officers as their experts on the ground who can be counted on to get the job done no matter what. Warrants are officers with all the rights, privileges and prestige that accompany higher levels of responsibility and leadership.

The Signal Regiment has two warrant officer military occupational specialties, with a total population of around 350 men and women. Opportunities exist for mobile subscriber equipment/triservice tactical network management technician, MOS 250N; and data processing technician (information systems technician), MOS 251A.

Warrants are eligible for retirement after completing 20 years active federal service; however, warrants now have the option of serving up to 30 years of active warrant officer service or to age 62, whichever comes first. Promotion time-in-grade has been accelerated to chief

warrant officer three, four and five. Chief warrant officers two, three and four will normally be promoted when they have five years time-in-grade.

Warrant officers receive military education at four levels as they progress through the ranks: Warrant Officer Basic Course as a warrant officer one; Warrant Officer Advanced Course on promotion to chief warrant officer three; Warrant Officer Staff Course at promotion to chief warrant officer four; and the Warrant Officer Senior Staff Course at chief warrant officer five. Warrants are authorized civilian degree completion up to a bachelor's degree, and some jobs are coded for master's degree programs. Warrants are also authorized Training with Industry, a program that sends an officer to work in civilian industry with a follow-on tour using the training and experience gained in TWI.

Outstanding Signal noncommissioned officers who are career professionals, who enjoy serving their country, who are seeking better pay, advancement, training opportunities and the chance to lead the most technological army in the world into the future may apply for warrant officer appointment. For more information, contact CW5 Pete Hewitt at DSN 780-8183 or commercial (706) 791-8183; email hewittp@emh.gordon.army.mil.

*CW2 Keenan Frank
MOS 250N
Bachelor of science in management studies
Chief, Cryptographic Management Branch
White House Communications Agency
Washington, D.C.*

"WHCA provides a wide array of telecommunication services to the President and his staff at the White House complex and at locations he visits worldwide. The soldiers, sailors and airmen assigned to WHCA are exposed to a wide array of unique circuits and networks, and have the opportunity to work closely with their peers in other military services and government agencies. My role at WHCA is to manage the cryptographic material used to secure the voice and data circuits serving the White House. Like most members of WHCA, I also travel as a member of the communication support teams, which precede presidential visits. We install and operate the equipment and networks which keep the commander in chief connected back to Wash-

The Signal experience



CW2 Keenan Frank manages crypto at the White House.

ington from anywhere in the world, at all times, regardless of the circumstances. This includes very-high-frequency radio, secured voice and data and audiovisual support. I've been fortunate to have had a wide variety of Signal-related assignments in 18 years of Army service. Every assignment has been challenging and rewarding due to the rapidly changing technology in the Signal field, and the chance to work with the superb caliber of soldiers in the Army."

Enlisted soldier opportunities

The enlisted portion of the Signal Regiment is the largest and most diverse. Enlisted soldiers serve in a number of military-occupation specialties with close ties to the civilian sector. These MOSs are grouped together by similarities known as career management fields.

There are three CMFs: CMF 25, visual information operations; CMF 31, Signal operations; and CMF 74, information operations. Outlined below is some of what these CMFs do.

CMF 25 consists of four MOSs: multimedia illustrator, visual information equipment operator/maintainer, combat documentation/production specialist and visual information operations chief. This CMF focuses on still photography, video, computer-controlled video switches, audio mixers/controls, closed circuit systems, visual imagery satellite equipment, broadcast and collection. Television production and distribution equipment creates visual information products supporting combat documentation, psychological operations, military intelligence, medicine, public affairs, training and other functions supporting Army, joint and combined operations.

Related civilian occupations include illustrator, motion-picture equipment supervisor, television and radio repairer, television equipment operator, still photographer, aerial photographer, recording engineer and audiovisual production specialist.

CMF 31 consists of 10 MOSs: radio operator/maintainer, multichannel transmission systems operator/maintainer, network switching system operator/maintainer, cable system installer/maintainer, microwave systems operator/maintainer, satellite communication systems operator/maintainer, satellite/microwave system chief, Signal support systems specialist, telecommunications operator chief and senior Signal operations chief.

