ARMY COMMUNICATOR

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The White House Communications Agency

Transforming presidential communications

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Chief of Signal's Comments

Lifelong Learning: A new look at training

While the Army transforms into a leaner, more deployable and lethal formation, with state-of-the-art equipment and highly trained soldiers, Army training needs to also move into this century with a "new look." To achieve a transformation in how we train, the Signal Center has been moving forward with a concept of training called Lifelong Learning. This winter, we've made some good progress, and the initiative is moving forward. We have a plan, and we are making it happen, getting good results, and capturing lessons learned. We have lived it for a year, and preliminary feedback from the field at Fort Hood and Fort Bragg is good. My personal thanks go to COL Alan Lynn and COL Howie Cohen for helping make that happen.

The University of Information Technology is the umbrella organization under which Lifelong Learning has been nurtured. The UIT Division, in the Directorate of Training, is the staff coordinating organization for each of the four tenets of lifelong learning. The four tenets are:

(1) Assignment Oriented Training:

We reorganized four Military Occupational Specialties into their own "AOT model," if you will, starting in October 2001, and by the end of FY 03 we will have over 5,000 graduates in the field! Initial results from TRADOC Analysis Center interviews with AOT graduates' supervisors indicate that these soldiers are just as well trained as graduates from the original (longer) courses, and are ready to go to work when they arrive at their new stations.

(2) Simulations:

We're pursuing a vigorous program of simulations to reduce equipment for training in the institution, home station, Combat Training Center, and deployed units. Our goal remains to reduce equipment costs down to 30 percent or less of that required for traditional approaches in the schoolhouse. Our first simulation, developed for the AN/TRC-173B, will be deployed this winter. In the late summer of 2002 we began developing three more simulations, built on the same basic architecture as the TRC-173B. These products will support satellite training, MOS 31U training, and the STRYKER Brigade Combat Team. In January of this year our simulations architecture was approved by TRADOC as the standard architecture for all TRADOC simulations. SFC Phil (Army of One) Arnold is the engine behind the simulation development, and he's impressing leaders across our sister schools.

BG Janet E.A. Hicks
Chief of Signal

(3) Resource Center and (4) Virtual Campus:

Our Resource Center is the hub for lifelong learning, and it is continuing to mature. Today, close to 3,000 Fort Gordon students use its online courseware and there are about 200 active classes involved. Our UIT website had about 700 unique visitors in February alone, taking advantage of the on-line forums, digital library, news items and more. I encourage you to visit! (http://uit.gordon.army.mil). We are excited about future developments in this and the Virtual Campus tenet as we establish a Signal presence on the AKO web page, conduct pilot digital training programs with The Army School Systems Battalions, and work with other Regimental units to establish additional virtual campuses. To keep our soldiers and leaders current in information technology, they must become lifelong learners; the institution must provide them the tools they need to continue honing their skills from the classroom to the foxhole, and unit commanders must provide them the opportunity to do so.

We've had developments in our officer training as well. The need to provide ultra-reliable voice and data connectivity for the Warfighter is more important today than ever before. As the Army transforms into a mobile force that is more reliant on data networks, the need for a Signal officer with a different skill set has become evident. We need our officers to be grounded in techni-

(Comments continued: inside back cover)

As the Army transforms into a mobile force that is more reliant on data networks, the need for a Signal officer with a different skill set has become evident. We need our officers to be grounded in technical skills that are relevant to what units are using today and be well versed in the tactical language of the combat arms.

Continued from inside front cover:

cal skills that are relevant to what units are using today and well versed in the tactical language of the combat arms.

We redesigned the Signal Captains Career Course so that instruction focuses more on the theories and concepts of networks, switching, and telecommunications rather than teaching officers about the "boxes" they are most likely to encounter. Feedback from the first graduates of this retooled SCCC was very good. Previously, when officers came to the SCCC they received instruction on TRADOC common core subjects, automation training, and a heavy dose of Mobile Subscriber Equipment, Digital Group Multiplexer, and Combat Net Radio. Now, the course is divided into modules such as automation, telecommunications, network management, information assurance, echelons above corps and echelons corps and below network planning, and company command topics. Our intent is to make this a more interactive course where the officers will learn about a subject and then apply that knowledge through scenario-based practical exercises and integrated Map Exercises. The end result is an officer who has the tools to succeed in a dynamic communications landscape. We are continuing to work the details of our captain Officer Education System. The jury is still out on its final look. The new concept is scheduled for implementation in FY06.

Our lieutenants are getting a course face lift, too. Officer Basic Course will become the Basic Officer Leadership Course, with three phases. BOLC Phase 1 is pre-commissioning, i.e., Reserve Officer Training Corps, United States Military Academy, Officer Candidate School, other. BOLC Phase 2 is a combined arms leadership laboratory where all Army officers attend a 6-week training course prior to branch training. The perception is that our OBCs have become too branch-centric, and BOLC Phase 2 will provide junior officer training that is Army/officer-centric. Phase 2 is scheduled for implementation in third quarter of FY06. The sites for that training have not been selected yet, but we expect them to be combat arms schools. BOLC Phase 3 is the resident course at the branch school. Our current Signal OBC is 18 weeks long and taught at Fort Gordon. While the overall length of the course remains constant, resident training at Fort Gordon will become 12 weeks and focus on signal skills (branch centric). The Signal Center is preparing a training strategy and will solicit your thoughts.

Just as how we fight is changing, how we train to fight must change. Your ideas are important to me. Please look for announcements and information about Lifelong Learning, OES, and many other training topics, and let me know what you think. Neither the Signal School nor TRADOC has cornered the market on good ideas. Every member of the Regiment is a valuable contributor to getting it right. Let me hear from you. Pro Patria Vigilans!

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Cover: WHCA: Transforming presidential communications by providing tech-savvy, reliable, real-time, secure information flow to the president -- and meeting the challenge of assembling a rapidly deployable, secure team anywhere in the world in 72 hours. Cover by SGT Clifton McDonald

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White House Communications Agency *transforms to meet new challenges*

by LTC Laura Hill

" … When I'm down at Crawford, [Texas], I'm in constant contact with our administration. We've got secure teleconferencing capacity there. And it's pretty good. It can be better. It can be more real-time. It's an important part of life and it's time for us to … move, move with an agenda." – President George W. Bush, remarks at the 21st Century High Forum, Presidential Hall, Dwight David Eisenhower Executive Building, June 13, 2002. Available at http://www.whitehouse.gov/news/releases/2002/06/20020613-11.html.

As you can see by the President's remarks during a recent forum on new technologies, the challenge for the White House Communications Agency is to ensure we consistently provide leading-edge technologies that enable the president and his staff to lead the nation effectively. In our role as the premier service provider for presidential communications, we not only showcase Defense Department capabilities during all presidential events, but also the capabilities of the most technologically advanced country in the world as we travel globally supporting the president in his role as head of state.

Our challenge is to provide reliable, redundant, robust, secure and non-secure voice, data and video connectivity to the president anywhere, anytime and by any means.

The terrorist attack of Sept. 11, 2001, coupled with emerging requirements of a tech-savvy administration, highlighted the need for reliable, real-time, secure information flow to the president and his staff. WHCA is meeting these challenges head on by executing a sweeping technological transformation plan called the Pioneer Project.

Air Force COL Michael McDonald, WHCA's commander, captures the essence of this aggressive modernization plan thus: "With the right technological solutions, we intend to transform WHCA – all components – into a fully integrated, network-centric organization with rapidly deployable command, control, communications, computers and intelligence packages that allow us to put together a secure presidential communications support team anywhere in the world within 72 hours once we receive an execute mission."

Specifics of this information-technology transformation plan include a realignment of core functions and missions in WHCA, coupled with a myriad of technological upgrades.

Force transformation

Recognizing the need to create a more streamlined, fully modernized communications-support agency in response to the events of Sept. 11, 2001 – and the unprecedented levels of support for the president, vice president and first lady – WHCA recently reorganized to meet these demands. During this process, WHCA created five new subcommands. The first of these subcommands, the Washington Area Communications Command, is responsible for providing all telecommunication systems and services supporting the president, vice president, first lady, White House staff, U.S. Secret Service and White House Military Office located within the Washington, D.C., area.

Also, to meet these unprecedented levels of telecommunications support for the president's, vice president's and first lady's travel missions, three new presidential communication commands were created. Camp David, the agency's remote detachment at Thurmont, Md., was also re-flagged as a subordinate command, providing telecommunications support for the presidential retreat.

Sept. 11 also exposed challenges in providing secure, redundant communications support for the president and his staff. After the

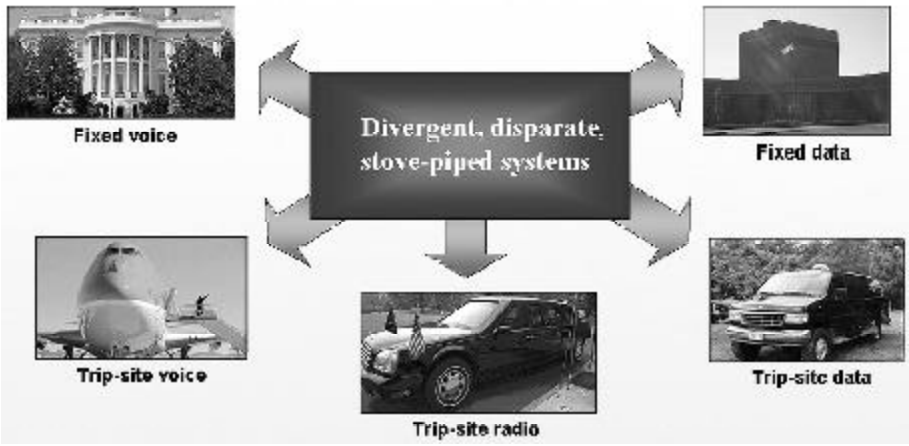

Figure 1. White House Communications Agency current support for daily operations.

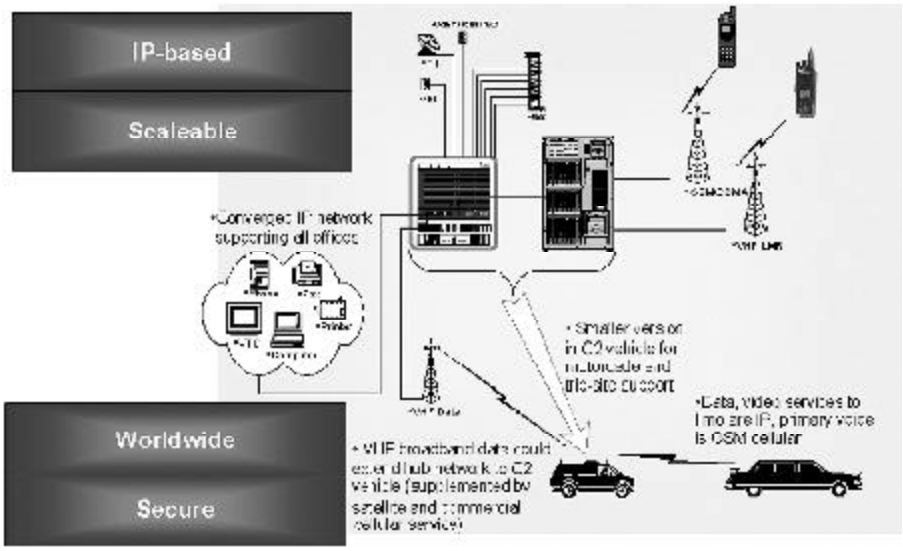

Figure 2. The illustration shows converging and streamlining network architectures into one seamless converged data and voice system.

initial attacks on the World Trade Center and the Pentagon, the White House staff was literally waiting in line to use secure communication lines. The immediate post "9-11" impact involving WHCA was a sudden surge in secure voice and data communication requirements. Mobilized by the September 2001 events, WHCA quickly assessed critical communications-support systems for the president and his staff. We realized that to provide an infrastructure that assures assured communications for the president and his staff under all threat scenarios, a substantial financial investment in IT equipment and services was required.

Systems supporting these missions must be redundant, secure and reliable in a global environment faced with significant information-assurance challenges, from day-to-day operations through crisis management and national-security emergencies. Therefore, the primary goal of providing the president and his staff with capabilities consistent with "corporate executives in the corporate environment" requires a major paradigm shift in the way WHCA currently does business to meet these requirements and the growing expectations from the president and his staff for instantaneous, global, secure, reliable and redundant communications support.

Figure 1 depicts how we currently support daily operations for the president and his staff. As this illustration indicates, we have separate infrastructures to support multiple voice, data, video and radio systems. Each of these systems requires an extensive amount of labor to install, operate and maintain. We don't have the personnel on hand to operate and maintain all these disparate systems. Couple this issue with support for our travel mission using the same limited personnel and equipment-support assets – we're facing a significant challenge in meeting those demands.

We currently deploy 20 personnel five days in advance to set up support for a presidential in/out mission in the continental United States. Support for our overseas events increases significantly, with an average of 45 personnel deploying three weeks in advance of a presidential visit to set up communications support. Therefore, by an infusion of new technologies, our goal is to reduce this operational footprint while simultaneously reallocating precious personnel resources and equipment to fulfill other critical missions.

By converging and streamlining our network architectures into one seamless converged data and voice system **Figure 2**, we can economize precious resources, reduce our operational footprint and provide significantly enhanced telecommunications support to the president and his staff. Specifically, a converged network will enable WHCA to integrate its five divergent networks into a single architecture supporting all voice/data/video requirements, while simultaneously expanding and improving service to the president and his staff regardless of location.

What we've done

Overhauling the agency's aged and failing legacy computer systems has been an ongoing project. Our most recent achievement in this endeavor was successfully fielding encryption cards and computer systems to WHCA and WHMO staff members for sending secure email transmissions. Upgrades to our special-mission circuit program include digitizing key communication links using secure-terminal equipment and installing voice-over-Internet-protocol voice/data equipment.

A new state-of-the-art communications trailer, recently installed at the president's ranch in Crawford, gives him the capability to record television messages and conduct both secure and unsecure videoconferences with his senior staff and advisers. Technical upgrades to Air Force One include installing live DirecTV, providing real-time information concerning world events to the president and his staff.

Also, events of 9-11 highlighted the criticality of our secure voice system and its vulnerabilities. A massive effort is currently ongoing to modernize our secure voice systems supporting the president and his staff. This includes new equipment and software upgrades, coupled with the installation of real-time monitoring technologies.

To enable real-time monitoring of deployed systems and assets,

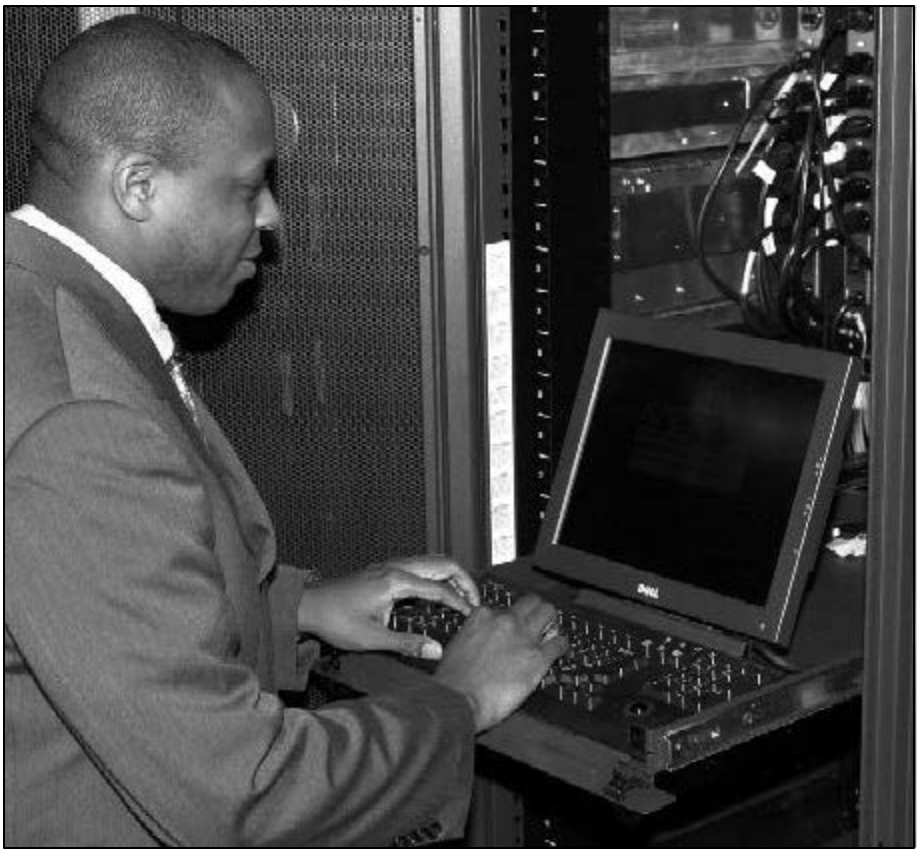

Figure 3. SGT Kaci Chambers, a 74B systems administrator assigned to White House Communications Agency's Intergration Systems Division, performs network server maintainence on the White House LAN.

WHCA network engineers designed a state-of-the-art operations center, modeled after the Defense Information Systems Agency's Global Network Operations and Security Center. This operations center stood up Sept. 1, 2002, providing 24 hours a day, seven days a week support for our travel and fixed communication sites. Embedded in this new command-and-control facility are network-monitoring tools and firmware systems, enabling our communications managers to make informed decisions in reallocating resources to meet priority needs.

Next steps

Through its government-industry partnership outreach program, WHCA is developing strategic partnerships with key government organizations and industry officials to fulfill these critical communications requirements for the president and his staff. These relationships bring the WHCA modernization team together with the strength and expertise of government agencies and industry to solve complex telecommunication problems. Cooperation through this initiative has yielded a variety of partnership opportunities including DISA, USSS, Navy Research Lab, National Security Agency, National Security Council, U.S. State Department, Cisco, Dell, Compaq, Avaya, Worldcom and SAIC – to name a few. Our ultimate goal in this endeavor is to reduce support costs and improve the readiness of WHCA's aging telecommunication systems through innovative government/industry partnerships.

Results of current teaming efforts with our industry partners include testing a myriad of wireless devices. Specifically, we're testing a new generation of high-speed mobile services including data-enabled wireless phones, virtual private-network systems, pagers, computers, printers and personal digital assistants using 802.11, infrared and Bluetooth technologies. As mobile computing and telephony converge, the challenge is to overcome the lack of robust authentication solutions to support these smart mobile devices. WHCA is currently working with NRL, NSA and leading industry counterparts to remove those obstacles.

The goal is developing and fielding an NSA-approved, secure encryption standard that provides end-to-end integrated security in wireless and wired environments for the president and his staff. A new mobile communications van is also in the pipeline to replace our aging Roadrunner fleet used to support presidential-motorcade movements. These state-of-the-art replacement vehicles are being developed with NRL's assistance. Envisioned is a highly capable, robust, mobile communications platform providing secure streaming video, data and secure communications to the presidential limousine and support vehicles.

The way ahead

As WHCA extends the boundaries of its new enterprise network to the president and his staff, a highly mobile, scalable, IP-based, secure communications infrastructure will meet those demands. This new infrastructure will enable us to reduce our operational footprint and rapidly disperse critical workforce (and other) resources to meet multiple mission requirements while simultaneously providing significantly enhanced telecommunications support to the president and his staff. Riding on our single-converged-network platform, these communication packages will provide increased bandwidth to our fixed and travel locations, secure commercial wireless-communications support and seamless network connectivity between fixed and travel locations.

Also, maximizing the use of commercial-off-the-shelf

Figure 4. SFC Thomas White Jr., a 31P assigned to the Whitehouse Communications Agency's Directorate of Operations, tests voice and video teleconference capabilities on deployable INMARSAT terminal and secure satellite Video TeleConference equipment.

telecommunication products and collaborating with industry/agency counterparts ensures that WHCA remains on the leading edge of proven, reliable and new technologies supporting the president and his staff.

LTC Hill commands WHCA's WACC. Past assignments include operations officer for the Defense Threat Reduction Agency at Fort Belvoir, Va., supporting the 2002 Winter Olympics in Salt Lake City, Utah. She also served as S-3 for 440th Signal Battalion, Signal officer for 1st Armored Division's Division Support Command and two assignments supporting Multinational Division-North communications in Bosnia. Her awards include the Defense Meritorious Service Medal and Bronze Order of Mercury. She has a bachelor's degree in education from Idaho State University and a master's degree in education from St. Mary's College, Leavenworth, Kan.

More reading

Webpage on WHCA provided on DISA's website, http://www.disa.mil/main/whca.html.

ACRONYM QUICKSCAN

DISA – Defense Information Systems Agency
IP – Internet protocol
IT – information technology
NRL – Navy Research Lab
NSA – National Security Agency
USSS – United States Secret Service
WACC – Washington Area Communications Command
WHASA – White House Army Signal Agency
WHCA – White House Communications Agency
WHMO – White House Military Office
WHSD – White House Signal Detachment

WHCA antecedents

To understand the rationale behind WHCA's recent reorganization initiative requires a quick history lesson concerning WHCA's presidential-support mission.

Signal Corps historical records reveal the installation of a radio system in the White House immediately following the bombing of Pearl Harbor Dec. 7, 1941. During this installation project, the chief Signal officer of the Washington Provisional Brigade (now known as Military District of Washington) selected 30 people – two officers and 28 enlisted soldiers – to operate and maintain this new radio system.

This small force was officially established March 25, 1942, as the White House Signal Detachment by orders from the War Department during the Roosevelt Administration. WHSD's mission was to provide, maintain and operate facilities for transmitting, receiving and safeguarding secure communications for the president during his travels and to assist the USSS in furnishing protection for the president.

Initially working out of the White House, WHSD provided communications support to the president through mobile radios, teletype machines, telephones and cryptographic aids. The Eisenhower Administration in 1954 saw the reorganization of WHSD under the office of the Chief of Signal, when WHSD was renamed the White House Army Signal Agency.

WHASA's role in providing presidential communications continued to expand through subsequent administrations to meet emerging requirements for communications support. This support included the addition of switchboard and photographic services, fixed radio and record communications, audiovisual support and publication services.

In 1962, WHASA disbanded by order of the secretary of defense under President John F. Kennedy, transferred to the Defense Communications Agency's auspices under WHMO's operational control and re-established as WHCA. During the course of several years and administrations, WHCA experienced a myriad of organization realignments in response to changing mission requirements.

30th Signal Symposium

attracts 2,700 attendees, 200 exhibitors

by CPT Thomas Birch

FORT GORDON, Ga. – The U.S. Army Signal Center and the Augusta-Fort Gordon Chapter of the Armed Forces Communications-Electronics Association hosted the 30th annual Signal Regimental Symposium here Dec. 2-6, 2002. The symposium attracted more than 2,700 attendees and more than 200 exhibitors.

The theme was "Enabling Information Superiority for the Objective Force." To that end, the symposium provided professional development for the Regiment's members through various workshops and guest speakers focusing on the Regiment's role in our transforming Army. The symposium also provided a forum in which senior leaders participated in shaping the Regiment's vision and charted a course that will enable the Regiment to support the Army in achieving information superiority as the Army transforms.

The symposium hosted general-officer sessions, a general-officer summit, the council of colonels, "council of fives" (chief warrant officers five), council of command sergeants major and the Functional Area 24/53 colonels focus group. Office Chief of Signal hosted officer, warrant officer and noncommissioned officer workshops.

The Directorate of Combat Developments, Signal Training and Doctrine Command system managers, School of Information Technology and the Reserve Component also hosted a variety of workshops. Workshop topics included Joint Tactical Radio System cluster and branch Briefings, Global Broadcast System, integrated-systems control, spectrum management, information management and the Objective Force multi-tier network.

During the symposium, branch and FA representatives from Personnel Command also conducted interviews and record reviews.

Chief of Signal BG Jan Hicks updated Signaleers on the "state of the Regiment." CSM Michael Terry, the Signal Regiment command sergeant major, presented "a walk through history," telling the stories of the Signal Regiment's heroes. The guest-speaker lineup included LTG Peter Cuviello, the Army's G-6; MG James Hylton, commander of Network Enterprise Technology Command/9th Army Signal Command; and MG Dave Bryan, vice director of the Defense Information Systems Agency and commander, Joint Task Force-Computer Network Operations.

For the first time in the symposium's history, the entire welcoming ceremony was broadcast live over the Internet via streaming audio and video.

AFCEA's Tech Expo 2002 showcased exhibits of the latest command, control, communications, computers and intelligence systems, including satellite communications, telecommunications, wireless technology, antennas, systems engineering, computer hardware and software, information assurance and communications shelters.

Other activities scheduled during the symposium included the Reserve Component's barbecue/social, the exhibit hall's grand opening, Distinguished Member of the Regiment induction ceremony, the AFCEA president's dinner, the Signal Corps Regimental Association chapter-awards presentation, unit reunions and the Regimental golf tournament at Gordon Lakes, sponsored by the Association of the United States Army.

CPT Birch served as the 2002 symposium-operations cell's assistant officer in charge.

ACRONYM QUICKSCAN

AFCEA – Armed Forces Communications-Electronics Association
FA – functional area

State of Signal Regiment strong

by Denise Allen

The state of the Signal Regiment is strong.

BG Jan Hicks, Chief of Signal, made that announcement as part of her "state of the Signal Regiment" address at the 30th annual Signal Regimental Symposium at Fort Gordon, Ga.

As she began her address, Hicks looked back at the state of the world when the first Signal symposium was held in 1973.