CMF 31 is the most diversified of the three CMFs. This CMF encompasses single-channel high frequency radio, message preparation and transmission, multichannel troposphere scatter communications, microwave and satellite systems, network and packet switching systems, combat net radio interface and digital group multiplexer. CMF 31ers also troubleshoot, maintain, assist and train at unit level for automation and communications systems and Signal support equipment.



The Signal Regiment depends on its enlisted soldiers to keep communications flowing; here a noncommissioned officer performs loop checks in a line-of-sight relay.

Related civilian jobs include broadcast engineer, central office operator, radio mechanic, electrical power lines installer/repairer, telephone and cable-television line installer, computer-peripherals equipment operator, radio officer, general communications superintendent, communications electronics supervisor, electronics inspector, telecommunications specialist, electronic equipment repairer and radio electronics communications equipment supervisor.

CMF 74 consists of four MOSs: information systems operator/analyst, telecommunications operator/maintainer, telecommunications computer operator/maintainer and information systems chief. In Fiscal Year 2002, however, the telecommunications computer operator/maintainer (74G) MOS will be deleted. The MOS' duties will be distributed among the other Signal MOSs. The soldiers formerly in this MOS will become information systems operators/analysts.

CMF 74ers are the automation and computer network specialists. They install, manage and maintain the Army's varied information systems, coordinating the communications interface required to ensure network access and continuity. They provide technical advice and assistance to other automation equipment operators regarding system initialization, application principles, capabilities, limitations, interfaces and protocol troubleshooting. They operate and maintain automated message switch and strategic telecommunication centers using system command consoles, computer terminals and associated communications security devices.

Related civilian jobs include computer programmer, programmer-analyst, system programmer, machine servicer, electronics-computer subassembly supervisor, electronics inspector, electronic digital computer mechanic, computer operator, computer peripheral operator, cryptographic-machine operator and teletype operator.

Enlisted jobs in the Signal Regiment are changing rapidly from atoms to bits. Slow, human information handling in the form of books, magazines, newspapers and videocassettes is becoming an instantaneous and inexpensive transfer of electronic data moving at the speed of light. The Army's digitization process is a formidable challenge for the Signal Regiment, but achievable. We're

also now a joint warfighter service; our platforms interconnect all military forces: Army, Navy, Air Force and Marine Corps. All military services are globalizing through digitization as technology makes all our forces interactive.

The Signal Regiment's enlisted

segment has therefore taken on a business mentality in which the old rules don't apply. We're changing with technology as we move into the 21st century; building new connections to replace rude interfaces with learning interfaces; structuring every transac-

tion as a joint venture; and redefining the interior by managing innovation as a portfolio of options. We socialize in digital neighborhoods where physical space is irrelevant and time plays a different role; we are the Signal Regiment. Come join us.

Signaleers use the integrated systems control center to provide situation awareness to warfighters via several information feeds. ISYSCON -- a new, cutting-edge capability -- is part of the Army's future digitized force. Sometimes things are done the old-fashioned way, however. Enlisted soldiers go anywhere in the world, doing whatever it takes to set up commo, like this soldier climbing a tree to string cable.



The Signal experience

*CPT Todd Hourihan
Reserve Officers' Training Corps
University of Massachusetts at Amherst
Bachelor of science in natural resources*

*Signal officer
Multinational Force and Observers Task Force
South Camp, Sinai, Egypt*

"I was South Camp's signal officer for all countries in the Southern Zone: Italy, Hungary, United States, United Kingdom. This involved a number of challenges. For instance, I provided all combat net radio systems in plain text; installed 134 radios in vehicles or on-site; was in charge of videoteleconferences for morale, plus six Defense Switched Network lines for soldiers' personal calls; established the area's email system, which processed more than 10,000 messages; was in charge of the radio and television station; maintained communications on Egyptian Hip heli-copters for a critical resupply mission when our Huey helicopters were grounded; provided computer support for the task force; helped plan the local area and wide area networks for the MFO's southern sector; em-placed a satellite system for cable on all sites; and even set up a communications plan for another unit. It was the type of job that if you do it well, you're doing your job, but if you fail, you're done. But I liked being with the infantry and being on my own. I liked proving myself in the combat units. I also liked going to different countries and seeing the world, and being part of modern history (the ongoing MFO is a result of the Camp David treaty)."