The Berlin Wall divided East and West Germany, America was embroiled in a conflict in Vietnam, and computers filled entire rooms. The Signal Regiment got the message through via voice communication or hard-copy messages typed at "a whopping 66 words a minute."

Since that first symposium, a lot has changed; powerful computers now fit in the palm of the hand.

"Today, the Signal Regiment is providing communications support with systems that are fully digital. We routinely move data in every nook and cranny of the battlespace to the lowest tactical levels," she said.

Even more change through enhanced technology is on the horizon, she said, as she highlighted a few emerging technologies – including a Cisco mobile-access router, a four-inch device that lets "mobile, tactical users keep the same Internet protocol address no matter where they're connected to a wireless network."

Also, IBM researchers have developed a chip called "millipede" that can read, write and rewrite about 25 DVDs' worth of information in a space seven millimeters by seven millimeters.

BG Jan Hicks, Chief of Signal, gives her "state of the Signal Regiment" at the symposium.

As the Army transforms into a more agile force that can transition from mission to mission, yet still be a lethal and dominant force, "information makes all of this happen," she said.

"Perhaps the single most important feature of the Army's transformation is the recognition and acceptance by warfighters that information is not 'an' essential, but 'the' essential element of combat power," she said.

These new technological developments will provide improved ways of getting the message through.

As the Signal Regiment faces its future in an era of transformation, "we're grappling with some very tough issues in people, equipment and training," Hicks said. The old schoolhouse approach to training "won't cut it" any more, she said.

At last year's symposium, MG Pat Cavanaugh, then Fort Gordon's commanding general, introduced the concept of lifelong learning. "A little more than a year ago, lifelong learning was only a good idea. Today, we're the only Training and Doctrine Command school with military-occupation specialties in the assignment-oriented training program. Graduates of these courses are in your units today," she said.

In his October 2002 visit to Fort Gordon, Secretary of the Army Thomas White was briefed on lifelong learning.

"He selected our assignment-oriented training feature as an Army Business Initiative Council program and has directed the Army staff to come back to him by the end of the fiscal year with recommendations on how to implement lifelong learning Army-wide," Hicks said. "The Signal Regiment will play an important role in providing those recommendations."

Hicks went on to say that soldiers, civilians and contractors were more important "than any new widget."

"They will determine the regiment's success, as they always have," she said. "As we move toward the Objective Force, we can expect new roles for the Signal Regiment. The Signal Regiment has always led change in the Army, and the Army, in this great transformation, is depending on the Signal Regiment to make information superiority a reality in the Objective Force. I challenge you to be a part of the solution, to stay focused on the vision and make it happen."

Ms. Allen is a staff writer for The Signal, *Fort Gordon's installation newspaper.*

‘Cyberman’
makes everyone cyberwarriors

by Denise Allen

MG Dave Bryan is not the typical keynote speaker.

Dressed as his alter ego “Cyberman,” in black boots and shorts, gray tights, red cape and shirt with the letter “C” emblazoned on it, Bryan had the audience exploding with laughter one minute and wiping away solemn tears the next as he addressed a serious topic at the 30th annual Signal Regimental Symposium.

‘Cyberman,’ alter ego, MG Dave Bryan, makes cyberwarriors of all attending the symposium.

“There’s too much at stake,” said Bryan, the vice director of Defense Information Systems Agency. “Cyberman is making all of you cyberwarriors. You too have the authority to wear tights like this.”

Last year, Bryan reported to Signaleers that 96 percent of successful intrusions in Department of Defense computers were preventable. He urged system administrators to create less obvious passwords such as “password” and be vigilant.

This year, only 85 percent of successful intrusions were preventable, leaving Bryan (and Cyberman) concerned for other reasons.

“Fifteen percent are brand-new combinations. Our machines and software are not going to protect us,” he said. “Cyberman is becoming paranoid. It’s what I don’t know about that bothers me.”

He knew about 40,000 penetration attempts, but how many more does he not know about, he asked.

“We’re better than we were in 1997, but we are not nearly good enough. Our national defense depends on information systems which are still vulnerable,” he said.

Bryan called for automated compliance checking, accountability for non-compliance and independent audits and evaluations.

He said closer looks should be given to those people who have access to Defense Department computers.

“We need to license people who are certified as system administrators. If they are contracted, there are no guarantees they are capable of doing a job,” he said. “We need to certify users and system administrators. Command accountability is the goal of Cyberman in Fiscal Year 2003.”

After presenting those points, Bryan stepped back as a videotape rolled.

The horrific scenes of a jetliner exploding through the World Trade Center followed by the collapse of the Twin Towers and its aftermath flooded the video screen as the words of President George W. Bush and Secretary of Defense Donald Rumsfeld played over the sound system.

Some in the audience wiped tears from their eyes as Bryan, now dressed in his Army uniform, returned from the stage wings. “We must not as a nation forget ever what happened,” he said. “We must never as a nation forget what is at stake. We must never forget we are still at risk. Our enemies don’t understand we draw strength from our diversity. One nation under God indivisible.

“They don’t understand … we are willing to make any sacrifice necessary. We must prevail.”

Ms. Allen is a staff writer for The Signal, *Fort Gordon’s installation newspaper.*

Transforming the Army to a network-based organization

by Denise Allen

In this era of Army transformation, the one thing that can be counted on is change.

"There's so much change going on, a lot of folks know what's for sure, that's change," said LTG Peter Cuviello, director of information systems for command, control, communications and computers and the Army's chief information officer.

"Everything needs to be modified," he said at the 30th annual Signal Regimental Symposium. "If you don't like change, you'll like irrelevance even worse."

Soldiers have to change with the Army.

Fueling some of this change is the vast amounts of technologies available. "The heart of the future is taking the Army and making it a network-based organization from the lowest level to the highest level. It's not going to be the way it is today," he said.

He urged everyone to embrace the news paths technology is forging. One of those important paths is Army Knowledge On-line.

"AKO is a portal for Army information," he said. "There are 1.1 million accounts. It's the largest portal in the world."

LTG Peter Cuviello, director of information systems for command, control, communications and computers, and the Army's chief information officer, speaks on transformation.

Through AKO in the Department of the Army, paper has been replaced with digital files in many instances. "We've done away with letterhead paper," he said.

Emails are encrypted and digitally signed.

However, not everyone who should be using it is. Cuviello's goal is to make every email address end in us.army.mil.

"Within the next year, we're going to do away with 6,300 exchange servers. You will not be in email; you will be in webmail," he said.

As the Army transforms, the year 2015 may seem in the distant future to some. "That isn't that far off," he said.

Already there are prototypes for the type of radios and other devices that will be used then. In 2015, there will be fewer military-occupation specialties; soldiers will have to be "multi-disciplined. No longer is a radio going to be a radio. A radio will be a computer," he said. A radio will have multifunctional purposes.

"The way it was is not going to be the way it will be," he said.

Ms. Allen is a staff writer for The Signal, *Fort Gordon's installation newspaper.*

ACRONYM QUICKSCAN

AKO – Army Knowledge On-line

Computer wizards 'wow' guests at technology expo

by Denise Allen

It was a problem Bryan Tuschen didn't mind having.

Even with 43,000 square feet of exhibit-hall space, there were still vendors outside the main tent during December's 30th annual Signal Regimental Symposium at Fort Gordon, Ga.

"It sold out," said Tuschen, executive director of the Augusta-Fort Gordon Chapter of the Armed Forces Communications and Electronics Association, which sponsors the technical exhibit. "Companies wanted to be here."

About 150 exhibitors participated in the event, which raised about $43,000 for AFCEA and its scholarship programs.

"We're not here specifically selling anything. We're demonstrating the newest technologies and solutions for emerging military requirements," said Robert Damen, manager of Raytheon Company's Augusta field office.

Among the pieces on display at the Raytheon booth was the Enhanced Position-Location Reporting System radio system. "It's the most advanced digital radio the Army has," said Damen. "It's jam-proof."

The company has worked to reduce the size of the radio to fit into the palm of a soldier's hand. "It was first released six months ago," said Gary Liusi of Raytheon. "The circuitry is lab-tested; the software is the same as what has been in the field for 15 years. We're repackaging technology."

He said the product could be ready for field evaluation in the next six months.

Another organization showing off its technologies was the National Science Center, a partnership between the Army and the private sector. "We have the luxury of innovating technology," said NSC's Ollie Washington. "We can go out and try a thing and pass it on to our Army partners."

Washington said technologies developed at NSC have been passed along to those working on the

University of Information Technology and the concept of assignment-oriented training. Some of the new technology NSC displayed was its artificial-intelligence program featuring "Andromeda," also known as "Andy."

Tuschen said he expects next year's technology expo to be even bigger. "We're looking to expand another 5,000 square feet," he said.

Ms. Allen is a staff writer for The Signal, *Fort Gordon's installation newspaper.*

ACRONYM QUICKSCAN

NSC – National Science Center

Newest 3 Distinguished Members of the Regiment bring a century's experience

by Susan Wood and Lisa Alley

FORT GORDON, Ga. – The three newest Distinguished Members of the Signal Regiment, inducted during the 30th annual Signal Symposium held in December 2002, accumulated about a century's worth of communications experience during their Army careers.

BG Janet Hicks, Chief of Signal, inducted retired LTG Otto Guenther, retired MG David Gust and retired COL Robert Forrester as Distinguished Members during a ceremony here.

Guenther served the Signal Regiment 34 years, working in the Army's command, control, communications, computers and intelligence arena. He also accrued more than 20 years' acquisition and procurement experience and became the Army's first chief information officer when Congress passed the Information and Technology Act in 1995.

Guenther

"(Guenther) exemplifies the true C4I visionary leader," the ceremony's narrator said in reading Guenther's biography. "Since his retirement, (Guenther) has continued to advance C4I technology. He consistently sets the standards that bring great honor to himself and the Signal Regiment."

Guenther's key assignments also included Communications-Electronics Command and Fort Monmouth commander, Fort Monmouth, N.J.; program executive officer for communications systems (responsible for the Army's tactical communications equipment); project manager for the Position Location and Reporting System / Tactical Information Distribution System; chief of the Telecommunications Division, 5th Signal Command; 102d Signal Battalion commander; and chief of the Communications-Electronics Branch, office of the assistant chief of staff / G-4 in Vietnam.

After retiring from the Army in August 1997, ending his career as the director of information systems for C4, Guenther became general manager of Computer Associates International's Federal Systems Group, a $300 million operation providing information-technology products and services to the federal market. Currently he serves as vice president and general manager of Tactical Systems Division, TRW Systems, where he oversees TRW's battlefield digitization, command-and-control and system-engineering activities for the U.S. Army.

Guenther also serves on the boards of directors for the Armed Forces Communications-Electronics Association; Government Electronics and Information Technology Association; and the Military Communications Conference Board.

Gust

Gust worked behind the scenes for innumerable Signal soldiers during his 34-year Army career. Many of the equipment systems Signal soldiers use today felt Gust's guiding hand in their development and acquisition. For example, as PM for mobile-subscriber equipment, he prepared and fielded 30 MSE battalions. MSE configuration changes made during his 2 ½-year PM-MSE tenure included the packet-switch overlay and fielding MSE switches in transit-case configurations for four light-infantry divisions.

As PEO-CS, his work included initiating the first Army triband satellite-terminal project, with eight prototypes of C-, X- and Ku-band satellite terminals produced for units at Fort Gordon and Fort Huachuca, Ariz; competitively procuring Spitfire, the enhanced man-portable ultra-high frequency tactical-satellite radio; adopting commercial-off-the-shelf technology for Global Positioning System receivers to make them more cost-effective; changing acquisition strategy for the Single-Channel Ground and Airborne Radio System radio so that it was more competitively priced; and spearheading engineering modifica-

tions to the emerging Enhanced Position Location Reporting System radio so that its data throughput doubled.

Also as PEO-CS, Gust encouraged integration for SINCGARS, MSE and EPLRS, which were separate communications programs run by three PMs within PEO-CS. As the Army's chief of staff began the campaign to digitize the Army, Gust persuaded his PMs that a "tactical Internet" was possible and that the Army needed it. He led the PMs in an integrated-product-team environment as PEO-CS led the way in increasing the Army's digital-pipeline systems to support growing Army automation-system traffic.

As PEO for intelligence, electronic warfare and sensors, he worked to integrate Signal and military-intelligence systems, helping ensure the MI customer's needs were articulated to the Signal Regiment and establishing liaisons between forts Gordon and Huachuca. Gust's initiative resulted in the first Trojan Spirit to Warfighter Information Network-Tactical migration plan, and the first Signal Center/Intelligence Center home-on-home conferences.

Since Gust retired from the Army in October 2000, he has continued communications support to the Army. The Dragon communications system used in Kosovo and the Raptor system used in Afghanistan and Kuwait are products from Technical and Management Services Corporation, where he serves as chief executive officer.

Throughout his 28-year career as a Signal officer, Forrester served in a variety of positions, rising from the rank of private. He commanded an infantry platoon, four companies – including a company in Vietnam – and 5th Signal Battalion. His final military assignment was as director of combat developments at Fort Gordon, where he was considered especially adept at motivating and developing subordinates to meet new challenges.

"Throughout his military career, Forrester managed several of the Army's most critical C4 programs through crisis after crisis, a perfect blend of technician and tactician," the narrator said at the induction ceremony. "He was called a 'national treasure' by his command and, as such, was awarded both the Bronze and Silver Orders of Mercury."

Forrester

Some of Forrester's assignments included force-development staff officer, office of the deputy chief of staff for operations; Training and Doctrine Command liaison officer, MSE fielding team, Fort Hood, Texas; chief of Concepts and Studies Division, Directorate of Combat Developments, Fort Gordon; and chief of TRADOC's C4I Requirements Division, Fort Monroe, Va. Many of these positions were jobs directly relating to defining requirements, funding and developing systems, and fielding much-needed C4 systems that would support U.S. joint and combined operations.

After he retired from the military in July 1996, Forrester signed on with General Dynamics C4 Systems (formerly GTE), where he is still shaping Army communications through equipment development, engineering, production and fielding.

"His contributions to the Signal Regiment continue to be significant, further enhancing his role as leader, mentor and great American," the narrator said. Particularly noteworthy is that he continually shares information with the Signal Regiment's leadership.

The Distinguished Member of the Regiment program was instituted when the Regiment was activated in 1986. The program recognizes people who make special contributions and distinguish themselves in service to the Regiment. DM positions are designed not only to recognize people whose service is most notable, but also to promote and enhance the Regiment's history and traditions and to foster cohesion among its members.

Ms. Wood has been chief of the Regimental Division, Office Chief of Signal, at Fort Gordon since May 1993. Part of her responsibilities include the Distinguished Member of the Regiment program, among other Regimental awards and recognition programs. She also serves on the board of the local AFCEA chapter and is the Chief of Signal's liaison to the national Signal Corps Regimental Association.

Ms. Alley edited Army Communicator *June 1995-February 2003 before becoming chief of the Command Information Branch in TRADOC's public-affairs office. A former soldier, she has served as a military and civilian reporter and editor, accumulating about 25 years' total experience in journalism and Army public affairs. She has also served as a Keith L. Ware (the Army journalism awards) judge and, as the U.S. Army Signal Center and Fort Gordon web manager, led a seminar on public affairs and the worldwide web at the Army's 2001 Worldwide Public Affairs Symposium.*

ACRONYM QUICKSCAN

AFCEA – Armed Forces Communications-Electronics Association
C4 – command, control, communications and computers
C4I – command, control, communications, computers and intelligence
CECOM – Communications-Electronics Command
DM – distinguished member
EPLRS – Enhanced Position-Location Reporting System
MI – military intelligence
MSE – mobile-subscriber equipment
PEO-CS – program executive officer for communications systems
PM – project manager
SINCGARS – Single-Channel Ground and Airborne Radio System
TRADOC – Training and Doctrine Command

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TSM update

Updates from Training and Doctrine Command systems managers for satellite communications, tactical radio and Warfighter Information Network-Tactical

TSM-TR

Enhanced Position-Location Reporting System

The Enhanced Position-Locating Reporting System's network manager customer testing was successfully completed at Electronic Proving Ground, Fort Huachuca, Ariz., Nov. 22, 2002. The test's focus was primarily operational in nature and evaluated the ENM, training, technical manuals and soldiers.

Architecture represented the basic EPLRS lower Tactical Internet used in the Force XXI Battle-Command Brigade-and-Below field test No. 5. FBCB2 and internet controllers were of the same hardware and software versions used in FT 5. Unit organization, composed of 1st and 2d Brigade elements of 4th Infantry Division, mirrored the FBCB2 structure used in FT 5. Geometries for EPLRS position-location purposes were very similar for both test events. The 2d Battalion, 8th Infantry Brigade, command-and-control needline contained the bulk of the EPLRS radios as participants. Additional loading in the form of automated, stepped, traffic generation of messages was used throughout the testing. The same traffic profile used in FBCB2 to add more message loading on that needline was used in ENM testing.

Four training courses were developed and/or modified to support field operations and the ENM's deployment. These courses, which kicked off in late September 2002, included the ENM operator's course, ENM monitor's course, EPLRS system-planner's course and the radio set operator's course.

NCS AN/TQS-158

(NCS) ENM AN/TSQ-158A

Soldiers representing several military-occupation specialties (31C/31W/31U/74B) participated in conducting the test.

During the test period, a one-week logistics demonstration was also conducted on the ENM configuration. MOS 31C soldiers performed the necessary troubleshooting diagnostics and remove/replace procedures and tasks during the demonstration.

The program executive office will use the test results to support the ENM fielding decision. Initial fielding will support 3d Stryker Brigade Combat Team in Fiscal Year 2003. This product improvement will be updated in the fielded units as a modification workorder in FY04/05.

Multifunctional Information Distribution System

The Multifunctional Information-Distribution System Low-Volume Terminal 2 successfully completed its first-article qualification testing in December 2002; the Army accepted the first six LVT (2) production terminals. Four of these terminals were delivered to the Lower Tier Project Office to outfit the Patriot battle-command program at this time, which allowed the project manager for MIDS to achieve the initial-operational capability date as specified in the acquisition-program baseline.

Army Test and Evaluation Command briefed the deputy undersecretary of the Army for operations research and the Navy's PEO for tactical aircraft Jan. 8 on results of the MIDS LVT (2) system-evaluation report. The briefing was well received, and both parties agreed to support a full-rate production decision.

The Operational Test and Evaluation's director was briefed in January; upon favorable recommendation from DOT&E, PEO(T) plans to request that the FRP decision be delegated from the assistant secretary of the Navy for research, development and acquisition to PEO(T).

Near-term digital radio/Step 2C radio

The Step 2C radio was planned for fielding to Stryker Brigade Combat Teams three through six, 1st Cavalry Division, 3d Armored Cavalry Regiment and III Corps troops. However, since the last TSM-TR update, a decision was made not to field the Step 2C radio. Consequently the program manager for Tactical Radio Communications Systems submitted a waiver to Headquarters Department of the Army seeking approval to procure more near-term digital radios to fill the void. This waiver was approved

at HQDA level and has been forwarded to the assistant secretary of defense for command, control and communications.

Lessons-learned from this experimental fielding provide a portion of the technical baseline for radios being designed for future fielding – for example, the Joint Tactical Radio System. Brigades in the First Digitized Division (4th Infantry Division)/First Digitized Corps (III Corps) use about 28 radios to form digital tactical-operations centers to TOC networks. The SBCTs will use some 48 radios to form their TOC-to-TOC networks.

The NTDR has been fielded to 4th Infantry Division, SBCT-1 and SBCT-2. Fieldings planned this FY are 1st Cavalry and 3/4th Infantry Division (SBCT-3).

Training for the NTDR is provided by new-equipment training teams, supported by PM-TRCS, as NTDR is fielded to the units.

Joint Tactical Radio System

The Department of Defense ratified the goal of systems interoperability by initiating many programs that will promote seamless operations between U.S. and other military forces. As a key program to provide seamless tactical-radio communications, JTRS will be the first tactical software-defined radio system that will use standard protocols throughout DoD.

Using standard communications-software modules that can be ported to hardware suites configured in form, fit and function to meet a variety of missions, the JTRS family of radios will combine the functionality of our current single-function radios into software-programmable multiband/multi-mode joint-tactical-radio sets tailored to meet the needs of specific user platforms. An important design feature of JTRS is the high level of modularity and commonality in software and hardware that will enable users in the operational environment to reconfigure/reprogram common modules to meet changing missions.

The hardware modules are self-contained, sealed, line-replaceable units. The JTR sets will incorporate built-in tests to diagnose malfunctions to the LRU and prescribe corrective actions. Based on BIT, operators and/or maintainers at unit level will remove, replace and evacuate the defective LRU. These features are expected to reduce training and logistics burdens while significantly increasing reliability and operational utility.

When fully fielded, JTRS will eventually replace all U.S. Army radios in the inventory.

The magnitude of the JTRS program costs and the reality of production capabilities are critical considerations in the schedule for displacing older radios. To maintain operational readiness of our forces during the expected long fielding process, JTRS will maintain backward compatibility with tactical radios currently in use.

The first-production JTR sets for vehicular and rotary-wing aircraft applications are expected to be available for initial fielding in the second quarter of FY07.

Acronym QuickScan

BIT – built-in test
DoD – Department of Defense
DOT&E – Directorate of Operational Test and Evaluation
ENM – E(nhanced Position-Location Reporting System) network manager
EPLRS – Enhanced Position-Location Reporting System
FBCB2 – Force XXI Battle-Command Brigade-and-Below
FRP – full-rate production
FT – field test
FY – fiscal year
HQDA – Headquarters Department of the Army
JTR – joint tactical radio
JTRS – Joint Tactical Radio System
LRU – line-replaceable unit
LVT (2) – Low-Volume Terminal 2
MIDS – Multifunctional Information-Distribution System
MOS – military-occupation specialty
NTDR – near-term digital radio
PEO – program executive office(r)
PEO-T – program executive office(r) for tactical aircraft
PM – project manager
PM-TRCS – project manager for Tactical Radio Communications Systems
SBCT – Stryker Brigade Combat Team

Advanced Warfare Environment

serial-to-socket conversion program helps soldiers 'get the picture'

by MAJ Tim Sellers and Marc Neely

Communicators in every position around the world are concerned with moving information. Whether it's voice, video or data, the communicator's job is to ensure the message reaches its intended recipient. "Getting the message through" is a touchstone for communicators everywhere.

Meeting this mission, however, is easier said than done. Creativity and innovation mark the efforts of Signal officers everywhere in looking for new ways to transmit and receive information. Sometimes innovation means developing new technology, but more often, it means making minor improvements to existing technology. These minor improvements have the potential to yield significant results.

The Advanced Warfare Environment serial-to-socket conversion program is one such minor improvement for serial-data transmission. Overcoming many shortcomings of traditional serial-data links, it augments a proven transmission method and significantly enhances the ability to share information, such as a common operational picture, in real-time.

The Army's air-defense community relies heavily on serial communications to receive and display tactical-air picture data. Although tactical data links use a variety of transmission means and protocols, the final link with the intended processor is almost always a serial connection. These connections are made with RS-232 cables over very short distances (less than 25 feet). Data rates vary but are normally no more than 19,200 bits per second. Serial communications are perfectly suited for these types of links, as they offer a simple, fast and reliable way of transmitting data at low speed.

There are, however, limitations to serial transmission. First, cable lengths are very short, forcing co-location of the processor with the data source. This means that antennas with line-of-sight and radio-frequency propagation requirements will sometimes conflict with the processor's required location. Although secure telephones can overcome this limitation (greatly increasing the distance between receiver and processor), the connection becomes more complicated, requiring the dedication of precious secure telephony assets, and remains point-to-point in nature.

This type of one-to-one communication is a second limitation of serial communications. As seen in **(Figure 1)**, the traditional serial link, even over secure telephone, still represents one serial source communicating with only one processor. A means for distributing one feed or stream of serial data to multiple processors over distances greater than 25 feet is needed.

The third, and perhaps most significant, limitation of serial communications to the air defender is the difficulty in obtaining a single integrated air picture. The SIAP is critical to a properly executed air-defense plan. Decision-makers at command-and-control elements must possess the same air picture as the shooter to correctly process information and control engagements. (Note: The corollary isn't true; the shooter doesn't require all the decision-maker's information.) Often, because of distance or availability, shooters may obtain air-picture data from one source, while decision-makers receive it from another. Either picture may be more or less accurate, causing a difference in perception of the battlespace and leading to difficulties in all aspects of executing the ADP.

The AWARE serial-to-socket conversion program mitigates all these limitations, significantly improving the ability to obtain and maintain the SIAP. Developed by Marc Neely of the Space and Missile-Defense Battle Lab in Huntsville, Ala., and validated in multiple joint and combined exercises, this tiny program (it fits on one 3 ½-inch floppy disk) encapsulates serial data (frames) into Internet-protocol data (packets) for transport. The distant end receives the IP packets, strips the packet header and provides the serial data for the intended processor **(Figure 2)**.

The program works exclusively

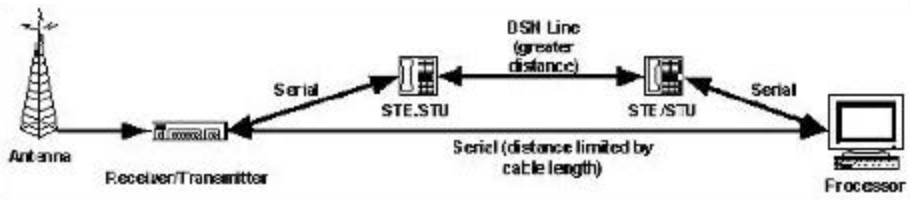

Figure 1. Traditional communications

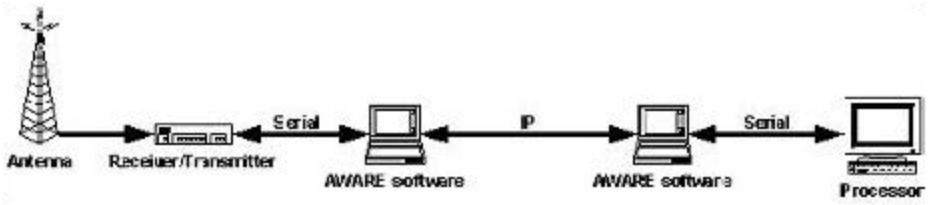

Figure 2. AWARE Serial to Socket comunications

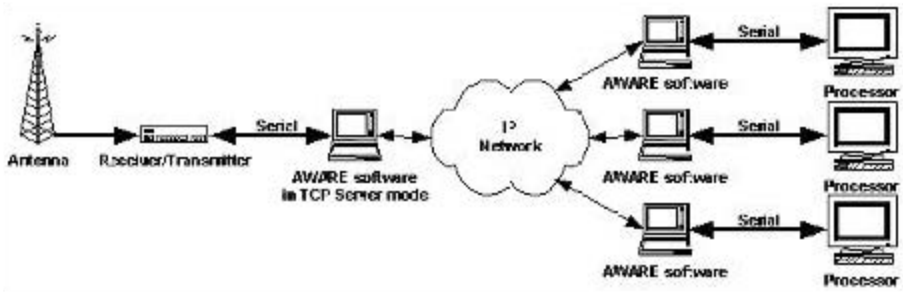

Figure 2. AWARE Serial to Socket in TCP server mode

at the network layer by encapsulating serial frames into IP packets. Format-independent, it allows any serial-data link to travel over any data-link layer protocol (for example, frame relay, asynchronous-transfer mode, ethernet) without changing the message format or the intended processor's configuration. The program installs on any Microsoft workstation or laptop. Data may be received and transmitted via serial, up/down protocol or transmission-control protocol, giving the program any-to-any protocol flexibility. Also, a single workstation can run multiple instances of the program – all with different receive and transmit protocols. Finally, the program can be configured as a TCP server, enabling multiple users to receive the same data simultaneously **(Figure 3)**.

Future add-ons to the program include a serial-port checker as well as a virtual serial-breakout box that will enable the user to change serial pin-outs through software. Anyone who has ever tried to build a specially pinned-out serial cable from scratch will certainly appreciate this function.

Using IP as a means of transporting serial data overcomes all the limitations of traditional serial communications. It virtually extends any serial cable to the IP network's limit. When used with an internet (either secure or non-secure), the distance can extend around the world. At the same time, IP's use can be just as practical for moving serial data across a large C2 center. The ability to simultaneously run multiple instances of the program, coupled with its capability to function as a TCP server, allows multiple users to receive and process the same serial feed. The improvement to the SIAP's quality and consistency is significant, enabling the decision-maker to have the same picture as the shooter.

The 263d Army Air and Missile-Defense Command of the South Carolina Army National Guard recently conducted an operation in Guantanamo Bay, Cuba, designed to demonstrate the ability to establish a SIAP and use it to accomplish the air-defense mission. The C2 headquarters, located in Guantanamo, received multiple, non-real-time air-picture feeds via the Global Command-and-Control System COP provided by Southern Command. Although vital for maintaining situation awareness, the constraints of these feeds made them virtually useless for air-defense missions. However, two sources of real-time air-picture data were also available. The Sentinel radar from 10th Mountain Division, along with air-picture data from the Joint Southern Surveillance and Reconnaissance Operation Center in Key West, Fla., were integrated into the COP to provide the real-time air picture.

The AWARE serial-to-socket conversion program played a key role in providing this data to the GCCS server. The program received air-picture data from both the Sentinel radar and JSSROC, and moved the data across the headquarters (about 500 feet) to the GCCS server for integration into the COP.

Also, AAMDC used the AWARE serial-to-socket conversion program to share SIAP data with its home station in Anderson, S.C. The program proved invaluable in providing the same view of the battle area in multiple locations separated by large distances **(Figure 4).**

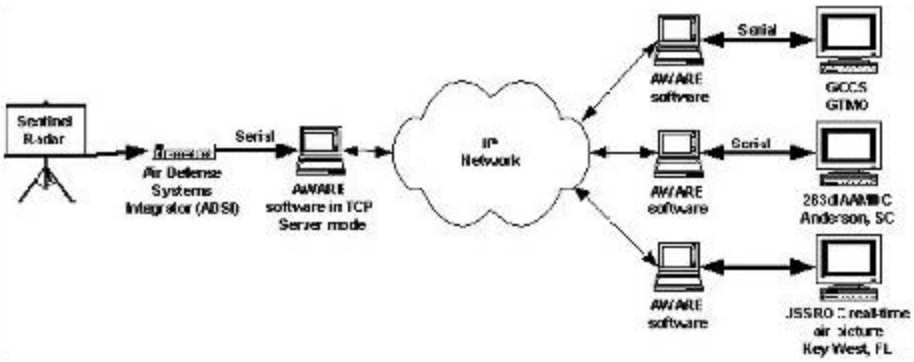

Figure 2. 263d AAMDC SIAP picture using AWARE Serial to Socket in TCP mode

Serial communications is rightfully the preferred method for transmitting air-picture data from sources to processors. Its simplicity, speed and reliability make it perfectly suited for the task. It does, however, suffer from limitations. These limitations can be overcome by using IP as an intermediary transport for serial data. The AWARE serial-to-socket conversion program provides a no-cost solution that can significantly enhance the way we receive and transmit this data, allowing immense improvements in the SIAP and air-defense assets' C2.

You may download this program using the Army Knowledge On-line knowledge center (document identification 85888). Send any comments or suggestions to Tim.Sellers@us.army.mil or marc.neely@smdc.army.mil.

MAJ Sellers is the deputy G-6 for 263d AAMDC. Before his activation in November 2001, he worked for NewSouth Communications, a competitive local-exchange carrier in Greenville, S.C.

Mr. Neely is an electrical engineer for Science Applications International Corporation and provides contractor support at SMDBL. Neely is also a captain in 1-203d Air Defense Artillery (Patriot) Battalion, Alabama Army National Guard. His current assignment is battalion assistant S-3.

ACRONYM QUICKSCAN

AAMDC – Army Air and Missile-Defense Command
ADP – air-defense plan
AWARE – Advanced Warfare Environment
C2 – command and control
COP – common operational picture
DSN – Defense Switched Network
GCCS – Global Command-and-Control System
GTMO – Guantanamo
IP – Internet protocol
JSSROC – Joint Southern Surveillance and Reconnaissance Operation Center
SIAP – single integrated air picture
SMDBL – Space and Missile-Defense Battle Lab
STE – secure-terminal equipment
STU – secure-terminal unit
TCP – transmission-control protocol

Five nations test coalition communications

by MAJ Rob Hedgepeth

"Commonwealth and Rebel soldiers – fall out!" was the command issued by LTC Paul Cooper, the Canadian army's exercise chief of staff, at the opening ceremonies of Communications Interoperability Demonstration Borealis. This demonstration of five nations' armies took place June 2002 in Kingston, Ontario, Canada. It was a very important learning opportunity for U.S. forces and some of our closest allies.

The light-hearted ribbing at the ceremony underscored the long histories and close bonds among nations participating in the demonstration: the United States, Great Britain, Canada, Australia and associate member New Zealand. The ABCA Armies Standardization Program conducted CID Borealis 2002 under its auspices.

History

The ABCA program began in 1947 to maintain the high level of interoperability and standardization existing among the armies at World War II's end. The program publishes quadripartite standardization agreements and other guides to enhance coalition operations.

CID Borealis was the program's first effort to promote communications interoperability among its nations. It used the North Atlantic Treaty Organization's successful Operation Combined Endeavor, held annually in Germany, as a model. The ABCA nations contracted the U.S. Army's Joint Interoperability Test Command to document the results of each test conducted. With only five nations participating, though, another CID Borealis goal was to thoroughly record each step operators made to achieve connectivity. Participants recorded this information, and it will accompany JITC's interoperability guide compact disc when published.

The 234th Signal Battalion and Headquarters, 2d Brigade, 34th Infantry Division, of the Iowa Army National Guard – as well as 134th Signal Battalion from the Minnesota Army National Guard – contributed soldiers and equipment. In total, 40 U.S. troops participated. Assisting the soldiers were technicians from the Communications-Electronics Command's Research and Development Engineering Center and manufacturers' technical representatives.

The mission was originally slated for 10th Signal Battalion from nearby Fort Drum, N.Y., but 10th's operational tempo, already high before Sept. 11, 2001, precluded the unit's involvement. At that point, the National Guard Bureau signed its units up.

"We were skeptical at first, but the guys from the Army National Guard have worked very hard to convince us they were the right choice for this mission," said LTC Myles Reardon, U.S. head of delegation and national standardization officer from the Army G-3's office. "They have really proven themselves."

Guard soldiers brought a range of civilian-acquired skills, including two electrical engineers, commercial-telecommunications troubleshooters and an enterprise-level local-area network / wide-area network administrator.

Demonstration

Planning for the demonstration began two years in advance. It required representatives from the Guard units and CECOM working with their counterparts from the other armies. They developed, over the course of many meetings, test methods and test plans. Next, the interoperability engineers developed test strings, detailing equipment for use in each test. Six workshops executed 700 tests in just 16 days.

The six workshops were very-high-frequency / ultra-high frequency radio, high-frequency radio, switch, transmission, LAN / WAN and command, control and information systems. Topographic and electronic-warfare workshops conducted more tests.

Although intended to operate administratively, the

Gen. John Keane, vice chief of staff of the U.S. Army, discusses the Army's response to terrorism during a visit to Operation CID Borealis. Keane represented the U.S. at a regular meeting of the armies.

underlying tactical concept of the test entailed one nation providing a division headquarters and every other nation providing a brigade. This set the stage for the scale of communications-system planning.

U.S. systems involved in the test were the Single-Channel Ground and Airborne Radio System, Havequick II and improved HF radio systems; mobile-subscriber equipment switch and transmission systems; MSE tactical high-speed data network equipment for LAN/WAN; and maneuver-control station, Advanced Field-Artillery Tactical-Data System and Global C2 System-Army C2IS equipment.

It's worth noting that a requirement for both divisional (134th) and corps-support (234th) Signal battalions existed. Digital NATO interface cards and the NATO analog-interface converter played important parts in the demonstration.

Primary systems from other countries included British Ptarmigan, Canadian Iris and Australian Parakeet switch and transmission systems, as well as various radio and C2ISs. The nations engaged more than 100 major pieces of equipment in testing.

In addition to learning about the communications systems of other nations, soldiers from each country learned a great deal more about their own equipment. Although most tests conducted were bilateral (between two nations at a time), the demonstration culminated in a coalition tactical network, building on the strengths of proven links.

Lessons-learned

"Standards to define the required interfaces among the various C3 systems aren't precise enough to cover all possibilities," said Barry Salis, associate director for technology transition at RDEC, "hence the need to conduct engineering tests using the actual fielded systems."

Indeed, even seemingly standard interfaces, such as NATO Standardization Agreement 4206's (coversheeted as QSTAG 788) digital interface between switches, required special conversions to work. A device made by the Australian delegation – used to convert alternate-mark-inversion signaling format to non-return-to-zero format – was invaluable and played a part in many different test strings. Lessons-learned included a recommendation for designing and procuring commercially produced hardware for this purpose.

U.S., British and Canadian radio operators test HF reception.

The LAN/WAN workshop also pointed out a need for standardization. All nations used Cisco equipment, but the many different routing protocols and hardware/software options and releases created incompatibility.

Even though some of the tests didn't achieve interoperability, a common theme for CID Borealis '02 was "failure is success." This promoted the idea that as long as the reasons for failure were documented, nations could undertake efforts to engineer and procure solutions as required. This would eventually turn the failure into a success.

One common observation is that a nation's ability to have its equipment conform to commercial-voice and data-trunking standards tremendously enhances interoperability efforts. Some common black-box solutions aid this process. The tactical-interface adapter converted 64-kilobits-per-second voice circuits from a commercial T1 or E1 trunk to 16-kbps tactical circuits for a node-center digital-trunk group. Codem Systems' multiplexers also aided in some tests at CID Borealis.

CID Borealis' participants learned much about themselves, their equipment and their allies. Activities encouraged human-interoperability opportunities at opening and closing barbeques and World Cup soccer pools. World Cup games, in fact, were available on the big-screen television in a recreation tent and fostered great conversation.

CID Borealis has helped bring our nations closer and achieve a bit of the vision GEN Dwight Eisenhower and Field Marshall Bernard Montgomery had in 1947. ABCA will bring friends and nations together again in the United States in 2004 as part of a planned joint-forces exercise to test lessons-learned in an operational scenario.

MAJ Hedgepeth serves on the staff of 105th Troop Command, Iowa Army National Guard. He was 234th Signal Battalion's ABCA project officer and served as part of the U.S. Army's special working party for interoperability engineering. Previous assignments with 234th Signal Battalion include executive officer, operations officer, company commander and platoon leader, as well as S-6 for a cavalry squadron and air-assault infantry battalion. He holds a bachelor's degree in electrical engineering and is a registered professional engineer. He designs power, lighting, life-safety, security and telecommunications systems for public and private clients in his civilian occupation with an architectural and engineering company.

More information on the ABCA program can be found at: http://abca.hqda.pentagon.mil.

ACRONYM QUICKSCAN

ABCA – American, British, Canadian and Australian
C2IS – command, control and information systems
C3 – command, control and communications
CECOM – Communications-Electronics Command
CID – communications-interoperability demonstration
HF – high frequency
JITC – Joint Interoperability Test Command
Kbps – kilobits per second
LAN – local-area network
MSE – mobile-subscriber equipment
NATO – North Atlantic Treaty Organization
QSTAG – quadripartite standardization agreement
RDEC – Research and Design Engineering Center
WAN – wide-area network

Training update

Training updates from the Directorate of Training, 15th Signal Brigade and Leader College of Information Technology, Fort Gordon, Ga.

LIFELONG LEARNING

by Barbara Walton

The Signal School has accomplished a great deal in the past year to support the tenets of lifelong learning, not just advancing the concept of lifelong learning for the Signal Regiment, but advancing the concept for the Army. Lifelong learning is no longer just a good idea; it's an accepted concept at Training and Doctrine Command and Department of the Army.

While the concept is sound and accepted, its execution is subject to much interpretation. Currently there are few policies, formulas or business practices to support it, nor is there a lifelong-learning funding line in the current Army budget. We remain in the proof-of-principle stage, and the Signal Regiment is leading the effort.

Our goal is to get each tenet ready for a formal assessment by the end of 2003 and to complete formal assessments of the entire lifelong-learning program by 2004.

Assignment-oriented training

We stood up four key military-occupation specialties. By the close of Fiscal Year 2002, we had almost 1,500 graduates in the field, and we're projecting nearly 4,000 by the end of this FY. The formal-assessment process began for this tenet earlier this year. TRADOC's analysis center will begin evaluating AOT's effectiveness by conducting interviews of AOT graduates and their supervisors, and by sending formal surveys to the field.

Figure 1. Lifelong Learning accomplishments.

Simulations

The AN/TRC-173 radio system was completed in December 2002 and was posted to the Resource Center early in 2003. We're looking forward to feedback from the field on this product. In late summer and early fall of 2002, we began developing three more simulations built on the same basic architecture as the AN/TRC-173. These simulations will support satellite training, MOS 31U training and the Stryker Brigade Combat Team. In late FY02, we partnered with Simulation, Training and Instrumentation Command, who will help us find the best methods for developing simulations and will seek out industry partners to assist us.

Resource Center

We continued to mature the Resource Center – this is the hub of lifelong learning. The Resource Center is a facility at Fort Gordon, Ga., with technical and educational functions. The Resource Center will use the latest technologies to provide proponent content to the lifelong learner. Its digital library will store simulations and other materials; it provides connectivity through Army Knowledge On-line; it has a help desk, forums and other student-assistance capabilities. It's linked to the Reimer Digital Library and will make maximum use of existing TRADOC assets in the distance-learning arena. The Resource Center will ensure the content – whether it's simulations, instructional modules or entire courses – is educationally sound and organized into meaningful training packages that tell the learner upfront what he is to do, how to do it, why it's important and how well he did after he finishes.

Today, close to 3,000 Fort Gordon students use the Resource

Figure 2. TRADOC future training and Leader-development strategy.

Center's on-line courseware. We want soldiers and leaders worldwide to do the same. Check out your proponent Resource Center by logging onto the University of Information Technology website at https://uit.gordon.army.mil.

More accomplishments

Late in the summer of 2002, lifelong learning became the common thread in TRADOC's future training and leader-development strategy. Lifelong learning begins with issuing AKO accounts to soldiers and leaders during the accessions process and continues throughout a career. In October 2002, we briefed the secretary of the Army and the new TRADOC commander and gained their support for our efforts. As you can see, the concept of lifelong learning is no longer just a good idea.

Ms. Walton is a supervisory instructional-systems specialist and chief of Directorate of Training's UIT Division at the Signal Center, Fort Gordon. She has been deeply involved in the UIT project from its beginning, as well as with the information-technology and digital-training master plan.

Assignment-oriented training

by Beverly Friend

This is an update on AOT at the U.S. Army Signal Center since Fall 2002. Although we've encountered growing pains, we've had no serious showstoppers as we continue our quest for more effective and efficient training via AOT.

Our graduate pool of AOT soldiers has steadily increased overall. At the end of fourth quarter FY02, the 31R AOT course had graduated 301 more students. Eighty-two of these graduates received echelons-above-corps assignments, and 219 were sent to echelons-corps-and-below units. As we completed the first quarter of training for FY03, the 31R AOT course boasted 27 EAC and 69 ECB graduates.

At the end of fourth quarter FY02, the 31F AOT course had graduated 96 more students, with 204 more graduates at the end of first quarter FY03. One hundred six of these students were EAC, and 194 were ECB.

The 31P AOT course, the last to be implemented, fell short of its projected graduates for FY02 but still graduated 30 students out of a projected 33. These figures are expected to increase to 269 during FY03, when we increase the number of classes per year to 26.

The 31S course has been and continues to be our biggest challenge as well as our most technical AOT course. Beginning in October, Army and Air Force tactical-satellite training are no longer consolidated. Midas training was added in March. Starting in June, the 31S AOT course will increase its student load from 12 students to 14 students per class.

The 31S AOT course graduated 143 students through first quarter FY03. Ninety-four were tactical, and 49 were strategic.

More changes are planned for the out years (for example, new equipment, systems and strategies) as we continue to train the best soldiers in the world using current and emerging instructional technology.

Dr. Friend is academic dean for initial-entry training at 15th Signal Brigade, Fort Gordon. She was formerly department director at the Signal Center's School of Telecommunications Technology. Friend holds master's degrees in education and instructional-systems technology. She has a doctorate in instructional-systems technology from Indiana University and is pursuing another doctorate in training and performance improvement. Her civil-service education includes training at the Distance Learning Institute in Stillwater, Okla.

ACRONYM QUICKSCAN

AKO – Army Knowledge On-line
AOT – assignment-oriented training
EAC – echelons above corps
ECB – echelons corps and below
FY – fiscal year
MOS – military-occupation specialty
TRADOC – Training and Doctrine Command
UIT – University of Information Technology

Automating the local-purchasing process at Karshi-Khanabad Airbase, Uzbekistan

by CPT David Stern

Karshi-Khanabad Airbase is home to Camp Stronghold Freedom, an Army logistics base supporting Operation Enduring Freedom. After transitioning with the initial base Signal officer, I quickly learned our base's mission was largely affected by our ability to order and receive equipment and services not available through the regular Army supply system. To accomplish this mission, our team built a web-based purchase-request-and-commitment system that has saved both time and money.

The project has attracted the attention of the Army Audit Agency and Army Central Command. We have validated the concept; now we want to share our experience and lessons-learned.

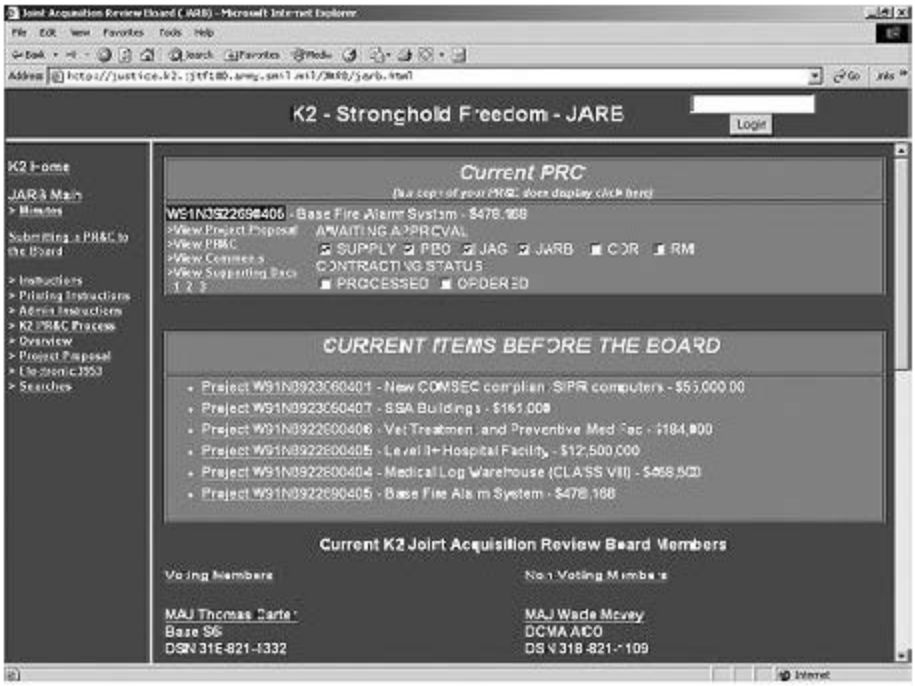

Figure 1. K2 main screen.

The mission

The logistics task force/base commander initiated a joint-acquisition review board to add management controls to locally purchasing supplies and equipment at K2. The JARB included members of the Army LTF as well as Army, Air Force and Marine tenants deployed to the base.

The requirement was to build a web-based system to enter and display all PR&Cs (Department of the Army Form 3953) slated for the JARB's review. In addition to displaying the actual PR&C, the commander also required the ability to view supporting documentation and to add/view comments.

The suspense for this project was 14 days.

Approach

My team of reservists from Phoenix, Ariz., included an Internet service corporation president, a mid-level Qwest digital-subscriber-line technical-support technician, a Unix system administrator and a Hewlett-Packard technical-support technician. Our team used experience gained in the commercial-communications sector and applied it directly to accomplishing this mission.

The project was initiated by evaluating options for developing the web-based automation required. We dismissed the use of software like Microsoft Access or the advanced database features in Microsoft FrontPage or Macromedia Dreamweaver because of the difficulty in using software programs to create programming code. The need to upload documents for review and to create dynamic fields (like a purchase request's document number) led us to use the Perl programming language with a custom non-database filing system. The wealth of free (open-source) programming resources available on the Internet was another factor that confirmed our course of action.

For the test and evaluation portion of the project, we used a locally procured computer and converted it from a Windows-based operating system to a Unix-based Apache/Linux server. The Apache webserver used open-source code at no cost to the government.

During the initial development stage, our intent was to develop the code required for the project independent of the directorate of information management's servers (to protect them from any programming errors.) Our team worked around the clock to program initial requirements and bring the PR&Cs for the JARB onto the secure Internet-protocol routed network. The SIPRNET was chosen in this wartime theater over the regular

Figure 2. CPT Dave Stern teaches Camp Stronghold Freedom logistics soldiers and contractors how to operate the Automated PR&C System in August 2002. This class was part of the fielding process 164th Corps Support Group for the automated PR&C system in Uzbekistan and Kuwait.

Internet (nonsecure Internet-protocol routed network) because SIPRNET has priority for restoral in the event of any outage and because the data is available worldwide to anyone with access to the SIPRNET. There's nothing in the system's code that requires it to be placed on the SIPRNET.

Before placing the Unix server on the SIPRNET, we received permission from the OEF Coalition/Joint Task Force-180 automation officer to stand our server up. Through discussions with the joint automation officer, we also learned that even if we succeeded with our mission, the task force couldn't support our project. Furthermore, the active-duty corps-support group replacing us wouldn't be nearly as knowledgeable or robust as our Reserve CSG's communications section. With the knowledge that the JAMO wouldn't support our project, we also learned the K2 DOIM wouldn't let us place our project on any of their servers.

We found there was plenty of experience in the theater using software like Frontpage and Dreamweaver to create webpages but almost no experience in the actual programming code these types of software programs create behind the scenes. With permission to stand our server up and a near-term mission at hand, we drove on despite the organization challenges we were experiencing.