Mobile satellites provide communications in the desert, while tanks make good platforms for antenna relays to link widespread units.



The Signal experience

CPT Melany Paul
Reserve Officers' Training Corps
University of Nevada at Reno
Bachelor of arts in speech communications and
criminal justice

Officer in charge, 7th Signal Brigade
Operation Joint Guard
Sarajevo, Bosnia

"As a fairly new first lieutenant, I deployed to Sarajevo as the officer-in-charge for 7th Signal Brigade. I was responsible for all 7th Signal Brigade soldiers and equipment within Bosnia, including sites in Mostar and Banja Luca. This position allowed me to work side-by-side with more than a dozen NATO nations while providing communications to the Stabilization Forces commander.

"As a first lieutenant I was working directly with senior-grade officers, who trusted my judgment and knowledge of the equipment and of my soldiers. I often needed to use ingenuity to overcome technical and personnel issues, since I was the senior leadership on the ground. I was able to have my own leadership style. I had a lot of responsibility but a lot of authority.

"We developed an alternative communications system that allowed for redeployment of three terminals and several switches. It was exciting to see my hard work and planning make a real difference in the overall mission and the lives of my soldiers. We covered a lot of area with our communications in Bosnia and had to maximize the use of technology.



Signal soldiers' greatest achievement in Bosnia has been maintaining reliable, quality communications through personnel and equipment changeovers, bad weather and political turmoil. Here 7th Signal Brigade soldiers check their connections in a shelter during Operation Joint Guard.

"This was an experience I'll never forget - being able to make a difference for the people of Bosnia; working with other nations and their communications systems; working side by side with the senior leadership; and seeing the results of my decisions making differences in my soldiers' lives.

"There are great reasons to join the Signal Corps. Everyone needs Signal officers - it's one branch that's vital to the warfighter. Wars are lost if there are no communications. Also, there's the chance for a person to gain new skills and live in new cultures."

CPT David Scott
U.S. Military Academy, West Point, N.Y.
Bachelor of science in management

Signal officer
Operation Joint Guard
Macedonia

"There is a lot of responsibility for a lot of equipment and soldiers early on as a Signal officer. Signal also offers more technical training than combat arms and requires leadership, too.

"In Macedonia I planned communications support for 15th Military Intelligence Battalion's unmanned-aerial-vehicle mission. I coordinated with the Signal officer on the ground for secure computer-alert and electronic-mail accounts. I also established tactical phones throughout my area and maintained constant communications support. Other things I did as a Signal officer were to request frequencies, maintain STU IIIs



Signaleers supported military intelligence's unmanned aerial vehicles with communications in Macedonia.

(secure phones), publish the Signal annex and a phone list, configure computers and try to coordinate on videoteleconferencing."

The Signal Regiment

❖ *The Signal Regiment is the team of soldiers and civilians, past and present, dedicated to providing and managing information systems and services for warfighters wherever assigned, regardless of other regimental or organizational ties. The Signal Regiment encompasses more than just the traditional Signal Corps. It extends beyond organizations or activities with defined boundaries and hierarchical relationships. The Signal Regiment is people bound together in a life-long relationship by a rich heritage, a common purposed and a shared vision for the future.*

The Signal Regiment was one of the first combat support branches to organize under the Army's regimental system. The regimental system's purpose is "to enhance combat effectiveness through a framework that provides the opportunity for affiliation; develops loyalty and commitment; fosters a sense of belonging; improves unit esprit; and institutionalizes the warfighting ethos."

The Signal Regiment was formed June 1, 1986, under the whole branch regimental concept. This means all soldiers are affiliated with the regiment in a life-long relationship - no matter where Signal soldiers are assigned or how often they move, their professional home will always be Fort Gordon, Ga., and their regiment will always be the Signal Regiment.