System features

The system has many features commonplace to products in the civilian sector but not widely used in military web-based systems. Our automated PR&C system has the following advantages over the traditional paper-based system:

- It allows anyone with access to the SIPRNET to submit a PR&C for consideration;
- It eliminates the need to load or update software;
- It dynamically lists supply sergeants authorized to process automated PR&Cs;
- It provides links to required documentation and allows electronic attachment of supporting documentation;
- It shows an actual copy of the DA Form 3953 with signatures that can be printed if necessary;
- It automatically generates the PR&C document number for all PR&C requests submitted;
- Its search tools allow visibility of the process from requirement generation to fulfillment;
- Its search tools allow visibility of all PR&Cs and supporting documentation;
- Users can add and view comments about individual PR&Cs;
- Signature authorities can electronically return documents for further action;
- Users can upload more supporting documentation at any time;
- Its administration tools are dynamic and web-based;
- It runs Perl scripts, which can run on virtually any platform;
- The JARB and judge advocate general have been seamlessly added into the process flow for more regulatory controls; and
- The JARB secretary can upload the JARB's minutes by using Microsoft Sharepoint software.

Fielding the project and anticipating more requirements

The project was initially launched with a briefing to the JARB board members and a desk-side training session for the JARB secretary. To give JARB members access to the PR&Cs before the actual JARB meeting, the JARB secretary entered all paper-based PR&Cs and supporting documentation into the system. This process was time-consuming for the secretary, and our team quickly realized that for the project to be successful, the next requirement was to automate the entire PR&C process on K2.

With recommendations from the JARB and the base's logistics personnel, the team took an additional week to expand the system, add approval levels and train personnel on its use. There was an initial class on the automated PR&C system with the base's supply sergeants and purchasing officers, at which time we determined their passwords and received their signatures.

As a paperless system, all signatures are scanned and the user's password is required to digitally sign documents. In addition, users' passwords also provide

W91N3922690405 - Microsoft Internet Explorer

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PURCHASE REQUEST AND COMMITMENT

1. PURCHASE INSTRUMENT NO.
2. REQUISITION NO. W91N3922690405
3. DATE 26SEP02
PAGE 1 OF 1 PAGES

4. TO: Kashi Kanabad Airbase, Uzbekistan
5. THRU: Kashi Kanabad Airbase PDO
6. FROM: 416 ACG

It is requested that the supplies and services enumerated below or on attached list be

7. PURCHASED FOR: Kashi Kanabad Airbase, Uzbekistan
8. DELIVERED TO: Kashi Kanabad Airbase, Uzbekistan
9. NOT LATER THAN (Date) 1JAN03

The supplies and services listed below cannot be secured through normal supply channels or other Army supply sources in the immediate vicinity, and their procurement will not violate existing regulations pertaining to local purchases for stock. therefore, local procurement is necessary for the following reason: (Check appropriate box and complete item.)

10. NAME OF PERSON TO CALL FOR ADDITIONAL INFORMATION: Fire Chief
11. TELEPHONE NUMBER: 303-647-4242

12. LOCAL PURCHASES AUTHORIZED AS THE NORMAL MEANS OF SUPPLY FOR THE FOREGOING BY
13. REQUISITIONING DISCLOSES NON-AVAILABILITY OF ITEMS AND LOCAL PURCHASE IS AUTHORIZED BY

EMERGENCY SITUATION PRECLUDES USE OF REQUISITION CHANNELS FOR SECURING ITEM

FUND CERTIFICATION

The supplies and services listed on this request are properly chargeable to the following allotments, the available balances of which are sufficient to cover the cost thereof, and funds have been committed.

18. ACCOUNTING CLASSIFICATION AND AMOUNT

14. ITEM	15. DESCRIPTION OF SUPPLY OR SERVICES	16. QUANTITY	17. UNIT	18. ESTIMATED UNIT PRICE $	TOTAL COST $
1	See attached document	1	job	476,168	476,168

20. TYPED NAME AND TITLE OF CERTIFYING OFFICER: Steven N. Andrade LTC USAF CJTF130-CJ8-K2
21. SIGNATURE
22. DATE

23. DISCOUNT TERMS

24. PURCHASE ORDER NUMBER

25. THE FOREGOING ITEMS ARE REQUIRED NOT LATER THAN AS INDICATED ABOVE FOR THE FOLLOWING PURPOSE

Base Fire Alarm system is necessary to insure the safety of building occupants and immediate fire department notification.

26. DELIVERY REQUIREMENTS

ARE MORE THAN 7 DAYS REQUIRED TO INSPECT AND ACCEPT THE REQUESTED GOODS OR SERVICES YES ☐ NO ☐

IF YES, NUMBER OF DAYS REQUIRED

27. TYPED NAME AND GRADE OF INITIATING OFFICER: 2LT ALISON HAMEL
28. SIGNATURE
29. DATE 26SEP02
30. TELEPHONE NUMBER: DSN 318-821-1334
31. TYPED NAME AND GRADE OF SUPPLY OFFICER: MSG DMITRI D. PAYNE
32. SIGNATURE
33. DATE 26SEP02

34. TYPED NAME AND GRADE OF APPROVING OFFICER OR DESIGNEE: JON J. MILLER LTC, QM Base Commander
35. SIGNATURE
36. DATE

DA FORM 3953, MAR 91 — EDITION OF AUG 75 IS OBSOLETE — USAPC V1.00

Done — Internet

Figure 3. DA Form 3953.

them access to their web-based action-item box, which contains all PR&Cs at their level for action.

Once the JARB secretary, supply sergeants and purchasing officers were trained, we taught resource managers and contracting officers how to use the system and follow procedures for adding fundsites and other information to the PR&C. The training was successful, so the base adopted the system. Our development team took careful notes in all training and sensing sessions with the users and continued to modify the system to meet users' needs.

Web-based administration features

Faced with the fact that our project was going to receive very little support when we rotated out of theater, we began to streamline administrator functions for managing the automated PR&C process. We instituted a dynamic webpage allowing the administrator to change the board members instantly, which in turn updated the webpage real-time. We automated the uploading of signatures as well as the signature blocks and passwords of the signature authorities for the process.

An intense amount of work has been placed into making sure that the system continues to run for years after we leave, with little to no maintenance.

Validating the concept

The automated PR&C project was launched in August 2002, and since that time has processed more than $30 million in local purchases. As I mentioned, the system's features and benefits have attracted AAA's and ARCENT's attention, and we've briefed the concept to congressman and some of the Defense Department's senior military and civilian leaders, as well as many civilian and military leaders who visited the Afghanistan theater. Also, more bases in Central Command's operations area – including Camp Doha, Kuwait – have adopted the system.

Lessons-learned

The biggest challenge with accomplishing this mission in a wartime environment was the availability of resources and soldiers trained to accomplish this type of mission. The after-action review for this project revealed several suggestions I'd like to share with the Regiment.

First, as school-trained Signal soldiers (25A, 74B and 31U), our team didn't receive institution-based training in actual computer programming. Some of us received basic training in software products like FrontPage and Dreamweaver, but our experience brought to light that we needed a working knowledge of at least one computer-programming language like Perl, C++ or Java.

In addition to the current computer-based training programs available through Army Knowledge On-line, we need electronic reference and training books available worldwide through the Internet. As an example, my team purchased several reference books through amazon.com and had them shipped to Uzbekistan. This could be prevented in the future if detailed reference and training books were available for Signal-specific subjects through a command-supported web portal. Soldiers will continue to need on-the-job training, and detailed electronic reference books will allow us to properly train them.

Second, K2 is still in the process of commercializing. The contractors and officers running DOIM denied our request to use the SIPRNET webserver for our project. What we learned is there's a significant "fear of the unknown" with respect to programming languages and allowing commercially accepted programming-language interpreters to be installed on Microsoft-oriented Internet information servers. In this case, we had to stand up our own webserver.

In the optimum case, all DOIMs would have exactly the same capabilities and support requirements for their automation custom-

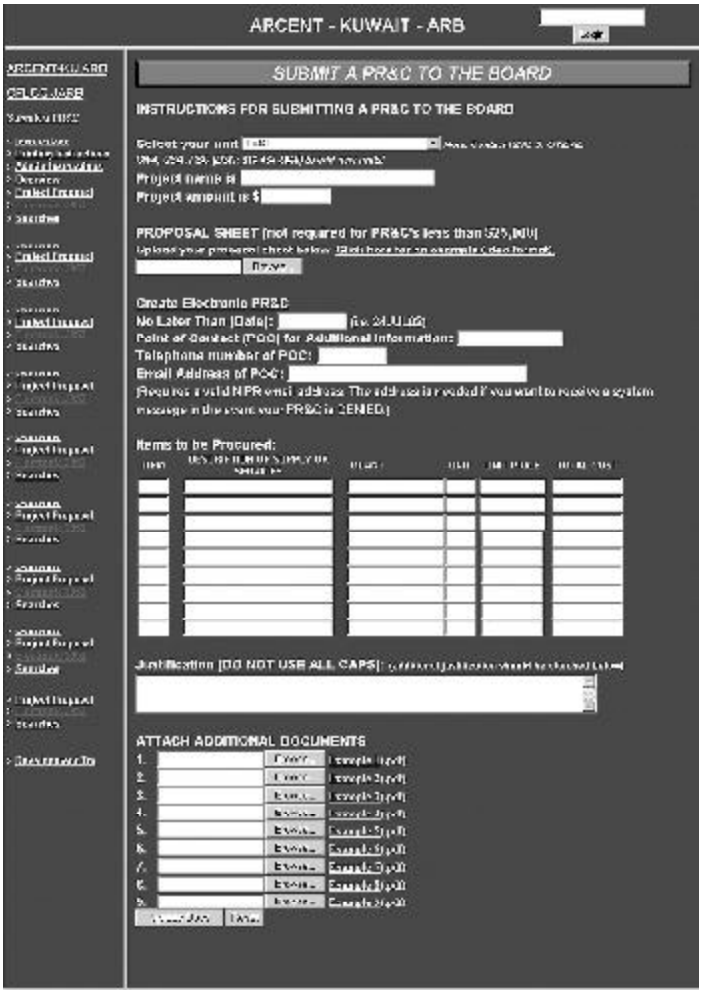


Figure 5. Purchase-Request and Commitment System entry form displaying fields for submitting information.

ers. A variety of commercially accepted programming languages like Perl, C++ and Java should be available to automation personnel worldwide. Also, there should be a central portal where the Army's automation personnel can share programs and scripts they've designed, built and implemented. There are many of these types of collaboration sites on the Internet, but a command-supported site where we could share programs previously written and modify them for new uses would produce immediate results. Achievements like this automated PR&C process could be mirrored across the Army in other specialties like maintenance and personnel. Also, programs and scripts that have made a significant impact can be evaluated and eventually implemented Army-wide through AKO or similar sites.

The final lesson we learned while accomplishing the mission in Uzbekistan is that the Army soldier is very knowledgeable about computers and the Internet. Most non-Signal soldiers can use Army CBT and other classes to design, operate and maintain websites. Automation soldiers need the training, tools and resources to go a step further. Automation soldiers need to have a clear understanding of the programming code behind the software to accomplish the mission. Today's Signal soldiers are capable of accomplishing bigger projects and missions if we can provide the tools and guidance to support them.

CPT Stern is an Army Reservist assigned to 164th Corps Support Group from Mesa, Ariz. In his civilian role, he is president of Stern Internet Services Corporation located in Sierra Vista, Ariz. He holds a master's degree in business administration/technology management from the University of Phoenix and a bachelor's degree in microelectronic engineering from Rochester Institute of Technology. Stern has served on active-duty in jobs such as Signal battalion detachment commander, Army Signal Command/ Network Enterprise Technology Command direct-support engineer, Signal battalion logistics officer and cable/wire platoon leader.

ACRONYM QUICKSCAN

AAA – Army Audit Agency
AKO – Army Knowledge On-line
ARCENT – Army Central Command
CBT – computer-based training
CSG – corps-support group
DA – Department of the Army
DOIM – directorate of information management
JAMO – joint automation officer
JARB – joint-acquisition review board
K2 – Karshi-Khanabad
LTF – logistics task force
OEF – Operation Enduring Freedom
PR&C – purchase request and commitment
SIPRNET – secure Internet-protocol routed network

Keeping families informed during Operation Enduring Freedom

by CPT David Stern

As a member of 164th Corps Support Group of Mesa, Ariz., I was activated and ordered to Karshi-Khanabad Airbase in Uzbekistan from June to December 2002. Serving as the group Signal officer, I was tasked to develop a way to assist the family-readiness group in keeping families informed.

I arranged for an Internet website, azarmyfamily.com, to be donated, plus electronic-newsletter software from SISCORP, so we had a website and electronic newsletter to distribute information, stories, promotion photos, contests and other items of interest to families and friends. Marilyn Ward, mother of a soldier, best described the bottom line upfront for this project when she said, "I loved the newsletter. It made me feel I was still in touch with my son, even if only to a degree."

Introducing the web address

Before the unit left the Reserve Center, the unit's FRG held a deployment briefing for families, where the website's domain name was announced and a signup sheet was passed around for the email addresses of all those present. From that point, newsletters and website information were passed via family members, FRG volunteers and the other family-related support channels. The newsletter started with about 100 email addresses, but the group's distribution list ended the deployment with 321.

Publishing the newsletter and updating the webpage

As one of the group commander's priorities, the website was updated three times a week, and the electronic newsletter was sent to everyone on the distribution list once a week. The newsletter software had the ability to send a simple text email or a webpage, with most subscribers choosing the webpage version.

The website and newsletters contained links to FRG volunteers' email addresses, phone numbers and email addresses of the chaplain staff, information about TriCare and other issues affecting family members. Newsletters also contained information to subscribe more family members to the distribution list and to send comments or suggestions for the newsletter and website.

Webpage developed for family readiness groups.

One of the newsletter's nice features was the ability to include families in the training the group was receiving. For example, at the mobilization station, the group conducted Force Protection Level One training. The same training was available to the public through the Internet, so we placed a link on the webpage and newsletter to allow family members to participate in the same training we were receiving.

Also, for the unit's redeployment we digitized a set of reunion videos and made them available on the website for family and friends.

Managing email addresses and newsletters

With the donated website and

electronic-newsletter tools, updating the website or sending quick updates to families could be accomplished from anywhere in the world with an Internet connection. This allowed volunteers in the United States to assist with the website (in addition to volunteers within the unit). The software had some nice features, including capability to import addresses from virtually any spreadsheet, notification of email addresses that were returned with the reason why (for example, mailbox was full), as well as general statistics and the ability to send Hypertext Markup Language emails.

Lessons learned: information security

As the project proceeded, the group's S-2 section was intimately involved with developing and editing pages for the website. As the website was hosted on a commercial system, soldiers, family members and FRG volunteers could publish pages and updates. To ensure no inadvertent disclosures were made in the website or newsletters, the S-2 staff viewed all pages, photos and text for classification before they were made public. What this brought to the fight was the ability to edit items of concern or leave them entirely out. The S-2 also brought us into compliance with appropriate guidelines by instructing removal of the unit name and other identifying features of the unit/personnel.

Putting down rumors

During 164th Corps Support Group's mobilization process, the national media began to report news of suspected chemical contamination at K2 Airbase. As this was the base the group was to assume command and control of, this posed a significant issue for the soldiers, friends and family of unit members.

The newsletter and website gave the group commander the ability to distribute a list of questions and answers as well as detailed information to 164th Corps Support Group's friends and family. The notable aspect of this was that families received information within 24 hours of it becoming national news. The result: the unit went on training to complete the mobilization process, unaffected by the national media.

Comments from families

No project is complete without an after-action review; these are comments from a few family members.

"You kept me informed as much as you could on the many days I couldn't actually hear Mark's voice," said Michelle Paone. "The pictures were great, the thoughts were great, the whole thing was great."

"It was nice to be able to get information out about my brother while he was on the other side of the planet!" David McKewan joked. "But seriously, it was comforting to be able to have as much contact as the newsletter provided."

"Why I liked it were the pictures. (They) gave a clear indication of what the area was like and what you had to put up with over there," said Diane Howard. "(It was) always interesting to hear what you were going through, good and bad! We back in the States appreciated knowing what it was like for you guys and to know you had some comforts! We appreciated getting the newsletter, and I for one shared it with friends and family."

Final comments

The electronic newsletter and Internet website gave the group and its FRG the ability to quickly and accurately distribute information to families. The newsletter and website also allowed soldiers to complete the mission at hand instead of worrying about informing their families of things such as safe arrivals, departures, locations, etc. Also, the newsletter and website allowed a security screening that ensured operational-security concerns were addressed and routinely communicated to families.

If you'd like to start your own newsletter, feel free to contact me at david.stern@us.army.mil.

CPT Stern is an Army reservist assigned to 164th Corps Support Group in Mesa. In his civilian role, he is president of Stern Internet Services Corporation located in Sierra Vista, Ariz. He holds a master's degree in business administration/technology management from the University of Phoenix and a bachelor's degree in microelectronic engineering from Rochester Institute of Technology. Stern has served on active duty in positions such as Signal battalion detachment commander, direct-support engineer, Signal battalion logistics officer and cable/wire platoon leader.

ACRONYM QUICKSCAN

FRG – family-readiness group
K2 – Karshi-Khanabad

E-newsletters made easy

Stern Internet Services Corporation started the electronic-newsletter project to give Sierra Vista, Ariz., and Tucson, Ariz., small to medium-sized companies the ability to send web-based emails to clients, said Dave Stern, the company's president.

"The advantages are that the cost is low, there is minimum setup time compared to other mediums, and people could chose whether to continue receiving the newsletters," Stern said. "Those were the reasons I created the SISC e-newsletter software, and I asked my business partners to allow me to donate it and a website to 164th Corps Support Group's family-readiness group."

Based on 164th's FRG's comments, Stern said his partners and he wanted to help other FRGs and activities such as headquarters and headquarters detachments, headquarters and headquarters companies or line companies produce e-newsletters more easily. SISC's $500 package is per FRG/activity and includes website domain-name registration and fees, hosting space and email, file-transfer protocol and web-based controls for the website (open to both military members and civilians), SISC's e-newsletter software, three-month access to computer-based-training hypertext-markup language classes for family members who would like to work on the unit's newsletter and free technical support.

For more information, to order the e-newsletter software on-line or to see a functional demonstration, link to http://www.sternisc.com/enews.html. Stern said the one restriction to SISC's offer is that the group must be affiliated with the U.S. government in some way.

The point of contact for this military program is Stern at dave@sternisc.com, (866) 774-7267.

ACRONYM QUICKSCAN

FRG – family-readiness group
SISC – Stern Internet Services Corporation

142d Signal Brigade 'lifts bosses'

by SFC David Carney

DECATUR, Ala. – MAJ Sarah White, personnel officer of the multi-component 142d Signal Brigade here, is very familiar with the complexities of coordinating a "boss lift."

During the summer of 2002, Alabama's adjutant general, MG Mike Sumrall, told 142d Signal Brigade's commander, BG Dallas Fanning, "We need to get some folks out to Fort Lewis [Wash.] to see the support we give the I Corps warfighter exercise."

Supporting a warfighter exercise demands much more time dedication than the traditional Guard and Reserve training for two weeks a year. To be able to effectively support the biennial warfighter exercise requires two weeks of train-up in September of one fiscal year, followed by a three-week annual training period a month later in the following fiscal year.

Understandably, the "away from work" time disturbs many civilian employers who don't understand the contribution Reserve Component soldiers make to the nation's defense structure. In fact, many employers continue to feel RC training is simply a summer camp (in the sense of Boy Scout camping).

One purpose of a "boss lift" is to demonstrate to the Reservist's employer what their employees are actually doing when they are doing their military duty. The understanding the employer gains hopefully makes the employer/employee/citizen-soldier bond stronger.

To accomplish this demonstration, White was tasked to plan and coordinate 142d Signal Brigade's first only boss lift. The coordination involved air transportation, meals, lodging, on-ground tours, ground transportation, command briefings, security in sensitive areas and escort personnel. White worked with unit commanders to locate employers, school leaders, civic leaders and media personnel who would participate in the boss lift.

Participants paid all their own expenses, lodging and meals, except for air transportation – which was provided by the Alabama Air National Guard's 117th Air Refueling Wing – between Birmingham, Ala., and Fort Lewis.

On-site tours at Fort Lewis were coordinated with the Alabama National Guard public-affairs office and Fort Lewis' protocol and public-affairs offices.

I Corps commander LTC Edward Soriano gave an I Corps mission brief demonstrating the strong relationship between 142d Signal Brigade and the I Corps command. Soriano also thanked the employers for their support of the Reservist's military participation, without whom I Corps couldn't complete its required national missions, he said.

Boss-lift participants also received briefings from 142d's staff about the high-tech support 142d provides to I Corps. The employers were actually able to watch their employees, now in uniform, use a computer to "get the backbone in" or lay cabling for a node center, all necessary activities to provide real-time communications to I Corps.

Responses from the mayors, school superintendents and major employers were unanimously highly favorable. They "had no idea" their employees were so important. Employers were told that supporting their employees during their mandatory annual training is not only a legal requirement but also allows the employer to assist in the nation's defense. The employers and school-teachers also learned that Signal is just as high speed as any combat-arms unit because communications is a vital part of every mission.

BG Dallas Fanning greets Terry Hatfield, city of Huntsville, Ala., mayor's aide, Mike Gillespie, Madison County Commission chairman and Ray Swain, Madison County superintendent of education, as they arrive at Fort Lewis, Wash., from Alabama.

"Coordinating a boss lift is very stressful because there are so many areas to consider, but it was extremely rewarding," White said. "Once you've done it one time, it becomes easy. I have all my notes and am looking forward to the next boss lift."

SFC Carney is 142d Signal Brigade's public-affairs noncommissioned officer.

ACRONYM QUICKSCAN

RC – Reserve Component

The 20-year transformation of the multi-compo 142d Signal Brigade

by SFC David Carney

DECATUR, Ala. – The modern history of the multi-component 142d Signal Brigade located here began in 1984 when a few Army National Guard and Active Component soldiers lay the groundwork for an evolution of change that would positively affect thousands of soldiers and complement the nation's defense structure for the next two decades.

BG Teddy Williams, commander of the National Guard's 142d Signal Brigade, had been providing staff assistance to I Corps and its Active Component 29th Signal Battalion when, in 1984, LTG Joseph Palastra (who had just assumed command of I Corps), called Williams to his office to discuss some technical issues. Williams reminded Palastra, "Sir, the 29th is not under my command. I only have limited authority here." A few days later, 29th Signal Battalion was placed under Williams's command for "training operational control." This was a natural process, since 142d's soldiers had many years of Signal experience and 29th Signal Battalion had just been reactivated the previous year in 1983. However, this was the first time a National Guard commander had commanded Regular Army soldiers.

The "weekend" soldiers of 142d Signal Brigade first participated with I Corps and 29th Signal Battalion at Operation Cascade Thunder at Camp Shelby, Miss., in 1985. In 1986, when LTG Norman Schwarzkopf became I Corps commander, Williams asked to take 142d units to the Team Spirit exercise in Korea to work with 29th Signal Battalion. There was apprehension among Schwarzkopf's staff about National Guard soldiers being able to fulfill the mission, but Schwarzkopf told his staff, "If Teddy Williams wants to try it, I'm going to let him, and I want every one of you to give him your full support."

BG Teddy Williams, commander of the National Guard's 142d Signal Brigade.

The National Guard soldiers of 142d Signal Brigade supported I Corps and continued to work with 29th Signal Battalion throughout the 1980s and 1990s at all corps events, including major deployments to Korea for the annual Team Spirit exercises. Joint active and Reserve training was natural for I Corps, which is known as "America's Corps" because of its large number of National Guard and Army Reserve units throughout America.

The relationship between 142d and 29th continued to develop until Oct. 1, 1999, when 29th Signal Battalion was fully integrated under 142d Signal Brigade's command and control. The 142d's headquarters also integrated active-duty members into the headquarters in Alabama and National Guard members into the newly created 142d forward detachment at Fort Lewis, Wash. This made 142d the first multi-component U.S. Army command.

"Multi-compo" became necessary as a method of maintaining a viable force structure by reconciling current military strength and missions within available resources. It's actually a marriage of the best of two different worlds. Both Active Component and Reserve Component have strengths, which when blended together create a synergistic effect. AC soldiers are able to train year-round, whereas the average Reservist only trains for about two months out of the year. This means AC soldiers can be trained up and on-line quickly. However, these same soldiers may move to a different assignment or get out of the Army within a relatively short time. While RC soldiers require much more calendar time in training, they tend to remain in one unit for their entire career and may be available for as much as 20 to 25 years.

The long-term availability of the RC soldier strengthens and maintains a skill set necessary for Signal's skill-intensive equipment. One notable proof of this skill-set continuity is that the present 142d commander, BG Dallas Fanning, was an operations officer at the very first combined exercise (1985's Cascade Thunder at Camp Shelby) and has participated in several subsequent exercises. National Guardsman LTC Tim Mitchell, who served as a Signal operations officer for the most recent warfighter exercise, remembers the 1985 Camp Shelby exercise well: "We were just young soldiers and had no idea we were building a legacy that would affect thousands of soldiers in years to come."

Williams, who had been a forward observer as a lieutenant during the Korean War, spurred this legacy. "He was a soldier's commander," Fanning said. "He had the innate ability to ask us to do more than what we thought could be done, and we did it. I believe Schwarzkopf knew that when Williams said 142d Signal Brigade would do something, it would be done."

"(Williams) had the guts to go and work with Regular Army when nobody else would do it," added retired LTC Tommy Lovelady. "He was determined to advance 142d's image, and he succeeded. Williams had drive and passion about everything he did. He believed in us."

Williams' legacy was evident during the most recent I Corps warfighter exercise in November 2002, when 142d Signal Brigade provided 270 Signal soldiers from Alabama, 550 Signal soldiers from Fort Lewis' 29th Signal Battalion and 16 Signal soldiers from 63d Signal Battalion, Fort Gordon, Ga. The 142d's soldiers installed more than 40,000 feet of cabling, 23 Cisco network routers, 67 system-control switches and a plethora of other hardware to create an operational communications network for the exercise. This network allowed soldiers to communicate during the exercise scenario and also in real-world requirements through secured and unsecured intranet, videoteleconferencing, radio and digital-telephone networks. These networks were fully installed and operational before the warfighter participants arrived at Fort Lewis.

Using the latest technologies during the warfighter exercise, 142d's active and National Guard soldiers met and exceeded the corps and brigade commanders' voice, data and VTC requirements. The Signaleers filled the corps' communications needs by using a network of satellite and radio links, fiberoptic cabling and other "hard wire" cabling. Each day this network moved more than 100 gigabytes of data – data that could fill up enough 3 ½ inch floppy disks to make a 12-foot high stack. The Signal soldiers also transmitted more than 70,000 voice calls and expected to exceed 150,000 calls over the three-week period surrounding the warfighter.

"Without the 142d Signal Brigade soldiers, I Corps could not operate," said LTG Edward Soriano, I Corps' commander. "Communications are as important as our weapons systems. If we can't communicate, we can't perform our mission."

"We're proud that over a 20-year period, we've been able to integrate both our active and our Reserve Component soldiers into one team able to provide the communications required to meet I Corps' warfighter needs," Fanning said.

SFC Carney is 142d Signal Brigade's public-affairs noncommissioned officer in charge. Public-Affairs NCO SGT Richard Robbins contributed to this article.

ACRONYM QUICKSCAN

AC – Active Component
RC – Reserve Component
VTC – videoteleconferencing

Pulse

Commentaries and letters to the editor... to correct the "record and express opinions"

To the editor:

In his recent article [***Books***, Winter 2002 edition] on Signal failures during 1st Air Cavalry Division's engagements in the Ia Drang valley in November 1965, retired LTC David Fiedler wrote, "As 2/7 Cavalry closed on [Landing Zone] Albany, the Americans were met by a fierce [Viet Cong] attack. The attack's intensity and the VC force's positioning, in my opinion, could only have been accomplished with foreknowledge of U.S. intentions. Intercepting U.S. radio transmissions and reacting to them (again, in my opinion) is the only way the enemy would have obtained this knowledge."

Although People's Army of Vietnam writings on this engagement do not explicitly confirm Fiedler's view, they imply (in my opinion) that PAVN commanders had advance knowledge of 2/7 Cavalry's movement. I agree with Fiedler that PAVN commanders could have obtained that knowledge only by intercepting U.S. radio transmissions.

I worked in Signals intelligence from 1959 to 1963 and in diverse intelligence assignments from 1963 to my retirement from the Army in 1979. I've translated PAVN's official histories of its 325th and 304th infantry divisions (elements of 66th Regiment, 304th Infantry Division, were the principle PAVN forces that attacked 2/7 Cavalry). I had the opportunity in early 1970 to informally examine firsthand the original transcripts of VC intercepts of American military communications that our 1st Infantry Division collected [when U.S. soldiers captured a VC communications-intelligence platoon in 1969]. I also had opportunities to interact with many of our former adversaries during the four years (1991-1995) I worked in the U.S. Missing in Action Office in Hanoi.

My counterpart during those years was a PAVN senior colonel who had been the combat-operations officer (a position that combined many of the functions of our G-2 and G-3) for the important B3 Front Command (also known as the Western Highlands Front) during the war's latter years. We occasionally touched briefly on wartime signals intelligence, informally and in very general terms, during private conversation. On those occasions, my counterpart seemed to enjoy pointing out that American forces exercised poor communications-security practices during the war. He boasted that the B3 Front Command obtained a wealth of information by monitoring American radio and telephone communications. (Our long-distance telephone links were vulnerable to radio intercept.) Like myself, he was forever security conscious and, with one exception, always declined to be drawn into giving any details.

The one exception was a conversation in which he noted that it was often possible to obtain valuable information from American radio and telephone communications without translating the English-language content. For example, he explained, if PAVN monitors detected a sudden buildup of radio and telephone communications between 173d Airborne Brigade operating in the coastal Phu Yen Province and the American Special Forces camp at Dak To in Kontum Province, it was a certain tipoff that 173d was preparing to move up to the Dak To area. Basic traffic analysis.

On one occasion, I discussed signals intelligence informally and very briefly with the retired PAVN general who escorted the first group of formally trained PAVN cryptographers to South Vietnam in 1961. After arriving in the south, he became the head of the Party Military Affairs Committee of the Central Office for South Vietnam – in effect, the commander of Communist armed forces in B2 Front (roughly the same area as the Republic of Vietnam's 3d and 4th Corps tactical zones). He told me he had been impressed with the effectiveness of American communication-intelligence activities – in particular, our radio-direction-finding operations. To counter these operations, he said, he ordered Communist forces in his region to make a strong effort to eliminate our mobile RDF teams. He indicated that the ambush of a joint American and South Vietnamese mobile RDF team Dec. 22, 1961, in which SPC James Davis was killed, was the first successful implementation of that order.

In the early 1990s, I obtained a few Vietnamese publications dealing with military communications. The National Security Agency's Center for Cryptographic History translated one of those books and a portion of another book. For *Army Communicator* readers who might wish to read NSA's excellent unclassified translation, the Center for Cryptographic History published it in this booklet: *Essential Matters: a History of the Cryptographic Branch of the People's Army of Viet Nam, 1945-1975, with a Supplement on Cryptography in the Border Guard (formerly the Armed Public Security Forces) 1959-1989*, translated and edited by David Gaddy, U.S. Cryptographic History, Series No. 5, Publication No. CCH-E32-94-02, 1994.

Retired CW3 Robert DeStatte
Temecula, Calif.

(*Editor's note*: DeStatte – who is fluent in Vietnamese and Cambodian – served five years during the Vietnam War as a radio-communications intercept specialist and prisoner-of-war interrogator/captured documents and

equipment "exploiter." After he retired from the Army, he joined civil service to work in the Defense Intelligence Agency's POW/MIA office and the Defense POW and Missing Personnel Affairs Office until he retired in 2001. He has translated several Vietnamese war histories, including the 285-page *Chien Truong Tri-Thien-Hue trong cuoc Khang Chien chong My cuu nuoc toan thang* (*The Tri-Thien-Hue Theater in the War of Resistance, National Salvation and Total Victory against the Americans*), Thuan Hoa Publishers, Hue City, Vietnam, 1985.

SIPRNET CONNECTIVITY: DO'S AND DON'TS

by COL Tim Gibson

Do you have access to a secure Internet-protocol router network terminal on a regular basis?

If you answered yes, you're wrong, because there's no such thing as a SIPRNET terminal.

While this may seem a childish start for an article addressing a serious problem, understanding what the SIPRNET is – and what it isn't – is the key to recognizing and solving a series of security problems we currently see on the SIPRNET.

The SIPRNET is the Defense Department's communications backbone, used for passing tactical and operational information at the secret classification level. The Joint Staff J-6 and the National Security Agency, Defense Intelligence Agency and Defense Information Systems Agency directors administer the SIPRNET jointly. These officers are called the SIPRNET designated approving authorities. They and their representatives (normally the Defense Information Systems Network Security Accreditation Working Group) manage the shared risk of the SIPRNET system and decide who can connect when, where and how.

Attached to the SIPRNET backbone are local-area networks, certified to process secret data, which received permission to connect to the SIPRNET from the SIPRNET DAAs. These local networks fall under the local commander's (the local DAA) authority. The SIPRNET is the national-level network backbone under the control of national authorities, while the local networks are under local control.

Unfortunately, it's within the abilities – but not the authority – of local units to execute major changes to the SIPRNET without telling the national authorities. This is the heart of our current problems: local units making significant changes to SIPRNET topology or adding SIPRNET connections without properly coordinating the changes or having them reviewed by competent authorities. The SIPRNET DAAs can't do their primary job, managing the risk of the shared system, unless they know how the shared system is configured.

Roles and responsibilities of Army unit commanders.

Local approving authorities receive permission to connect local secret networks with specific configurations to the SIPRNET. (Incidentally, for purposes of SIPRNET connections, all Army unit commanders are local approving authorities because they have no direct control of the SIPRNET backbone, only their local networks. This is regardless of rank or position.) Once the local unit receives authority to operate its network, the local unit can make changes to the secret LAN within the scope of the original authority.

For example, if a secret local network was approved within a building and the commander wants to expand the network to another part of the building, this is completely acceptable as long as the required physical security requirements are met. All the local commander needs to do is inform the SIPRNET authorities of the change and document it. There is no reason for a completely new authority to operate.

However, these are the only types of changes the local commander can make without express permission from SIPRNET authorities outside the Army.

For example, if a unit is deploying from Europe or the continental United States to the Middle East, it's reasonable for the unit commander to expect SIPRNET capability upon arrival. Planning for this new connection requires time. Too often, the request is forgotten and so the unit's communications officer just "makes it happen" upon arrival in the Middle East, ignoring any security issues.

One way communications officers make it happen is to request a normal communications link, place military-grade cryptographic devices on each end and pass SIPRNET traffic through the link. Another way is to tunnel SIPRNET traffic through the unclassified military network or through the Internet via Taclane or Network Encryption System encryption devices. While either method is technically correct, the local commander bypasses SIPRNET authorities if either is used without permission, because both methods effectively extend the SIPRNET, changing the basic backbone configuration. Remember, no officer in any Army unit can grant permission to change SIPRNET connections or topology.

In summary, the local or regional commander/authority:

· ***May not*** grant interim or final approval on the design or equipment configuration for a new SIPRNET circuit. Only the SIPRNET DAAs or the DSAWG may approve the new circuit. Also, the local or regional commander/authority ***may not*** accredit the circuit or equipment configuration without having it verified by a DSAWG/SIPRNET project-manager designated activity;

· ***May not*** grant interim or final approval for the design or equipment configuration for a major SIPRNET topology change. This includes tunneling the SIPRNET through new or existing non-secure Internet-protocol router network or Internet connections, or extending an existing SIPRNET installation beyond the scope of the current accreditation;

· ***May not*** approve the interconnection of the SIPRNET with any

other network. This includes interconnecting the SIPRNET with the NIPRNET, Internet or anything else, or enabling a secret-and-below-interoperability guard such as a mail guard, data guard or data diode;

· ***May*** disapprove any design or equipment configuration submitted by subordinates;

· ***May*** authorize the expansion of the local classified SIPRNET LAN within the scope of an existing accreditation, as long as the accreditation change is documented and submitted up the SIPRNET approving chain;

· ***May*** regularly change the configuration for tactical SIPRNET connections. Tactical connections include those provided by mobile-subscriber-equipment and triservice-tactical type of systems. This is within the scope of the tactical-system accreditation. This authority ***does not*** include the long-haul or local fixed circuits that connect the tactical systems to the SIPRNET backbone.

Receiving permission to make or alter SIPRNET connections

If you need help with a SIPRNET connection, the best place to start is the local DISA field office. If there is no local office, you may contact the SIPRNET program-management office directly. The latter is very helpful and will assist customers with the forms and requirements for getting SIPRNET connectivity installed or extended.

While the process can be long, ranging from one to several months depending on the requirements, the SIPRNET program office works as quickly as possible and gives priority to urgent operational requests. Normally, if you begin the paperwork and engineering for SIPRNET connection changes when the initial communications planning begins, you will be fine. Problems arise when everything else is completed and the SIPRNET connectivity requirement is "remembered."

One way to possibly get faster service is to raise operational requirements through non-Army channels. Army units deploying for operations overseas are under the control of a unified combatant command (for example, Central Command). Requests from combatant commanders or their J-6 often receive more attention and a higher priority than similar requests from Army channels. If this seems unfair, remember the Army's mission is to train, maintain and equip the ground-combat force. The "Army" doesn't conduct operations; Army units conduct operations under a joint-task-force commander or unified combatant commander. Hence, requests from combatant commands have a higher likelihood of being "operational" than requests from Army administrative channels.

Why we need to follow the rules

The SIPRNET is a fairly fragile system with more than 400,000 users, equally sharing risk. There are very few internal controls and little compartmentalization within the system – once you have access, you're in. Because of the system's fragility, physical-access controls must be kept tight. A poorly secured computer with dial-up secret access in Chicago is just as much of a threat as a misconfigured system in the Middle East.

One aspect of physical security is to know where the system extends and how it's secured. These details are part of the normal SIPRNET connection-approval process. If a unit extends its secret network to another location without permission or interconnects the secret LAN with the Internet because it makes administration easier (this actually happens), the unit puts all networks connected to the SIPRNET at risk. One possible consequence of ignoring the rules is having the unit's SIPRNET connection terminated, regardless of the operational consequences (this also happens from time to time).

Operational security today is paramount. Properly secured, configured and documented networks are an integral part of operational security for network-centric warfare. Otherwise, the network cannot be fully trusted … and an untrusted network is useless. No networks, no network-centric warfare.

References. CJCSI 6211.02A, ***Defense Information System Network and Connected Systems***; DISA, ***SIPRNET Customer Connection Process Guide***; DISA, AUTODIN message 121713Z DEC 95, subject: SIPRNET interim-connection requirements.

More information about the SIPRNET connection process can be found at http://giap.disa.smil.mil.

Points of contact

At Joint Staff J-6, contact MAJ David Phillips, (703) 697-4503 (DSN 227-4503), or email David.Phillips@js.pentagon.mil for connection validation. For information on the SIPRNET connection process, call Cmdr. Scott Fish, (703) 697-8896.

There are several POCs at DISA. The SIPRNET program manager is Joe Alvarez, (703) 882-0190 (DSN 381-0190)/NS52. The classified-networks customer-service manager is Jim Nostrant, (703) 882-0191 (DSN 381-0191)/NS52, nostranj@ncr.disa.mil.

The Army's and Air Force's customer-service representative is Keefe Matthews, (703) 882-1956 (DSN 381-1956). The Navy's/Defense Department's customer-service representative is Riginald Bethune, (703) 882-0813 (DSN 381-0813).

Call the SIPRNET connection-approval office at (703) 882-1455 (DSN 381-1455).

Contact SIPRNET security managers John Staples, (703) 882-2116 (DSN 381-2116)/NS52, email staplesj@ncr.disa.mil, or Holly Kvitek, (703) 882-2115 (DSN 381-2115)/NS52, email kvitekh@ncr.disa.mil.

COL Gibson is technical director for the Joint Task Force for

Computer Network Operations at U.S. Strategic Command.

BE A BANDWIDTH NIBBLER, NOT A KOBAYASHI

by LTG Peter Cuviello

Given two options for eating hot dogs at lunch, we can take the refined route and nibble on them one bite at a time. Or, we can emulate Japanese professional speed-eater Takeru "The Tsunami" Kobayashi, who crammed 50 hot dogs down his throat in 12 minutes at a competitive-eating contest last July at New York's Coney Island.

Kobayashi's maneuver clearly repels us. And yet, when it comes to stuffing huge amounts of data into the emails we send, we're imitating Kobayashi's feat – except that the 113-pound self-proclaimed "Tsunami" kept his meal down. Our huge email attachments so upset the flow of available bandwidth that our computer networks swiftly regurgitate them back at us as undeliverable.

Bandwidth, of course, is just a fancy way of describing how fast information can be carried through a phone line, cable line, satellite feed and so on. When we choke our bandwidth with the file equivalent of 50 hot dogs, we clog, and in some cases, obstruct, our systems. In contrast, we can easily swallow a bite of one hot dog better than we can 50 barely chewed ones at the same time.

This is no idle consideration. Soldiers deploying today need every bit of bandwidth for their network-centric operations. The old method of attaching large files to an email and broadcasting it via sequential chain-mail to entire garrisons, major commands or the Army-wide workforce requires huge chunks of bandwidth and brings networks and in-boxes to a crawl. Unless we do our part to preserve the smooth operation of the Army's bandwidth, we will be putting our warfighters' security and success at risk.

Fortunately, there's an easy fix, simply by restricting what we send out as attachments to email. Instead of emailing large files, such as slide charts, announcement flyers, videoclips (among others), we should simply upload them to a collaboration area on Army Knowledge On-line, the Army portal located at www.us.army.mil. Once posted on AKO, we can send out to all concerned a brief AKO message that contains a link to the item. This way, instead of sending millions of bytes of data, only a few thousand are sent.

This AKO method minimizes the burden on bandwidth, networks and in-boxes and allows us to use limited bandwidth for those essential operational-mission requirements. It also eliminates the need for thousands of people to resend and/or store the same large files on their computers' hard drives or fileservers all over the Army.

That's because AKO's Knowledge Collaboration Center essentially is now your hard drive, accessible to the whole Army, and with just one copy on one server. The KCC areas can also be limited to just a few persons you select yourself. AKO has a full set of self-teaching tutorials, and we've backed it up with round-the-clock help-desk support.

The Army has invested heavily in the AKO portal and portal technology. We believe the KCC offers everyone a smarter and better way to achieve the same end results, while enabling all to be good stewards of limited bandwidth resources.

So, do your part. Stop sending large enclosures via email and start using the AKO portal to the maximum. Be a bandwidth nibbler, not a Kobayashi.

LTG Cuviello is the Army's chief information officer/G-6.

ACRONYM QUICKSCAN

AKO – Army Knowledge On-line
DAA – designated approving authority
DISA – Defense Information Systems Agency
DSAWG – D(efense Information Systems Network) Security Accreditation Working Group
KCC – Knowledge Collaboration Center
LAN – local-area network
MIA – missing in action
NIPRNET – non-secure Internet-protocol router network
NSA – National Security Agency
PAVN – People's Army of Vietnam
POC – point of contact
POW – prisoner of war
RDF – radio direction finding
SIPRNET – secure/secret Internet-protocol router network
VC – Viet Cong

A costly lesson

Project Touchdown: how we paid the price for lack of communications security in Vietnam

by David Fiedler

In late 1969, I and every other member of 1st Signal Brigade and 160th Signal Group's 44th Signal Battalion were searching for Viet Cong or North Vietnamese Army spies within our local-hire Signal workforce. (The Vietnamese locals were mostly base-camp telephone-switchboard operators, installers and repair personnel that 1st Signal Brigade employed in its base-camp facilities.) At that time, the G-2, U.S. Army Vietnam – our command headquarters – was convinced that, because so much of our operational information was apparently in the enemy's hands and we were taking such high casualties, espionage on a large scale was the only possible explanation.

G-2 also felt that the most likely location for espionage was at major Signal locations where operational information was concentrated and there was also a large local civilian workforce. In fact, in 44th Signal Battalion, we caught one of our cleaning women with a stolen manual for the AN/FRC-93 high-frequency radio (also known commercially as the Collins KWM-2A) at a gate search. She was turned over to the Vietnamese National Police, which was probably tantamount to a death sentence for the woman, and that bothers me even today because she was probably innocent. She probably wanted the manual for toilet paper, since such a use for publications was common among the Vietnamese.

Almost everyone was quite happy with this "spy capture" except myself and a few others. We failed to see how obtaining a manual that could be bought in any amateur radio store in America would be of much value as technical intelligence to the enemy. In addition, we thought our losses were clearly the result of operational, not technical, communications intelligence.

No spy ring, just arrogance

Thanks to our battalion S-2, 44th Signal Battalion soldiers were aware as early as 1965 that the enemy was probably monitoring USARV tactical-radio nets. The Army Security Agency tried to make everyone else a believer in this, too. However, as I mentioned in my article in the last *Army Communicator* [*Books*, Winter 2002 edition], despite ASA's many warnings, it was USARV's official opinion that the NVA/VC had no equipment capable of monitoring U.S. tactical-radio nets, nor could they understand English well enough to use the information if they had the equipment and, most importantly, our tactical forces moved so fast and our actions on the battlefield were so quick that even if the enemy managed to acquire some information from our tactical-radio nets, it would do them no good and us no harm. That arrogance was to cost us dearly.

At this point, it's important to know that by 1965 frequency-modulation voice radio had been deployed to every level of command from squad to corps (and higher). It's also important to know that this radio equipment, AN/PRT-4 and AN/PRR-9 (handheld radios for squads or platoons), AN/PRC-25 (manpack and vehicular for platoon, company or battalion) and AN/VRC-46 (vehicular, platoon through corps and higher) *did not* have any communications-security provisions at the Vietnam War's outset.

Since there was no COMSEC device, either internal or external, provided to this equipment until late in the conflict, the only solution was to constantly stress the vulnerability of FM voice radio to intercept and analysis and to carefully use Signal operating instructions, off-line (paper) operations codes and authentication tables (challenge and reply) to provide net security. As I said, however, before late 1969, the USARV and Military Assistance Command Vietnam commanders steadfastly refused to believe there was a real COMINT threat. This attitude was reflected across the entire force at every level.

Accordingly, since existing operations codes and authentication tables were cumbersome for the typical poorly trained FM voice radio operators (most of who were officers and senior noncommissioned officers) to use, they were rarely employed. Field commanders clearly believed that time was more important than security. This view was reinforced in the combat-arms training base, where very little time was devoted to communications subjects, even though the Signal Corps had declared combat-net-radio equipment to be "user-owned and -operated."

Unit Signal officers (S-6/G-6) magnified the hemorrhage of vital tactical information over the radio because many of these officers were cowed by higher headquarters and tactical commanders into also believing there was no COMINT threat. By direction, Signal officers rarely, if ever, took even the minimal action of just simply changing net call signs and frequencies.

Taken together, our COMSEC laxness – created by our arrogant assessment of the enemy's capabilities and intelligence – led to a massive opportunity to intercept and exploit our tactical FM communica-

tions nets our astute enemy used to extreme advantage.

While we in the Signal Corps tout good communications as a combat multiplier, we rarely mention that Vietnam proved enemy exploitation of our communications is deadly. No one to my knowledge has ever been able to calculate the number of names on the Vietnam Wall due to poor COMSEC, but all indications are that the number is considerable. The number of Americans killed and wounded in action due to lack of radio security certainly must, in my opinion, far exceed the much-publicized losses due to friendly fire or non-combat related deaths due to accidents, for example.

The blame for this unfortunately lies squarely with the major U.S. field commands (MACV and USARV), the Signal Corps leadership and the Signal schools at Fort Gordon, Ga., and Fort Monmouth, N.J. Compounding the "user-owned and -operated" COMSEC disaster was the concept that tactical-unit Signal officers (S-6s) could be trained in nine weeks at Fort Gordon in the Signal Officer Basic Course.

These basic Signal officers (Military-Occupation Specialty 0200) were then assigned to tactical units in the United States or Europe for periods as short as eight months where, according to the Signal Corps, they would learn their job on the job, be promoted to first lieutenant and then deployed to Vietnam.

The result of this concept speaks for itself, since most Signal officers when assigned to tactical units did very little Signal work, had no formal training while in these assignments and no Signal standards to meet while in these assignments.

Embarrassed by Alpha-3

Fortunately, in late December 1969 – almost four years after the U.S. Army deployed major units to Vietnam and after four years of exposing our combat-radio nets to exploitation – the situation changed dramatically. On the morning of Dec. 20, 1969, a scout from 1st Brigade, 1st Infantry Division, discovered a long wire antenna on the ground at the old Michelin rubber plantation in the area northwest of Saigon. The antenna wire led to a carefully concealed underground bunker complex that was packed with enemy radio-communications intercept equipment. This complex was the operations center for an NVA/VC platoon-sized radio "technical reconnaissance unit" known as Alpha-3 that was part of the NVA's 47th Technical Reconnaissance Battalion.

After a short fight, 12 members of Alpha-3 were taken prisoner. Even more significant, however, was the fact that U.S. infantry also captured all of Alpha-3's equipment and its logbooks. These logbooks proved without doubt that the enemy had been intercepting U.S. voice radio traffic over an extended period of time, understood the exact meaning of the traffic and were able to easily decrypt and understand traffic covered by unauthorized (locally made) codes and infrequent SOI changes.

Alpha-3's actual intercept equipment wasn't the product of some super-secret Soviet or Chinese version of Fort Monmouth or the Massachusetts Institute of Technology labs. Alpha-3's stuff consisted mostly of captured AN/PRC-25 or AN/PRC-77 radios and others bought from our South Vietnam allies or through third parties. Obviously, this equipment was 100 percent interoperable with the radios in our units since it was identical to our equipment. Supplementing the captured or acquired U.S. standard very-high-frequency equipment, Alpha-3 had several Chinese R-139 HF receivers and a good number of Sony and Panasonic commercial radios they had simply modified to work in the U.S. tactical-frequency bands.

Alpha-3's hardware engineering wasn't without some imagination, though. At the time, all U.S. units were suffering from a critical shortage of BA-4386 magnesium batteries. Alpha-3 soldiers discovered they could solder together eight BA-30 D-cell flashlight batteries (no shortage of these) and produce the 12 volts of direct-current power the AN/PRC-25 needed to receive signals.

In addition, unlike U.S. forces, the NVA Signal establishment was able to impart to Alpha-3 an appreciation of the critical role antenna engineering plays in any radio system. Compared to Fort Gordon graduates of both then and now, Alpha-3 personnel were antenna geniuses. With this knowledge, Alpha-3 was able to produce antennas that extended the normal operating distances of their radio-intercept receivers far beyond their expected range.