Since the U.S. Army Signal Center and Fort Gordon is the Signal Regiment's regimental home, the Signal Center's commanding general is the Army's Chief of Signal. He's the regimen-

tal commander, and the Signal Center's command sergeant major is the regimental sergeant major. The Office Chief of Signal is the operational headquarters for regimental activities; the director is the regimental adjutant.

The Signal Regiment has a coat of arms whose origin can be traced to the 1860s and to Major Albert J. Myer, the first Chief Signal Officer. The Signal Regiment also has a distinctive insignia, worn by all Signal soldiers on the Army green, blue and white uniforms. Our insignia serves as a symbol of corps affiliation for Signal soldiers worldwide.



Signal Towers is the Signal Center's headquarters at Fort Gordon, Ga., home of the Regiment.



The Signal Regiment's distinctive insignia is worn by soldiers and civilians affiliated with the Regiment. The insignia is a gold eagle holding in his talons a golden baton, from which descends a red Signal flag. Around the edges is the motto, "Pro Patria Vigilans," which means "Watchful for the Country."



Early in the morning at the Signal Center, after a night on bivouac, 2LT Diane Klein and other Signal Officer Basic Course students are inducted into the Signal Regiment in a pinning ceremony, part of the process in formally affiliating and welcoming newly commissioned and branch detailed officers into the Regiment.

To formalize affiliation, and to welcome them to the regiment, newly commissioned or branch detailed officers are inducted into the Signal Regiment after they complete the Signal Officer Basic Course or Signal Basic Branch Qualification Course. The Regimental Induction process consists of a class regimental run; signing the class roster for inclusion in the Signal Regiment's lieutenants' register; and the pinning ceremony. At the induction ceremony's end, the lieutenants are authorized the Signal Regiment's distinctive insignia.



A run with Regimental colors is part of the Regimental Induction process.

Signal Corps Regimental Association

To further esprit de corps and promote the Signal Regiment, the Signal Corps Regimental Association was established at the Signal Center, with chapters worldwide. SCRA is open to all members of the Regiment: active or reserve officers, warrant officers

and enlisted soldiers; Army civilians; and others affiliated with the Signal Regiment.

SCRA offers its members close continued identification with the Regiment as well as camaraderie with fellow members. SCRA's objectives include recognizing accomplishments

of people who have made significant contributions with Order of Mercury and Wahatchee awards or Brevet Colonel appointments. SCRA also maintains an official roster of members, publishes a quarterly newsletter, hosts SCRA functions and supports Regimental and chapter activities.

The Signal experience

1LT Michael Davenport
Reserve Officers' Training Corps
Augusta State University
Bachelor of science in computer science

Automation officer in charge
Headquarters and Headquarters Company,
63d Signal Battalion
Joint Task Force Aguila (Hurricane Mitch
disaster relief), El Salvador

"We knew there would be a big data push for networking and technology. I think we really capitalized on that by providing the best support we could. Anybody can provide phones, but not everybody can provide data like we did. We raised the standards about 10 tiers. No longer can (Signal units) make excuses for not doing extremely bandwidth-intensive things, because we proved we can. As far as technology goes, I think we're right up with the civilian market. We took civilian equipment available today and implemented it into the Army systems."



1LT Michael Davenport created a computer system from civilian equipment in El Salvador.

As Signal officer I was required to establish reliable communications over a 100-kilometer front. I set up three radio-communications sites and four more sites for retransmission in the mountains. I coordinated with the border patrol, Forest Service and California National Guard to get access to fixed sites, and I made sure my roving retrans teams checked each site each day. I also programmed Saber radios, set up base stations and trained aviators on the Sabers' use in an emergency. I ensured all coordination for frequencies, battery needs and equipment was done.

"We were challenged by high winds, desert conditions and long distances that were much farther than we were used to, but my retrans network was said to be the best and most complete ever established in the area."

CPT Nathan Tennant
U.S. Military Academy, West Point, N.Y.
Bachelor of science in electrical engineering
Signal officer
Joint Task Force-6 (counterdrug)
El Centro, Calif.

"In May and June 2000, I deployed to El Centro on a JTF-6 mission.

"For those considering branching Signal, I'd say that Signal is a good choice. It offers technical training in addition to leadership experience. It also puts you out there in direct support of the warfighter rather than just combat service support."