This lesson needs to be remembered today as the Army adopts more non-COMSEC-protected radios, radio/intercoms and wireless local-area network equipment with the expectation that their low radiated-signal levels will protect them from enemy interception and exploitation. The Alpha-3 experience teaches us that nothing could be further from the truth. Supposedly ignorant Third World Alpha-3 soldiers were expert enough to actually build radio receivers in the field from new and used parts obtained or manufactured locally. Very few U.S. Army Signal Corps personnel either then or now could duplicate this capability.

The most shocking thing about Alpha-3 platoon's capture by far, however, wasn't its intercept equipment or its ability as antenna engineers, but rather its station logbooks, training materials and knowledge of U.S. operational CNR doctrine and procedures. In short, Alpha-3 was reading our mail and knew exactly what it meant and what to do about it. U.S. infantrymen found handwritten logs containing the texts of American voice conversations transcribed verbatim in English and then analyzed by excellent English linguists.

The 47th Technical Reconnaissance Battalion was primarily interested in plain-language and brevity-coded voice communications its intercept operators had no

problem understanding. Of particular interest were forward air controller, forward observer, command-and-control and civilian press communications. The civilian press, in fact, proved to be a great source of immediate operational information throughout the war. Present-day commanders should take a lesson from this when considering allowing the civilian press and its normally uncovered communications (satellite phone, cellphone, etc.) into their operations area. A better approach may be to let the press use COMSEC-protected military communications to avoid immediate disclosure of critical operational information.

The Alpha-3 logs showed us that back in 1965 we were passing this operations-security information over the air in the clear because we underestimated the enemy's COMINT capabilities:

· Artillery target information (in time for the enemy to take cover);

· Artillery harassment-and-interdiction fire schedules (in time for the enemy to stay clear of targeted locations);

· Ambush site locations (bringing up the question of who ambushed who);

· Casualty reports;

· Air strike (B-52) warnings;

· Friendly troop positions;

· Radio-net call sign and frequency changes;

· Unit status reports;

· Plans and orders; and

· Idle operator chitchat containing all sorts of operational information.

More examination of captured enemy material also revealed the enemy had deduced from their COMINT operations the following general characteristics about our CNR operations and could exploit them:

· U.S. units made extensive use of locally produced unauthorized codes, many of the "point of origin" or Sardot type, which the NVA/VC had no difficulty cracking. Alpha-3's logs clearly show many locally invented coded transmissions transcribed verbatim and then the plain English meaning of the transmission written next to it. The seriousness of this action was magnified many times because U.S. operators were convinced their transmissions sounded great over the radio, were fully secure and could only be understood by friendly forces. The amount of tactical advantage given to the enemy because of this false sense of security can only be imagined.

· Captured 47th Technical Reconnaissance Battalion training material stated that U.S. units didn't change call signs or frequencies very often, but when they did, some frequencies or other components were often retained from the previous net structure. The material went on to explain how to recover unit identity after an SOI change. An example was shown of operator chitchat where one operator told another the details of an SOI change (old call sign to new call sign, old frequency to new frequency) many hours before the actual change. In this case, 47th Technical Reconnaissance Battalion made the change faster than the U.S. unit, who had coordination problems. The 47th Technical Reconnaissance Battalion's interceptors had already been waiting for several hours on the new frequencies by the time the U.S. unit got its problems sorted out.

· U.S. units often failed to use authentication procedures in a deception environment. This was particularly evident under a higher-stress situation such as medical evacuation, search-and-rescue, quick-fire artillery targets and units in contact with the enemy. The NVA's imitative communications deception could exploit this U.S. characteristic to lure evacuation and SAR aircraft into preplanned "kill boxes," misdirect artillery fire to harmless locations or on to U.S. forces and disrupt, confuse and expose maneuvering U.S. troops. I personally saw this at work in 1969, when an unauthenticated transmission caused 69th Signal Battalion's base camp at Ben Hua to be shelled, producing produced several casualties.

· U.S. radio operators, many of who were field-grade commissioned officers and senior noncommissioned officerss, lacked proper circuit discipline. These operators were prone to long chats over the air that invariably led to the disclosure of important operational information.

· Prior to major operations, COMSEC levels didn't increase. This led to disclosure of some useful information before almost every U.S. operation.

· Secure communications equipment, if available, was almost never used between 1965 and 1969, since the equipment (Nestor) was bulky and the S-6 staff had problems structuring mixed COMSEC and non-COMSEC radio nets. This changed after the capture of Alpha-3, when a crash program began immediately to install COMSEC equipment in vehicles and aircraft. Equipment bulk was not a problem on these platforms but was for manpack operations, so equipping the light infantry lagged. Unfortunately, the bulk of U.S. combat forces were light infantry.

· Radio operators in tactical units generally failed to acknowledge radio communications' vulnerability to COMINT. After Alpha-3's capture, great pressure was brought upon the Signal Corps to improve operator training. This was done in many maneuver units, but since most equipment was "user-owned and -operated," operator training was considered out of Signal's control and thus improvements were difficult, spotty and depended on the unit's S-6 and staff's quality and training. Mindsets were also very hard to change in maneuver units, where Signal officers weren't particularly well regarded as communications experts, sometimes with good reason.

If these revelations weren't shocking enough, the Alpha-3 treasure trove of training documents also showed how extracted information from radio transmissions was used against specific units such as 11th Armored Cavalry Regiment, 1st Infantry Division, 25th Infantry

Division and 1st Cavalry Division. The 47th Technical Reconnaissance Battalion actually profiled these major U.S. units based on CNR intercepts. Some typical examples of unit profiling were:

· Normal modes of transportation, down to identifying vehicle types and characteristics. The VC/NVA, according to Alpha-3, had a healthy respect for the M-113 family of armored personnel carriers and the UH-1 helicopter. The M-151 jeep didn't particularly impress them, neither did the Stryker-like V-100 armored car U.S. military policemen used.

· Unit areas of operation. The enemy usually knew which U.S. unit was opposing them and within what areas the unit operated.

· Methods of navigation. The enemy knew which units were using landmarks to determine position and what the landmarks were.

· Unit message formats and radio procedures.

· Unit composition, weapons and capabilities.

· Radio-net traffic volume and what it meant.

Also, 47th Technical Reconnaissance Battalion was sophisticated enough to actually analyze the tone and content of unit radio traffic and used the analysis to predict unit actions. There is considerable information that 47th knew much of this type of data before the Tet 1968 enemy offensive and used it against us extensively during that action. After Alpha-3 was captured in 1969, a new emphasis was placed on COMSEC in U.S. combat units. Long-dormant Signal staff officers began to enforce long-disregarded COMSEC directives, such as station authentication and encryption of coordinates, due to pressure from their combat-arms commanders.

Project Touchdown

The information that Alpha-3's logs contained astounded the USARV commander, GEN Creighton Abrams. A surviving audio record of Abrams' reaction to this (I've personally listened to it) reveals an obviously shaken commander completely floored by proof that our enemy had been intercepting and exploiting our tactical-voice-radio communications on a grand scale and there was no spy organization to be busted.

After this, Abrams' hostility to Signal Corps officers, our training, doctrine and tactics as taught and conceived at Fort Gordon – and particularly Signal officers in S-6/G-6 assignments battalion through corps – is legendary. Led by the MACV high command, the Signal Corps quickly became the target for an unmerciful attack by our combat-arms brethren, who at the time needed a blood sacrifice and something to blame for why the ground war was not going particularly well. Unfortunately, much of the attack was well deserved.

The Army got so serious about placing the blame mostly on the Signal Corps that the National Security Agency – the folks responsible for producing codes, ciphers and COMSEC equipment, not the Signal Corps (whom Army headquarters assumed would lack objectivity) – was directed to produce detailed briefings, training materials and movies exposing how Army combat communications were being exploited in Vietnam. In their effort to expunge themselves from blame, top commanders declassified this information and used it to justify procuring new, less vulnerable CNR equipment (Nestor, Vinson, the Single-Channel Ground and Airborne Radio System) as well as establishing larger field COMSEC organizations controlled by G-2, not the Signal Corps. The name for this exposure effort was Project Touchdown, and the Army distributed its highly embarrassing training materials under that name for many years.

Relevance for today

Many today will say of what relevance is this almost 40-year-old information to today's Army and Signal Corps? I say:

· Never underestimate the capabilities of your "electronic enemy." Technology needs to be applied with a good dose of common military sense today more than ever. Even a technologically unsophisticated enemy like 47th Technical Reconnaissance Battalion can find a flaw in something we do and exploit it. Command, control, communications, computers, intelligence, surveillance and reconnaissance systems are often the most vulnerable to exploitation – the Signal Corps is the heart of C4ISR, so be alert.

· The trained S-6 is key to protecting combat units from COMINT and other forms of communications and automation exploitation. Assignment of junior, inexperienced, minimally trained officers to S-6 positions in maneuver units leads directly to defeat on the battlefield, as the Vietnam experience proved.

· We need better, longer, more intensive S-6 specific subject-matter training at the Signal Center.

· Signal officers need to move from Signal-unit to maneuver-unit assignments freely so they learn all aspects of the Signal profession. Certainly maneuver S-6 assignments need to have equal career importance with the much-sought-after Signal battalion/company, joint and Department of the Army staff assignments. S-6 assignments cannot be allowed to turn into career dead ends.

· COMSEC and OPSEC procedures properly applied in Vietnam would have kept many names off that famous wall in Washington. In the most glaring cases of Tet 1968 and 7th Cavalry/1st Calvary Division at Ia Drang 1969, we'll never know how many lives could have been saved by a few well-trained Signal officers aggressively doing their jobs in spite of what others may have thought. In my opinion, the number would have been considerable.

Over the years since Vietnam, the temptation to relax COMSEC and OPSEC requirements for the sake of convenience, ease of operation, cost, time or just plain laziness continues to rear its ugly head. While all CNRs in tactical units now

have either embedded or external COMSEC devices, the temptation not to use them or not to change the COMSEC keys, for instance, has triumphed too often. The devices and proper net-operations procedures do no good if you don't use them.

Also, to satisfy their commander's perceived need for more communications, some S-6s have sanctioned the use of unprotected radio equipment to supplement organic protected CNRs. Initially, modified amateur (ham) radios were used, followed by citizen-band radios (particularly during the CB craze of the 1970s) and, most recently, by Family Radio Service radios – which can be easily obtained, don't even require a Federal Communications Commission license and have been seen in some units, even outside the continental United States. Sometimes this equipment is disguised with names like wireless LAN, soldier intercom, brand-name brick, wireless orderwire, cellular telephone and cellular telephone walkie-talkie – and now even voice-over-Internet-protocol and others.

Users invariably treat these devices as if they were secure U.S. Type I COMSEC protected CNRs. If you don't believe me, the next time you're in an operational situation, see if anyone on a cellphone is authenticating the station on the other end, using operations codes or encrypting location coordinates.

If we learned nothing else from Vietnam and Alpha-3, it's that this sort of thing gets people killed and must be stopped. Only the competent, well-trained and aggressive S-6/G-6 is able to do this, so let's get on with it!

Mr. Fiedler – a retired Signal Corps lieutenant colonel – is an engineer and project director at the project manager for tactical-radio communications systems, Fort Monmouth. Past assignments include service with Army avionics, electronic warfare, combat-surveillance and target-acquisition laboratories, Army Communications Systems Agency, PM for mobile-subscriber equipment, PM-SINCGARS and PM for All-Source Analysis System. He's also served as assistant PM, field-office chief and director of integration for the Joint Tactical Fusion Program, a field-operating agency of the deputy chief of staff for operations. Fiedler has served in Army, Army Reserve and Army National Guard Signal, infantry and armor units and as a DA civilian engineer since 1971. He holds degrees in both physics and engineering and a master's degree in industrial management. He is the author of many articles in the fields of combat communications and electronic warfare.

ACRONYM QUICKSCAN

ASA – Army Security Agency
C4ISR – command, control, communications, computers, intelligence, surveillance and reconnaissance
CB – citizens band
CNR – combat-net radio
COMINT – communications intelligence
COMSEC – communications security
DA – Department of the Army
FM – frequency modulation
HF – high frequency
LAN – local-area network
MACV – Military Assistance Command Vietnam
NVA – North Vietnamese Army
OPSEC – operations security
PM – project manager
SAR – search and rescue
SOI – Signal operating instructions
USARV – U.S. Army Vietnam
VC – Viet Cong

Circuit check

News and trends of interest to the Signal Regiment

NEWS

112TH SIGNAL BATTALION SOLDIERS GET VALOR AWARDS

by CPT Brad Mills

FORT BRAGG, N.C. – Three radio operator-maintainers (Military Occupation Specialty 31C) were recently awarded the first valor medals ever given in 112th Signal Battalion for their valor in Afghanistan.

MG Geoffrey Lambert, Special Forces Command's commander, pinned the Bronze Star with "V" device on SSG Robert Barnes and Army Commendation Medals with "V" devices on SGT Jesse Janicek and SPC Justin Bandura.

They earned their medals the night of March 19, 2002. Barnes, Janicek and Bandura – members of 112th Signal Battalion's Special Operations Communications Assembly team – had been supporting a Special Forces company's advance-operating base with single ultra-high-frequency tactical satellite and high-frequency radio communications at Chapman Airfield in Khowst, Afghanistan. Then the airfield came under attack by Taliban and Al-Qaeda fighters.

For the next hour, Special Forces soldiers and 112th Signaleers battled the fighters, who were trying to capture the airfield so they could destroy the logistics and supply base that Special Forces units in the area were using. Barnes dodged gunfire to reposition two communications antennas in the dark, then called for close air-fire support of nearby A-10 and AC-130 Spector gunships. In a moment's notice the AC-130s and A-10s were attacking Al-Qaeda and Taliban machinegun emplacements and 107mm mortar positions.

Without tacsat communications from the PSC-5 Spitfire radio, the fight on Khowst's airfield may not have been decisive between Special Forces and the terrorists.

"All the training in the world doesn't prepare you," Barnes said. "Well, it prepares you, but you only have one split second to put all that into practice. I was terrified, but we all had a job to do."

CPT Mills is 112th Signal Battalion's adjutant.

COMMUNICATIONS-ELECTRONICS COMMAND ENGINEER NABS THOMAS EDISON AWARD

FORT MONMOUTH, N.J. – The Research and Development Council of New Jersey recently honored a Communications-Electronics Command employee for his invention.

Dr. Wei Su, an electronics engineer with the Intelligence and Information Warfare Directorate, received the 2002 Thomas Alva Edison Patent Award for his innovative method that enhances the performance of electronic systems.

Most electronic communications systems use crystal oscillators as timing devices, which are subject to noise induced by vibrations. In military products, these vibrations can affect anything from radar equipment's accuracy to weapons systems' precision.

By eliminating vibration-induced noise on electronic military systems mounted on moving platforms such as missiles, helicopters and tanks, false alarms and identifications will be prevented and overall performance will be enhanced.

Su's method, "Phase and Magnitude Compensated Tuning for Suppression of Vibration Frequencies," provides an inexpensive solution to eliminate vibration-induced mechanical noise by sending out a compensated electronic signal that suppresses it, thus enabling systems to perform more accurately.

In addition to being of critical importance for the military, the invention is also valuable to the private sector for commercial electronic-timing devices.

Su's invention won the Edison Award in the defense category, which includes nominees from both government and industry. Other categories for the prestigious award are industrial, electronic-information technology, university-technology transfer, medical health and agricultural.

Su holds eight patents, is a senior member of the Institute of Electrical and Electronics Engineers and has authored more than 60 technical articles.

NINE TEAM SIGNALEERS SUPPORT WARFIGHTER 2002

by SPC Adrienne Gardner

FORT LEWIS, Wash. – Nine 516th Signal Brigade soldiers joined nine others from the Army Reserve and Air National Guard to make up the J-6 (communications) staff for the high-command joint task force supporting I Corps' Warfighter Exercise 2002 held October-November 2002 in the fictitious country of Pacifica (Fort Lewis).

The J-6's mission was to support the 150-member HICON JTF staff with joint command-and-control communications, voice, data help-desk and ongoing command, control, communications and computers real-world missions.

The J-6 support team's vanguard of six arrived at Pacifica early

to install initial communications for the HICON J-staff. Initial installation included running and terminating 3,500 feet of Category 5 local-area network cable, placing switches in their respective areas and establishing a non-secure (unclassified) Internet protocol routed network and secure IPRNET (classified) Internet "café."

The café's main focus was to provide the HICON J-staff access to their garrison NIPRNET and SIPRNET email accounts via on-line web access provided by 30th Signal Battalion. This enabled staff members to participate in the WFX while also remaining current in U.S. Army Pacific's real-world missions requiring their support.

The café also provided snacks, drinks, coffee, television entertainment and heat – especially during the night shift, when Washington temperatures dropped below a brisk 30 degrees.

The rest of the J-6 support team, which arrived at later dates in October, consisted of 12 more people from the Army and Air National Guard, making the WFX a true joint endeavor for the J-6. "This exercise provided the HICON J-staff an opportunity to train in a simulated environment representing a real-world operation," said LTC Stephen Donahue, who served as the J-6 officer-in-charge. "The HICON J-staff learned how to become a more synchronized staff while providing support to I Corps units, which enhanced their ability to achieve their goals and objectives while operating in Pacific."

Communications throughout the exercise were on the C2 wide-area network, which provided an automated means to not only collaborate between staff members but to also monitor the movement of all forces through the common operating picture.

The request-for-information website, which the USARPAC staff uses in garrison, was deployed to Pacifica and transferred to the I Corps webserver, where it was used during the WFX. USARPAC also deployed a portion of its website, providing valuable campaign-information exchange among the HICON J-staff throughout the exercise.

"Information management was so critical to the warfighter that it was the HICON JTF J-6's responsibility to keep communications and automated services operational," Donahue said. "This was to ensure the JTF J-staff could remain engaged in the fight, providing valuable information to the HICON commander, LTG James Campbell, so he could make well-informed decisions throughout the campaign."

At the last battle-update briefing, the JTF J-staff was greeted by two retired four-star generals – GENs Thomas Schwartz and William Crouch – and retired three-star general LTG David Grange Jr.

"During the briefing, they stressed the importance and value in participating in a WFX such as this one," Donahue noted. "It's an excellent opportunity for the commander to test the unit's ability to deploy and maintain effective C2 throughout the deployment, and to make an overall assessment of the unit's go-to-war readiness."

The retired generals provided senior-leadership observation, mentorship and real-world experience throughout the exercise, which offered a realistic view of situations that could be encountered in combat. I Corps commander LTG Edward Soriano, who also attended the BUB, briefed the JTF on the exercise's progress and how his troops were doing during the WFX. He also outlined what was needed to obtain objectives and win the battle.

Donahue remarked that the J-6 staff's success was due to its "purple-ish (joint) mix."

"We had members of the active Army, Army Reserves and Air National Guard from five separate commands pulling together for the 'one team, one fight' concept," he noted. "As purple as we were, our operations were fairly transparent to the staff, which was a good thing.

"Overall, the I Corps WFX was extremely successful, and the J-6 was properly staffed to provide timely and efficient C4 capabilities to the USARPAC-led J-staff," Donahue said. "This exercise offered a great learning experience to those who had never participated in a WFX previously. It offered insight into real-world campaigns which are currently going on in virtually every region of the world today."

SPC Adrienne Gardner, a network technician with USARPAC's G-6/516th Signal Brigade's Global Command and Control System Division, agreed. "Although you can prepare for events you may encounter in combat or operations-other-than-war, nothing can prepare you for what may actually take place in the field – but it's always better to have the training and not need it than to need the training and not have it," said Gardner. "It was a great 'one team/Team Signal' effort!"

SPC Gardner is assigned to 516th Signal Brigade.

KUNIA BEGINS GSC-52 MODERNIZATION

by SFC Christopher Shamberger

KUNIA, Hawaii – The Kunia satellite communications AN/GSC-52 terminal underwent a major upgrade this winter. The upgrade started in November and ran though February.

"The upgrade will extend the life of the AN/GSC-52 state-of-the-art medium terminal," said LTC Rich Volz, commander, 30th Signal Battalion.

"The upgrade will also enhance our ability to control and monitor the terminal," Volz explained. "Finally, the upgrade will provide our customers increased bandwidth and availability of circuits. It will provide our terminal with an increased commonality with the other Defense Satellite Communications System strategic terminals."

During the upgrade, the elevated equipment room, operations van and maintenance van was replaced. A ground-mounted chiller unit was added to the terminal, which will cool the amplifiers and

other associated equipment.

"With this upgrade, the Kunia SATCOM facility will be fully capable of providing warfighter connectivity from both the garrison and tactical environments," Volz said.

SFC Shamberger is assigned to 396th Signal Company.

RESERVE SIGNALEERS OPEN CISCO ACADEMY

by 1LT Shawn Herron

FORT MEADE, Md. – 311th Theater Signal Command, an Army Reserve unit based here, made history in August 2002 when it welcomed the first students into its Cisco Systems Networking Academy. This event marked the first and only certified Cisco Academy in the Army Reserve.

Spearheaded by MAJ Bernard Smith, Cisco Academy program manager, the impetus behind the establishment was simple and important: training. Army Reserve Signaleers needed a way to complete training commensurate with their active-duty counterparts. While this problem may be simply stated, the solution isn't so clear.

The level of knowledge required to set up and deploy systems with the new network standards continually rises. Everybody now requires email, access to web resources and web-based reporting systems to do their jobs. That is all data networking and it's all new, according to MAJ Kenneth Runyon, network-operations development officer for 311th Theater Signal Command. Before, if you could pick up a green phone, dial a number and connect, it was a go. That's not good enough anymore.

"Whether you provide satellite, voice or data communications," said Smith, "it all links to a router." Having someone trained to configure those routers and associated network designs is critical to successful Signal operations in today's network-centric Army.

The Signal Regiment trains switch operators, radio operators and cable installers, and we need to

Cisco is spearheaded by MAJ Bernard Smith, Cisco Academy program manager, Fort Meade, Md.

maintain this, but we also need to train soldiers to be router operators. "They'll be out there configuring routers – whether it's a strategic or tactical site," said Runyon. "We need to maintain our transmission-oriented competencies and expand the data-oriented services we provide."

The skills the Cisco Academy teaches are fundamental to this competency. The 311th Theater Signal Command's academy currently provides instruction in semesters one through four of the Cisco networking curriculum that leads to the Cisco Certified Networking Associate-level certification. While the course is primarily designed to train soldiers how to design networks and use the equipment, they are encouraged to acquire Cisco's industry certification.

"The training culminates with technicians and Signaleers technically proficient in understanding and designing both tactical and strategic network architectures in an integrated environment," said Smith. "The Cisco Academy program will enable Signaleers to further understand information-technology plug-and-play operations as part of the Signal Regiment's transformation."

The Cisco curriculum is part of occupational training for enlisted soldiers and noncommissioned officers in Military Occupation Specialty 74B, warrant officers with 251A and 250N specialties and officers branched 25A or holding functional areas 53, 24 and 30 designations. The active-duty version of the course at the regional Cisco Academy at Fort Gordon, Ga., is about eight weeks long. For a typical Reservist who performs only two weeks of active duty a year, this makes maintaining technical proficiency in required networking skills a particular challenge.

The 311th Theater Signal Command needed to provide ongoing state-of-the-art training with quality at the forefront that covered all the technical skills required of a 21st-century Signal soldier while still meeting all of its mission requirements – and in a format that worked around the demands of its soldiers' full-time civilian jobs and lives. The solution: open its own training academy.

With the support of the Fort Gordon regional Cisco office, Smith began building an academy at 311th Theater Signal Command. To become certified by Cisco and meet Army training requirements, 311th's academy had to comply with strict standards from Cisco, Fort Gordon's regional Cisco office and the Army's Signal Center and School. Some of those requirements included a facility and equipment to support the training and meet operational requirements, Cisco-trained and -certified academy instructors, technical proficiency relevant to the organizational mission, a Smartnet agreement and a memorandum of agreement among 311th, Fort Gordon's regional Cisco office and Cisco. The MOA outlined operational, administrative and auditing requirements.

With its own academy, 311th Theater Signal Command is able to offer classes in a part-time evening and weekend schedule. Two classes graduated in March. The first class was a daytime class offered four hours per day Monday, Wednesday and Friday for the full-time staff. The other session was offered four hours a night Tuesday and Thursday and four hours every Saturday morning – on drill weekends the schedule is eight hours on Saturday. Both sessions lasted a little over six months. The time spent in the classroom and curriculum equals the

active-duty version.

This academy is a testament not only of the Army Reserve's ingenuity in overcoming the challenge of maintaining go-to-war readiness with only 62 training days per year, but also of the commitment level of the individual Reservist who is willing to spend 12-16 hours a week of his or her personal time to stay technically proficient.

Another CCNA class starting in April will graduate in August. Plans have begun to add semesters five and six to the curriculum, leading to the Cisco Certified Networking Professional level.

Within the 311th TSC's academy, Smith has established a dialogue with authors of the Cisco training materials to begin on-site preparations to offer training in the Cisco Certified Trainer and Cisco Certified Internetwork Expert curriculums.

Through a partnership with CW2 Robert Denmark and SFC Susan Bennett of the Fort Gordon regional Cisco office; Laura Harrison of U.S. Army Reserve Command's G-6, Fort McPherson, Ga.; SGT Curly Henry of 335th Theater Signal Command, Atlanta, Ga.; and MAJ Robert Boyer of Army Reserve Information Operations Command in Adelphi, Md., 311th Theater Signal Command is coordinating on replicating its academy at more Reserve Component units – specifically at 335th Theater Signal Command, ARIOC and three other locations stretching from Georgia to Pennsylvania. Follow-on initiatives include establishing regional academies throughout the Army Reserve.

With many of its soldiers working as information-technology professionals in their civilian jobs, the academy provides more value to the soldier by teaching and enhancing skills that benefit them in and out of uniform.

Commenting on the academy, MG George Bowman, 311th Theater Signal Command's commander, noted, "I just don't see a downside. This has been like a dream that has come to fruition." Welcoming the first students in the new facility, he added, "This training will help you become better soldiers, more technically and tactically capable, and make you better in your private careers, better equipped to handle the networks that are out there."

To the new students, Bowman issued the challenge to "think through the interfaces, to think through the bottlenecks in our networks as we put them together, so that we can provide secure networks for our customers, so that we can protect our networks from intrusion. Just as we protect our soldiers from harm, and we protect our facilities from outside intruders, we must protect our networks."

1LT Herron is a network-systems engineer with 311th Theater Signal Command. He also serves as the command's public-affairs officer.

UPDATES

PREPARE FOR THE FUTURE AT JOINT COURSE

by LTC Reynold Palaganas

NORFOLK, Va. – What's in your future? Will you soon be serving at a corps- or theater-level G-2 or G-6 staff supporting a joint task force, or will you be working with a JTF joint communications control center executing requirements associated with an information-management plan? Or, are you looking at an assignment to one of the theater Signal commands or to an Army service-component command headquarters as an active-duty or Reserve Component officer or senior noncommissioned officer?

Are you involved in exercise-planning conferences such as Lucky Sentinel, Ulchi Focus Lens, Combined Endeavor or Grecian Firebolt? Are you an action officer or senior NCO supporting signals intelligence, space operations or theater missile-defense command-and-control initiatives? Or, are you a Training and Doctrine Command systems manager, project manager action officer or Defense Department civilian who deals with a myriad of interoperability issues/key performance parameters in the command, control, communications, computers, intelligence, surveillance and reconnaissance transformation arena?

If any of these situations describe you, then the Joint Command, Control, Communications, Computers and Intelligence Staff and Operations Course stands ready to support your joint C4I educational needs. JC4ISOC is four weeks long, is taught seven times during the fiscal year and is sponsored by the Joint Staff/J-6.

First established in January 1978 by the deputy secretary of defense as a joint C3 systems course at the Armed Forces Staff College, JC4ISOC is now one of the resident courses under the Joint Command, Control and Information Warfare School, Joint Forces Staff College, Norfolk, Va. JCIWS's mission is to educate and train company- and intermediate-level military staff officers, senior NCOs and their Defense Department civilian equivalents in the concepts, applications and procedures associated with C4I and information operations in a joint and multinational environment.

To support the warfighter's needs in a network-centric, capabilities-based force, the JC4ISOC curriculum takes a generalist approach. The program meets the school's objectives and supports the college's mission by emphasizing a broad understanding of the joint C4I environment and C2 process, as well as operating, planning and managing current joint C4I systems. The course provides quality C4I instruction for the joint community on topics such as Joint Vision 2020, joint interoperability, battle-space systems, Global Information Grid, information assurance and JTF C4I planning.

Reviews from past students indicate the course's value to their current and upcoming assignments. For instance, an Air Force colonel said, "I would have been 300 percent more effective in the job (I had) if I

had attended that (JC4ISOC) course. … Yes, the information was that beneficial, especially that part about the C4I contacts and points of contact!"

The course accommodates up to 25 students. Remaining available course dates for this FY are Class 03-5, April 21-May 16; Class 03-6, June 2-27; and Class 03-7, Aug. 4-29. For more information, see the annual JC4ISOC message issued to major commands and joint agencies of all services announcing FY course dates and prerequisites, or the separate message disseminated a few weeks before the start of each class.

Students must possess a top secret/sensitive compartmented information clearance and be cleared for SCI indoctrination before arrival. Students' commands must fund their own travel, per diem and billeting, which includes a five-day field trip to the Washington, D.C., area for "up close and personal" experiences with joint agencies and organizations.

Administrative information is available through the "welcome aboard" and "general information" sections of the JFSC website at https://www.jfsc.ndu.edu/ (click on JCIWS link).

JC4ISOC quota-control point of contact is Lt. Cdr. Katherine Mayer, DSN 646-6320, commercial (757) 443-6320, email mayerk@jfsc.ndu.edu or jciws@jfsc.ndu.edu. Army faculty representatives are LTC Katherine Bryant, DSN 646-6328, or myself, DSN 646-6331 or commercial (757) 443-6328/6331.

LTC Palaganas has been assigned as a C4I instructor with JFSC since September 2002. His previous assignment was as commander, 54th Signal Battalion, Riyadh, Saudi Arabia, from August 2001 to August 2002 during Operation Enduring Freedom. Other recent key assignments were as joint communications battlestaff officer at the National Airborne Operations Center, Joint Staff/J-38, Offutt AFB, Neb., and G-6, 32d Army Air and Missile Defense Command, Fort Bliss, Texas.

TRANSFORMATION INFORMATION-TECHNOLOGY PLANNING CONTINUES IN HAWAII

by Walter Taketa and Mike Sato

FORT SHAFTER, Hawaii – Information-technology planning for Army transformation in Hawaii continues to move at a rapid pace in support of Stryker Brigade Combat Team No. 5, scheduled for fielding of 2d Brigade, 25th Infantry Division (Light) in Fiscal Year 2005.

"The 30th Signal Battalion's transformation team, consisting of military, civilian and contractor support, has postured the Army on Hawaii for change on both Oahu and the Big Island at Pohakuloa Training Area," said LTC Rich Volz, battalion commander.

"Four major IT projects – the information-systems facility, the mission-training-support facility, the fixed tactical Internet and the backbone installation-information-infrastructure architecture – are the linchpins for support of the SBCT's technology portion," Volz explained.

Volz said the 30th team, with key assistance from 516th Signal Brigade's Engineering and Software Branch, has developed a detailed plan with these key projects, along with other major range projects, which is pending approval at the Department of the Army level.

This leaning-forward approach has given the Information Systems Engineering Command-Fort Detrick Engineering Office and the U.S. Army Simulation, Training and Instrumentation Command – the keepers of the plans to support the military construction and operations of SBCT 5 – a clear roadmap on what needs to be done to support the SBCT on Hawaii, Volz noted.

"The 30th transformation team briefed these plans to senior leaders in October and November, 2002, which continues to get us closer to final approval for funding in support of transformation in Hawaii," Volz said.

Mr. Taketa and Mr. Sato work for 30th Signal Battalion.

NETWORK ENTERPRISE TECHNOLOGY COMMAND AND INSTALLATION MANAGEMANT AGENCY STAND UP; TEAM SIGNAL ADDS THIRD HAT

by Bill McPherson

FORT SHAFTER, Hawaii – As a result of ongoing Army transformation efforts, the new fiscal year ushered in several major organizational changes within the Army, which resulted in the addition of a third hat for COL Monica Gorzelnik and the staff at 516th Signal Brigade headquarters and U.S. Army Pacific G-6.

The Department of the Army announced the stand-up of the new U.S. Army Installation Management Agency and the redesignation of the former Army Signal Command as the new U.S. Army Network Enterprise Technology Command/9th Army Signal Command, both effective Oct. 1, 2002.

"The new IMA shifts installation-management oversight responsibility from major commands to the IMA, which should streamline headquarters, reduce layers of review and approval and allow commanders to focus on their mission," Gorzelnik told her headquarters staff at a Town Hall session Sept. 6, 2002.

"The IMA is composed of seven regional directorates, including the Pacific Region, based here at Fort Shafter," Gorzelnik explained. "As the Army's senior Signal Corps officer in the Pacific Region, I picked up my third hat as regional chief information officer."

As RCIO, Gorzelnik reports to IMA's acting Pacific Region director, Stanley Sokoloski.

Garrison commanders in Alaska, Hawaii and Japan, who used to report to USARPAC's major subordinate commands, also now report to Sokoloski. Wearing their director of information management hats, the four dual-hatted Signal battalion commanders/DOIMs report through the garrison commanders to the IMA Pacific Region.

(As battalion commanders, they still report to Gorzelnik as brigade commander).

"This new IMA process will eliminate migration of installation-support dollars, such as base communications for the Signal family, and achieve regional efficiencies and equitable services via across-the-boards standards," Gorzelnik said.

"Since we're in the first year of this new IMA organization, funding streams and other 'kinks' are still being ironed out," she added, "but this reorganization is a good thing for Army commanders and warfighters."

Before Oct. 1, 2002, the former ASC reported to Forces Command. NETCOM/9th ASC now reports directly to the Army's chief information officer/G-6, LTG Peter Cuviello.

MG James Hylton commands NETCOM from his headquarters at Fort Huachuca, Ariz. However, the command also maintains a presence in the National Capital Region – where NETCOM's deputy commander, BG Velma "Von" Richardson (see newsbrief, Page 57), is assigned – and operates regional offices at Fort Monroe, Va; Rock Island, Ill; Fort McPherson, Ga.; and Fort Sam Houston, Texas. The 5th Signal Command provides RCIO support to the European region in Heidelberg, Germany, while 1st Signal Brigade is responsible for the Korean region in Seoul, Korea.

At a Pentagon press conference Sept. 19, 2002, it was explained that NETCOM/9th ASC will operate, maintain and defend the Army's communications networks. It will be responsible for technically integrating the disparate capabilities for command, control, communications and computers Army-wide. NETCOM will provide an "infostructure" responsive to the Army's warfighting missions through one strategic-communications network to forward-deployed forces.

"By creating an enterprise-level infostructure, the Army is now postured to execute the functions critical to information management," Hylton said at the press conference. "These include functions associated with network operations, management and defense, information-dissemination management and information assurance. Centralization of authority over these functions will ensure secure, dependable and timely communications across the Army from the foxhole to the White House."

Wearing her hat as 516th Signal Brigade's commander, Gorzelnik reports to Hylton. Gorzelnik's third hat as G-6 for USARPAC remains essentially unchanged. As G-6, she reports to LTG James Campbell, USARPAC's commander.

Mr. McPherson is 516th Signal Brigade's public-affairs officer.

SPACE AND MISSILE DEFENSE COMMAND TAKES OVER FORT GREELY INSTALLATION

by Bill McPherson

FORT GREELY, Alaska – After months of planning, U. S. Army Alaska officials made an administrative transfer of Fort Greely to the Strategic Missile Defense Command at a Sept. 30, 2002, ceremony here.

"In response to the build-up of the missile-defense program here, 507th Signal Company, 59th Signal Battalion, has spent the past year increasing Signal requirements, including more than 500 additional telephone lines and new network systems," explained CPT Deidra Jankowiak, 507th's commander.

Fort Greely, named after MG Adolphus Greely, former chief of Signal, was built in 1942, in concert with the Alaska Highway's construction. Fort Greely closed in July 2001 to prepare for transfer to SMDC. For the last eight to 12 months, Ground Midcourse Defense has been constructing a missile-defense testbed at Fort Greely. USARAK maintains possession and control of the more than 600,000 acres of training land surrounding the main post area.

"In light of the new security environment and progress made to date in missile-defense development efforts, the President has directed the Defense Department to begin fielding initial missile-defense capabilities in 2004-2005 to meet the near-term ballistic-missile threat to our homeland, our deployed forces and our friends and allies," said a Defense Department statement. "This initial capability will build on the Pacific missile defense testbed and serve as a starting point for fielding improved, layered missile-defense capabilities later."

Fort Greely will be part of SMDC's ground-based interceptor capabilities with 16 interceptors planned for 2004-2005. Interceptors can intercept and destroy intercontinental ballistic missiles during their midcourse phase of flight.

Signal facilities are also upgrading at Shemya, Alaska (see newsbrief, Page 59), to support Fort Greely's testbed and Shemya's upgraded radar capabilities.

Mr. McPherson is 516th Signal Brigade's public-affairs officer. Some information for this newsbrief was excerpted from a Defense Department announcement on the U.S. missile program.

"CINC" IS SUNK

by Jim Garamone

WASHINGTON – The term "CINC" is sunk.

Defense Secretary Donald Rumsfeld put out a memo Oct. 24, 2002, to defense leaders saying there is only one commander in chief in America: the president.

His memo also forbids use of the acronym "CINC" (pronounced "sink") with titles for military officers.

The title of commander in chief is enshrined in the U.S. Constitution. Article II, Section 2, states, "The president shall be commander in chief of the Army and Navy of the United States, and of the militia of the several states, when called into the actual service of the United States."

Even before World War II, however, the title was applied to U.S. military officers, and over the years "commander in chief" came to

refer to the commanders of the U.S. unified combatant commands. Their titles became, for instance, "commander in chief, U.S. Pacific Command" or "commander in chief, U.S. Transportation Command."

No more. Rumsfeld has been using the term "combatant commander" for months now when referring to a regional organization such as U.S. Central Command and "commander" when talking about a specified unit such as U.S. Strategic Command.

But don't toss out that old stationery or signs. The memo also tells officials to use old stocks and replace signs only when done in regular maintenance. The changes should be done "without any undue additional cost to taxpayers."

The new term is simply "commander," as in "commander, U.S. Northern Command" and "commander, U.S. Special Operations Command."

The next hurdle is getting over the conversational habit of referring to "the CINCs."

Mr. Garamone writes for American Forces Press Service.

TRAINING AND DOCTRINE UPDATED TO SUPPORT TRANSFORMATION

by Jim Caldwell

WASHINGTON – Field Manual 7-0, ***Training the Force***, was fielded in November 2002. FM 7-0 is an update to the Army's capstone training doctrine.

The companion to FM 7-0, FM 7-1, ***Battle-Focused Training***, will be released in June. The two capstone manuals replace FMs 25-100 and 25-101 produced in 1988 and 1989, respectively.

GEN Eric Shinseki, the Army's chief of staff, said the manuals were updated not only to train today's leaders, soldiers and units, but also to lay the training foundation for Army transformation.

"The main thing about transformation is that, yes, we're changing organizations and, yes, we're changing their focus on the small unit and the skills we're going to base in a small unit," said LTC Ben Clapsaddle, chief of the training-management writing team for Training and Doctrine Command. "But to get them to that phase and to make them an organization, the same sound fundamentals are required. The fundamentals of how you come up with your mission, how you plan your training, how you execute it and how you recover from training are pretty much the same – whether it's a Stryker Brigade Combat Team, a tank battalion or a mechanized brigade at Fort Hood, Texas."

The obvious difference will be in new equipment and technologies. Clapsaddle said members of the writing team conferred with the SBCTs at Fort Lewis, Wash., learning how they trained. Since FMs 25-100 and 25-101 were produced, the world has changed tremendously, which has led the Army to focus even more on leader development and training.

"Leader development and leader training were specifically not addressed in 25-100, 25-101," said Joe Leigh, a member of the writing team. "The whole discussion of leader development and training was left to FM 22-100 (***Leadership***). The inference was that leader training and leader development are intricate parts of training, but they weren't a discussion internal to 25-100 and 25-101. That needed to be cleared up.

"New in FM 7-0 is the discussion of live, virtual and constructive techniques of training," Leigh said. "Back in '88, '89 there were no discussions in 25-100 and 25-101 of simulation and simulators, virtual training and constructive training. They were just at the embryonic stage and, quite frankly, the Army at that stage didn't have a clear vision and understanding of how all of that stuff was going to come together."

Mr. Caldwell writes for Training and Doctrine Command's news service.

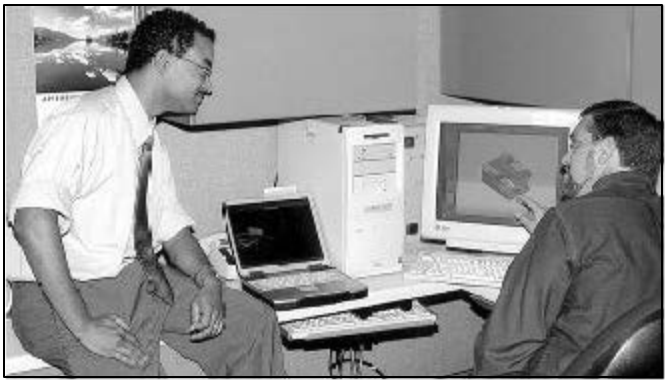
TOBYHANNA KITS INCREASE UTILITY OF ARTILLERY DATA VEHICLES

TOBYHANNA ARMY DEPOT, Pa. – Technicians here are fabricating computer kits for Advanced Field-Artillery Tactical Data Systems vehicles. The kits allow the vehicles, Army prepositioned stock M577s permanently deployed overseas, to act as AFATDS command posts. M577s are modified versions of the M113 Armored Personnel Carrier.

"They are designed to be quickly integrated with AFATDS computer systems based on user requirements," said George Brady, a mechanical engineer in the depot's Production Engineering Directorate.

AFATDS provides automated command, control and communications support for weapons systems such as artillery and tanks.

The M577s are stripped, modified and updated to accommodate the AFATDS systems and be able to handle next-generation computer systems. "The base kit is [composed of] a power distribution system, data network and one or two workstations," Brady said. "We also supply the interfaces for different



Tobyhanna is fabricating M577s computer kits for Advanced Field Artillery Tactical Data Systems vehicles.

computer systems. Ultra computers and compact computers are easily integrated onto the basic platform."

New interfaces are also being developed for the lightweight computer unit and the notebook computer unit that will be fielded soon. "To design the kits to be as useful as possible, we had to anticipate all the different computer systems that could be fielded in the near future," Brady added. "The kits can handle any tactical computer system when the correct interfaces are provided."

LEADER TRANSITIONS

REGIMENT RECEIVES NEW SENIOR-ENLISTED LEADER

FORT GORDON, Ga. – CSM Michael Terry became the sixth Regimental command sergeant major as well as the new U.S. Army Signal Center and Fort Gordon sergeant major in a change-of-responsibility ceremony here Nov. 14, 2002. Terry took the reins from CSM Stanley Davis, who retired after more than 30 years' service.

The Regimental command sergeant major assists and advises the Chief of Signal and other commanders and senior officers on Signal enlisted matters. The Regiment's top enlisted soldier also counsels and mentors Signal non-commissioned officers.

Like Davis, Terry's assignment just before becoming the Regimental command sergeant major was as command sergeant major for 5th Signal Command. Previous assignments included 124th Signal Battalion, Fort Carson, Colo.; U.S. Army Recruiting Station, Davenport, Iowa; 1/36th Field Artillery, Augsburg, Germany; Electronics Proving Ground, Fort Huachuca, Ariz., 125th Signal Battalion, Schofield Barracks, Hawaii; 10th Signal Battalion, Fort Drum, N.Y.; 142d/124th Signal Battalion, 16th Signal Battalion and 3d Signal Brigade, Fort Hood, Texas; and 516th Signal Brigade, Fort Shafter, Hawaii. He has deployed to real-world situations three times: Hurricane Andrew relief in Homestead, Fla., and two deployments to Somalia during Operations Restore Hope and Continue Hope.

NATIONAL GUARD SIGNAL GENERAL TAPPED FOR SECOND STAR

WASHINGTON – Defense Secretary Donald Rumsfeld announced in October 2002 that the president nominated Army National Guard BG Emile Bataille for promotion to major general.

Bataille is serving as director for command, control, communications and computer systems, U.S. Strategic Command, Offutt AFB, Neb.

NETWORK ENTERPRISE TECHNOLOGY COMMAND GETS NEW DEPUTY COMMANDER

FORT HUACHUCA, Ariz. – BG Velma "Von" Richardson became deputy commander of U.S. Army Network Enterprise Technology Command/9th Army Signal Command Oct. 1, 2002.

Richardson was previously assigned to Army Signal Command, NETCOM/9th ASC's predecessor, July 8 through Sept. 30, 2002. Her duty location is in the National Capital Region.

Born and educated in South Carolina, Richardson earned a bachelor's degree in mathematics from Livingstone College in Salisbury, N.C., in May 1973. Upon graduation from college, she received a direct commission as a second lieutenant in the U.S. Army Reserve.

Richardson came to NETCOM from the Army and Air Force Exchange Service, Dallas, Texas, where she was the deputy commander. Previously she was deputy commander of the U.S. Army Signal Center and Fort Gordon, Fort Gordon, Ga.

NEW PRODUCT MANAGER OVERSEES ARMY'S EUROPEAN TELECOMMUNICATIONS INFRASTRUCTURE

by Stephen Larsen

FORT MONMOUTH, N.J. – Today's continental-United-States-based, power-projection Army requires that troops deployed around the world have virtually instantaneous access to do their jobs working with command-and-control and sustaining-base information systems – an especially important consideration given the volatile nature of the world situation.

Recognizing that need, the Army established its first project manager for Defense Communications Systems-Europe. LTC Simon Holzman was presented the charter as PM DCS-E in a ceremony in Mannheim, Germany.

Holzman's mission is to acquire and deliver the installation information infrastructure in Europe that will link the forward-deployed warfighter to worldwide C2 and information systems. He is tasked to implement the European portion of the Installation Information Infrastructure Modernization Program, which includes the common-user installation transport-network program, Army Defense Information Systems Network router program, outside cable rehabilitation program and digital-switched-systems modernization program.

Holzman hit the ground running, as already since he's been PM DCS-E, they have cut over DISN-E switches in Chievres, Belgium – the first DISN-E switch to be activated outside of Germany – and in Brussels, Belgium, replacing the Brussels North Atlantic Treaty Organization KN switch as the primary end-office switch for the Brussels area.

Mr. Larsen serves as the public-affairs officer for the program executive officer for Executive Information Systems at Fort Monmouth.

5TH SIGNAL COMMAND FINDS FIRST JOINT EUROPEAN NETWORK OPERATIONS DRILL TO BE A 'DRAGON'

by Danny Johnson

MANNHEIM, Germany – 5th Signal Command here conducted Exercise Dragon Impact 03-1 Oct. 28-Nov. 1, 2002, in conjunction with U.S. European Command's theater network-operations drill.

The exercise trained the Army Network-Operations and Security Center-Europe and subordinate network-operations security centers and network-service centers on all aspects of EUCOM J-6 and 5th Signal Command tactics, techniques and procedures for netops.

"My intent was for 5th Signal Command to conduct a world-class exercise to train our NOSCs and NSCs on our TTPs for providing netops support to our customers," said BG Marilyn Quagliotti, 5th Signal Command's commander. "At the end of the exercise, our NOSC and NSC personnel better understood our procedures, and we identified TTPs that were missing or needed refinement. We also participated in the EUCOM theater netops drill to train ANOSC-EUR and to evaluate the new EUCOM TTP for netops. Now we have a much better understanding on how to operate the theater's communications networks as the theater information grid."

Dragon Impact's participating organizations – in addition to 5th Signal Command and ANOSC-EUR – included the EUCOM J-6's (Joint Staff Directorate for Command, Control, Communications and Computers) Theater Command, Control, Communications and Computer Coordination Center; Defense Information Systems Agency-Europe Regional Network Operations and Security Center; U.S. Air Force in the Europe NOSC; and commander of the U.S. Naval Forces Europe N-6 (Navy C4 department) and Naval Computers and Telecommunications Area Master Station, European and central area of operation.

The joint exercise-control group located at Patch Barracks, Stuttgart, Germany, injected 38 netops events into one of the component NOSCs. The NOSC then evaluated and reported to the TCCC, which provided guidance and direction to the NOSCs as required. Each NOSC reacted in each area of netops, network management, information assurance and information-dissemination management, using netops events tailored to each battalion's particular mission. Scenarios were tailored so they supported both the EUCOM netops drill and Dragon Impact training objectives.

The 2d Signal Brigade's five battalion NOSCs and NSCs participated in the exercise from their home-station locations. COL Herb Newman, 2d Signal Brigade's commander, served as the senior observer/controller for the exercise.

"Dragon Impact's laser-like focus on enhanced readiness and improved capability to support warfighters and other communications-network customers exercised TTPs at all levels," said Newman. "Exercise participants departed better trained and ready to execute their global responsibilities."

The 7th Signal Brigade provided a tactical NOSC, and 509th Signal Battalion in Vincenza, Italy, used its NOSC and NSCs to participate in the exercise from its home-station location.

CPT Veronica Ko, assistant S-3 for operations at 2d Signal Brigade, said that the collective team members who served as external O/Cs – from far-flung places such as Network Enterprise Technology Command, Fort Huachuca, Ariz; 1st Signal Brigade, Korea; U.S. Army Signal Center and School, Fort Gordon, Ga.; and Communications-Electronics Command, Fort Monmouth, N.J. – vigorously tested and evaluated 5th Signal Command's newly developed netops structure and supporting documentation. Not only did the external O/Cs help 5th Signal Command, they helped the Signal Regiment transform for the future, she said.

There were also 11 internal O/Cs from within 5th Signal Command units.

"The drill really flexed our internal and external reporting procedures and validated our priorities on who our critical custom-

The Network Management Branch Team in the Army Network Operations and Security Center-Europe handles the Master Scenario Events List from the battalion Network Operations and Security Centers and the European Command TCCC.

ers are," said Navy Lt. Cmdr. John Owen, senior O/C for the Navy N-6. "When cascading system-casualties start to progressively impact missions, getting priority service restored is our top goal. I was really impressed with our sailors' response to this evolution, and we learned a lot about our own capabilities as well as how the other components work together."

"The Army and 5th Signal Command have done a great job creating their TTPs for netops and exercising netops within the Army," said Air Force MAJ Darryl Neal, EUCOM J-6's lead action officer for the drill. "EUCOM realized we need to do the same at theater level and designed the netops drill to exercise netops of the TIG. When we were done, the TCCC and our component netops centers had a much better understanding of how we'll operate the TIG in the future."

Mr. Johnson is 5th Signal Command's public-affairs officer and command historian.

NEW DETACHMENT STANDS UP AT 30TH SIGNAL BATTALION

by 1LT Kim Hiland

FORT SHAFTER, Hawaii – The history of 30th Signal Battalion changed Oct. 16, 2002, when it reorganized under an Army directive and added a different guidon to its roster.

Before that date, 30th Signal Battalion was composed of 390th and 396th Signal companies. Under the reorganization, 390th Signal Company inactivated and Headquarters and Headquarters Detachment activated, aligning 30th Signal Battalion with its sister battalions throughout 516th Signal Brigade.

The detachment will provide support for the battalion staff, Army civilians, cable team, network-operations center and visual-information center.

The 396th Signal Company, previously composed of the Kunia satellite-communications facility,

1LT Kimberly Hiland, commander of the new HHD, cuts 30th Signal Battalion reorganization cake as her daughter, Shelby, watches.

expanded and inherited soldiers and civilians from 390th Signal Company.

The last reorganization for 30th Signal Battalion took place Oct. 16, 1992, when the battalion reactivated as a modified table of organization and equipment command under 516th Signal Brigade.

1LT Hiland commands the new Headquarters and Headquarters Detachment, 30th Signal Battalion.

59TH SIGNAL BATTALION EXTENDS LOCAL-AREA NETWORK MORE THAN 1,500 MILES TO SHEMYA

by MAJ Brian Owen

FORT RICHARDSON, Alaska – 59th Signal Battalion extended its local-area network more than 1,500 miles away to the Aleutian Island of Shemya, Alaska, last fall.

The island is home to a communications facility that will support the missile-defense testbed at Fort Greely, Alaska.

Joe Lencz and Ray Pocaigue of the 59th traveled to Shemya to install the termination and LAN equipment necessary to extend Fort Richardson's LAN to the remote outpost.

Shemya is located near the far western end of the Aleutian Island chain and is more than a five-hour flight from Anchorage. The requirement for LAN service originated in July 2002, but because of the unpredictable weather common to the Aleutians, flights were canceled or turned around while enroute due to poor weather. The project was eventually completed in September 2002.

"I'm glad to finally get this part of the mission accomplished," said Pocaigue. "We had three flights cancelled, and we were turned around in flight twice because of weather."

Shemya, Alaska, located on the Aleutian Island chain.

Pocaigue said the mission at Shemya isn't finished, however. "There will be a requirement in the near future to install secure Internet protocol routed network connections, which will provide another adventure for the 'Voice of the Arctic,'" he said.

MAJ Owen is 59th Signal Battalion's executive officer.

SHAPING HAWAII'S INFORMATION-TECHNOLOGY FUTURE

by MAJ Rod Laszlo

SCHOFIELD BARRACKS, Hawaii – The Hawaii Information Technology Steering Committee provides a quarterly forum for 25th Infantry Division's and U.S. Army Hawaii's senior leadership to receive information and make decisions on planning future IT in Hawaii and how best to posture the Army on Hawaii for transformation.

"This quarterly meeting has set

the stage for numerous IT 'dreams' in Hawaii to become reality," noted LTC Rich Volz, 30th Signal Battalion's commander and USARHAW's director of information management.

The committee is composed of 25th Infantry Division (Light)'s assistant division commander for support (chair), ADC-operations and chief of staff; USARHAW garrison's commander; and the Hawaii Signal leadership, including 516th Signal Brigade's commander, 30th Signal Battalion's commander/DOIM and 125th Signal Battalion's commander.

"The ITSC made some key decisions on two critical topics: IT lifecycle management and the future of the secure network on Hawaii," Volz said. "These two key decisions will posture the Army in Hawaii to meet much of the Army's Knowledge Management goals and make the Army-Hawaii a leader for IT."

For IT lifecycle management, Volz said DOIM has assisted in developing a plan based on a modified table of organization and equipment-type authorization for systems. Before this, IT lifecycle management was based on the premise that however many computers units could buy, they would simply just get them. Now, in coordination with commanders, 25th Infantry's G-6 and unit information-management officers, units will have a target authorization to work off of and will be able to manage systems more effectively.

"Furthermore, the division and garrison started a plan at the end of Fiscal Year 2002 for three-year lifecycle funding, to ensure all units have standard computers," Volz added. "The idea of 'haves' and 'have nots' will be a thing of the past. This plan brings all units up to a Windows/Office 2000 standard, therefore bringing all of U.S. Army Hawaii to one standard – proactively posturing all units for transformation."

On the secure Internet protocol routed network side, 30th Signal Battalion developed a detailed plan to expand the SIPRNET to all battalions and directorates on Hawaii. "This plan bridges the gap that currently exists between the incoming Stryker Brigade Combat Teams, 25th Infantry Division (Light)'s headquarters and the higher headquarters of U.S. Army Pacific," Volz explained. "The battalion has received partial funding in the amount of $250,000 during the FY02 year-end closeout to again start this process and posture the Army-Hawaii for transformation."

ITSC member COL Monica Gorzelnik, 516th Signal Brigade's commander, said the Hawaii ITSC is a "valuable tool" for leaders to have situation awareness of IT plans and to make key decisions on the future of IT on Hawaii. "The 30th has led the way to ensure Hawaii will be ready to execute transformation and support the Objective Force warfighter," she said.

MAJ Laszlo is assigned to 30th Signal Battalion.

30TH REVAMPS CIVILIAN TRAINING

by Michelle Morton

FORT SHAFTER, Hawaii – 30th Signal Battalion/directorate of information management began piloting a one-hour weekly training session for its civilian employees during the last quarter of Fiscal Year 2002.

"Similar to the soldiers' Sergeant's Time, this weekly class is an opportunity for our civilians to work on certain aspects of improving their individual job performance while allowing the organization to objectively identify weaknesses and focus limited resources on those critical areas," explained Niels Nielsen, deputy DOIM and the organization's highest-ranking civilian.

For the first quarter of FY03, the focus was on reviewing and updating job descriptions and developing sound individual development plans. IDPs to be developed will ensure that the needs of the command and employees are addressed.

Employee input is an integral part of this process. "I want them to take an active role in determining their future. We owe it to each of our employees to do this right," said LTC Rich Volz, battalion commander/DOIM.

In support of promoting the Army's "Total Team Training," the 30th/DOIM team also instituted a monthly senior-civilian and officer professional-development program.

"This monthly program gives our officers and senior civilians an opportunity for professional growth and to share of a wealth of experience with our junior officers, while broadening all leaders in the process," said Volz. "I expect each of these programs to focus on developing leadership and specialty qualifications that will permit our workforce to execute their current responsibilities as well as prepare them to function at the next higher level."

Ms. Morton works for 30th Signal Battalion.

78TH SIGNAL BATTALION SOLDIERS HELP CAMP ZAMA JUNIOR RESERVE OFFICERS TRAINING CORPS

by CSM Darrel Calton

CAMP ZAMA, Japan – Five soldiers from 78th Signal Battalion are volunteering as staff cadre for the Camp Zama Junior Reserve Officer Training Corps, sponsored by Defense Department schools located at Camp Zama and Naval Air Facility Atsugi.

They have been assisting retired CSM George Dale, Camp Zama High School JROTC commandant, in training about 120 cadets in grades seven through 12.

"Since August, our soldiers have assisted with uniform inspections, drill and ceremony, teaching classes, mentoring cadets and pre-marksmanship instruction," said SSG Robert Franklin, high-frequency-radio team chief at 78th Signal Battalion.

"Our key emphasis has been on inspecting the cadets and their wear of the uniform, which we conduct each Wednesday at 7:45 a.m.," Franklin explained.

"We're also preparing the drill team for a drill competition. Children are our future, so it's very rewarding work for all of us in the cadre."

Dale commended 78th Signal Battalion soldiers for volunteering their expertise.

"The soldiers are providing an invaluable service in mentoring the cadets and setting the example, particularly the younger soldiers who are just a couple of years older than the high school cadets," Dale said. "The cadets feel they can follow the example of, relate to and open up to the soldiers."

Joining Franklin on the soldier cadre are 78th Signal Battalion's SFC Peter Bagley, SSG Camelia Navalo, SPC Shani Fielder, SPC Troy Stone and SPC Donald Yonce.

CSM Calton is 78th Signal Battalion's command sergeant major.

SSG Robert Franklin returns salute of Camp Zama JROTC cadet.

58TH SIGNAL BATTALION MEMBERS ENJOY OKINAWA DANCE THEATER

by LTC Leo Thrush

FORT BUCKNER, Okinawa – In an exceptional team-building, cultural and historic event, 40 soldiers and family members from 58th Signal Battalion traveled to Naha Nov. 9, 2002, to experience some Japanese culture at a famous dinner-dance theater.

The evening included Okinawan dance, samisen guitar and a steak, sashimi and lobster dinner at

Okinawa Dance Theater band.

Tea House of the August Moon, a historic location which was the inspiration for the Broadway play and 1956 movie of the same name starring Marlon Brando and Glenn Ford. The teahouse was also referred to in the recent novel, ***Memoirs of a Geisha***.

Our hostess for the evening was the owner and a former member of 58th Signal Battalion many years ago. She explained everything to us – from the types and meanings of the different kimonos and obis (clothing articles) to the differences between Japanese and Okinawa food and customs. We learned about Okinawan politics, Okinawa-America relations and our own unit history from an Okinawan perspective.

It was a great, informative and fun evening with our loved ones, teammates and friends. No one was disappointed in chuckling at SSG Edgar Vines trying to walk in the cook's traditional raised-platform shoes, or at Rob Brosey and me on stage with the Okinawan dancers doing the "horsy dance."

LTC Thrush commands 58th Signal Battalion.

OF INTEREST

SIGNAL CENTER WELCOMES NEW HISTORIAN

FORT GORDON, Ga. – The U.S. Army Signal Center's new command historian, Steve Rauch, assumes duties in a position that has been vacant for some years. However, he has hit the ground running.

"As branch historian, my primary mission is to provide leaders and soldiers with effective history education and archival services that develop critical thinking skills and encourage the pursuit of lifelong learning," Rauch said. "As the command historian, I also support the Chief of Signal by providing relevant historical insight and analysis for decision-making through collecting, preserving, interpreting and disseminating Signal branch and Army history. What this means is that, under the Chief of Signal's guidance, I plan to make the command historian an active resource for developing Signal soldiers and leaders as they go about their missions for the Signal Regiment at Fort Gordon and throughout the Army."

He plans to initially focus on rebuilding the history program and archives. "Through these efforts, I hope to instill a sense of common heritage between soldiers of today and those of the past," he said. "I believe that history is the soul of the U.S. Army."

A specific effort where he asks for Signal soldiers' assistance is to collect and preserve materials reflecting the efforts of Signal units, soldiers and leaders participating in current operations such as Operation Noble Eagle and Operation Enduring Freedom. "I ask that any Signal commanders, leaders, soldiers and units who have unclassified records of historical value to forward those to my office for inclusion in the Signal Corps archives," Rauch said.

"The nature of records could be after-action reviews, briefings, messages, emails, maps, videos

existing in any media (such as hard copy, CD-ROM or Microsoft Office files) which would aid future researchers in writing the history of their contribution to the Signal Corps and the U.S. Army."

Rauch said his office daily receives requests for information from active and former Signal soldiers regarding old units, past acquaintances and the like. "The archive holdings have some records of historic and current Signal units but aren't complete or comprehensive," he noted. "Also, individuals' records aren't maintained here, although some personal papers and mementoes from former Chiefs of Signal or prominent Signal soldiers are part of the collection.

"I recommend that any inquiry regarding a unit begin with a visit to the U.S. Army Center of Military History website at the Force Structure and Unit History branch page (http://www.army.mil/cmh-pg/lineage/Unit-Info.htm), which provides a listing of active and some inactive Signal units. Also, many unit associations have started websites and messages boards that are full of information and personal experiences relating to a particular unit. For information on an individual's service records, the national archives and National Personnel Records Center maintain these; instructions for gaining access can be found at http://www.archives.gov/research_room/obtain_copies/veterans_service_records.html.

"One of my projects is to make these and other links for information available via a command historian website on the Regimental Division, Office Chief of Signal, homepage in the near future," Rauch said.

A retired Army ordnance officer and multifunctional logistician, Rauch was assistant professor of history in the Combat Studies Institute, U.S. Army Command and General Staff College, Fort Leavenworth, Kan., before arriving at Fort Gordon. Rauch's experience also includes seven years teaching military history at Training and Doctrine Command service school, civilian undergraduate and military graduate levels. His expertise includes American colonial and early national U.S. military history, 19th-century European history and general military history.

He holds two master's degrees, one in history and one in adult and continuing education.

Those wishing to contact Rauch may do so at rauchs@gordon.army.mil; commercial telephone (706) 791-5212 (DSN 780-5212); commercial fax (706) 791-5777; or by writing the command historian in Bldg. 29706, Barnes Avenue, Fort Gordon, Ga 30905.

SIGNAL MASTER SERGEANT PROVIDES COMO FOR NORTH KOREA MISSION

by SGT Courtney Vickery

FORT SHAFTER, Hawaii – It was an opportunity few people in the Western world ever get, and a Team Signal soldier had the opportunity to do it.

MSG Harold "Bill" Gierke, operations noncommissioned officer for Detachment 1, 311th Theater Signal Command, 516th Signal Brigade, went to Communist-occupied North Korea to assist the Army's Central Identification Laboratory here in recovering the remains of U.S. servicemembers missing in action from the Korean War.

"It was an honor to do this for our fallen comrades," said Gierke. "That was my primary motivation."

As the communications noncommissioned officer for Operation North Korea Joint Recovery, Gierke provided the communications link between the operation's two joint recovery elements located at the base camps and the liaison officer located at Pyongyang.

Gierke spent 31 days in North Korea – mostly in the capital city of Pyongyang, providing communications support from a liaison to the U.S. recovery units near the Chosin Reservoir and Unsan River.

"I would make radio contact with the two JREs twice a day to establish any operational needs and get a situation report to pinpoint exact locations of recovery operations," Gierke explained. "Once we gathered the necessary information, we would then create another sitrep incorporating the two daily sitreps and send it to a liaison officer in Beijing and to the Defense Prisoner of War/Missing in Action Personnel Office at the Pentagon."

A normal day for Gierke began with physical training in the morning, followed by a radio check and breakfast at 8:30 a.m. From there it was back to his room until it was time for lunch. And he'd only come down once again for dinner and a final radio check at 6 p.m.

The North Korean Ministry of Foreign Affairs closely watches movement of U.S. personnel in the country, said Gierke.

"Their control was pretty tight," he said. "We were only allowed out of the hotel a total of five days to sightsee."

Gierke said he was constantly supervised by a Ministry of Foreign Affairs representative and added, "We were only shown what they wanted us to see."

The 28-person U.S. contingent was composed primarily of specialists from the Army's Central Identification Laboratory in Hawaii.

A JRE operating near the Chosin Reservoir in North Korea recovered five sets of remains believed to be those of U.S. Army soldiers from 7th Infantry Division who fought against Chinese forces in November-December 1950. Some 1,000 Americans are estimated to have been lost in battles of the Chosin campaign.

Also, a second team recovered three sets of remains in the area along the Kuryong River near the junction of Unsan and Kujang counties, about 60 miles north of Pyongyang. The area was the site of battles between Communist forces and the U.S. Army's 1st Cavalry and 25th Infantry divisions in November 1950.

"It means a lot to me to be able to help bring some sort of closure to

the families who lost loved ones in the course of military service," Gierke said. "Even though I played a small role, I was able to appreciate our American way of life and the day-to-day things we do that are often taken for granted – such as having running water for the toilet and hot water for a shower."

Gierke

Gierke noted that 24 individual joint operations have been conducted since 1996 in North Korea, during which 167 sets of remains believed to be those of U.S. soldiers have been recovered. Thirteen have been positively identified and returned to their families for burial with military honors. Of the 88,000 U.S. servicemembers missing in action from all conflicts, more than 8,100 are from the Korean War.

SGT Vickery is assigned to 516th Signal Brigade's public-affairs office.

FORMER SAILOR REMEMBERS FALLEN COMRADES

by SGT Shawn Woodard

FORT JACKSON, S.C. – PVT Paul Mena, a former sailor assigned to the USS Cole, will never forget Oct. 12, 2000, no matter what challenge is placed before him. These days he learns the way of the Army.

After basic training here, Mena will be trained as a 31L cable system installer-maintainer at Fort Gordon, Ga., and will join the U.S. Army Signal Regiment.

The morning of Oct. 12 will remain in the minds of sailors who were aboard the USS Cole when it was attacked by terrorists. The guided-missile destroyer was in a Yemeni port for a routine refueling stop when a small boat loaded with explosives was detonated beside the ship, blasting a hole in its side.

Following the attack in which 17 sailors were killed and 39 were injured, the USS Cole was returned to the United States aboard a Norwegian heavy-transport ship.

Mena vividly remembers the tragic incident as if it had happened yesterday.

"At around 11:25 a.m., there was a thunderous explosion that threw me about five feet," said Mena. He said the first thing that came to mind was to check to see whether he had lost any of his limbs. Fortunately, Mena had only suffered minor bumps and bruises.

"Although there were sailors running in all directions, everyone reacted to the attack just as they had practiced several times during training exercises," said Mena. "In the midst of all the confusion, the executive officer took charge and began to attempt to regain order on the ship."

The New Jersey native served six months of his four years in the Navy aboard the USS Cole. He worked in every position from being the ship's barber to firefighting while serving as a sailor. When he left the Navy, unemployment rates were up and he was unable to find a job. He then tried to re-enlist in the Navy but was denied the job he wanted, so he went to the Army recruiting office and enlisted.

Although Mena has changed service branches from Navy to Army, he said he's happy to serve his country regardless of branch.

While in basic training, Mena said he considered himself a valuable asset to his peers. "Being prior service allows me to share my experiences with other soldiers," he said. "I think I'm a well-disciplined soldier who possesses leadership skills – something drill sergeants look for."

Mena is now thinking of retiring from the military with the support from his wife, Jane, and two daughters, Alexus (six) and Julia (two).

"Although I'm fortunate enough to continue serving my country, I'll always have a place in my heart for those 17 sailors who lost their lives on that tragic morning," said Mena.

SGT Woodard writes for the Fort Jackson Leader, *the post's newspaper.*

FORT MONMOUTH TELECOMMUNICETIONS INFRASTRUCTURE UPGRADE STARTS

by Stephen Larsen

FORT MONMOUTH, N.J. – The first shovelful of dirt was turned here Oct. 7, 2002, in a $5 million project to expand and upgrade the fort's telecommunications infrastructure under the Installation Information Infrastructure Modernization Program.

The project, being managed by the Fort Monmouth-based project manager for Defense Communications and Army Switched Systems, will provide a new telecommunications infrastructure backbone, including creating a new fiberoptic cable ring throughout the installation; reinforcing parts in the existing network backbone; installing 90,000 feet of fiberoptic and copper cable; and building 60 new manholes.

"I think the most important benefits are that the new infrastructure will support future requirements for voice and data connectivity," said Heather Vimba, project leader for PM DCASS, "and make life easier for the people who operate and maintain the network." She added that by providing transmission connectivity from the user to the dial central office / main communications node, the I3MP infrastructure allows warfighting commanders deployed in split-base operations to tap into command-and-control and sustaining-base information systems back in the United States – an important consideration as world events heat up.

I3MP is an initiative of the Army's chief information officer / G-6 to upgrade the information infra-

structure at Army posts, camps and stations with global Defense Communications Systems, Army nontactical secure/nonsecure C2 base information voice systems, data switching systems and associated networks. PM DCASS – part of the Fort Belvoir, Va.-based program executive office for Enterprise Information Systems – has to date implemented I3MP at 70 Army posts, camps and stations around the world.

Mr. Larsen serves as the public-affairs officer for the program executive officer for Executive Information Systems at Fort Monmouth.

NATIONAL SCIENCE CENTER CELEBRATES FLIGHT CELEBRATION

AUGUSTA, Ga. – Dec. 23, 1907. BG James Allen, the Army's Chief Signal Officer, issued Signal Corps Specification No. 486, "Advertisement and Specification for a Heavier-Than-Air Flying Machine." The contract was awarded to the Wright brothers and the military's journey into the era of flight began.

As we prepare to celebrate the 100th anniversary of the Wright brothers' accomplishment (flight of the first aircraft), the National Science Center kicked off its year-long "celebration of flight – 100 years and soaring!" Dec. 17, 2002, with the "Firsts in Flight" exhibit's unveiling.

NSC is a partnership between the National Science Center Inc. and the Army's Signal Regiment at Fort Gordon, Ga.

The "Firsts in Flight" exhibit features photographs, videos, posters, articles and models that celebrate the Army's early efforts to make the heavier-than-air flying machine an important part of the nation's military arsenal. NSC's exhibit showcases firsts such as:

· The first aviation office in the military – the Aeronautical Division in the office of the Army's Chief Signal Officer;

· The first specifications for "a heavier-than-air flying machine" – Signal Corps Specification No. 486;

· The first military test flight at Fort Myer, Va., in September 1908;

· The first airplane passenger, LT Frank Lahm, Sept. 9, 1908;

· The first air tragedy – the death of LT Thomas Selfridge, first person to die as a result of an airplane accident;

· The delivery of the first military aircraft – Signal Corps Airplane No. 1, Aug. 2, 1909;

· The Signal Corps Winter Flight School here in Augusta 1911-1913, including the Wright brothers' visit to the school in Augusta; and

· The first radiotelephones in airplanes.

This celebration and exhibit development will be accomplished through a partnership with the Signal Museum at Fort Gordon. "The 'Firsts in Flight' exhibit is a perfect example of the relationship between the Signal Museum and the National Science Center's Fort Discovery," said Susan Wood, chief of Regimental Division, Office Chief of Signal, to which the Signal Museum belongs. "Museum staff regularly provide consultation, design and development services to NSC staff. The relationship between the two agencies is one of cooperation and shared resources, benefiting both agencies."

TOBYHANNA HIGH-TECH TRAINING SITE IMPROVES MILITARY TRAINING

TOBYHANNA ARMY DEPOT, Pa. – Tobyhanna Army Depot's High-Tech Regional Training Site-Maintenance has earned full accreditation to train soldiers in an added military-occupation specialty. The depot is now accredited for MOS 35E, ordnance radio-communications security repair.

With accreditation, Tobyhanna Army Depot now joins Fort Gordon, Ga., as the only installations equipped to provide 35E instruction.

"The main difference is that we teach skill-qualified soldiers who are interested in changing their MOS, while [Fort] Gordon teaches fresh students – those who just enlisted in the Army without a skill specialty yet," said CW4 James Maness, the 35E course's technical coordinator.

Also, Fort Gordon provides a 26-week training program, he added. "We had to adjust our instruction plan and shorten the length of the course to accommodate the Reservists who train here," Maness said. "Our students can complete the course in 17 weeks, taught in four phases that works around their Reservist schedules."

Other MOS training offered through Tobyhanna's High-Tech Regional Training Site-Maintenance includes 31F (network operator-maintainer), 31R (multichannel-systems operator) and 31C (radio operator-maintainer).

INCOMPATIBLE INFO SYSTEMS POSE A HOMELAND SECURITY CHALLANGE, WHITE HOUSE INFO CZAR SAYS

by Gerry Gilmore

WASHINGTON – Sorting through and integrating different computer information systems from the 22 agencies slated to comprise the new Department of Homeland Security presents "a challenge," the White House's chief homeland-security information official said.

Agencies selected to merge into DHS will bring a variety of disparate, separate databases with them, said Lee Holcomb, director for information structure in the White House Office of Homeland Security.

Before the Sept. 11, 2001, terrorist attacks on America, a number of federal agencies had developed technologies and systems to integrate within an agency setting but in many cases didn't address information sharing across multiple agencies, Holcomb said. Such advanced capability, he added, is a mandatory asset for the new DHS, which was slated to start up in March.

Many existing databases operated by DHS-designated agencies, and systems run by other organizations expected to work closely with DHS, aren't "mutually

accessible," Holcomb added.

Also, he noted that much of the communications equipment now used by civic emergency first responders – such as police and fire and rescue workers – is either outdated or incompatible with federal gear.

"In many cases, police officers are operating 1970s analog radios," Holcomb pointed out. Such discrepancies will be solved, he emphasized, by testing and selecting a model emergency-response setup, complete with modern, interoperable communications equipment.

Under a key initiative called Project Safecom, Holcomb noted, firefighters, police officers and emergency medical technicians gain the ability to communicate seamlessly and quickly to help preserve life and property during a disaster.

"It's very critical that we're giving them the tools they need to protect communities to the maximum extent possible," he concluded.

Mr. Gilmore writes for American Forces Press Service.

HAWAII MILITARY POLICE ARE FIRST TO RECEIVE PACIFIC MOBILE EMERGENCY RADIO SYSTEM

by Joe Halligan and Jim Arrowood

FORT SHAFTER, Hawaii – October 2002 was the month the military services witnessed final test and acceptance of Phase I for the Hawaii Pacific Mobile Emergency Radio System.

Military-police units here and at Fort DeRussy, Schofield Barracks and Waianae Recreation Center have now gone operational. The MPs received comprehensive training in using system components during their operational test and acceptance of the new radio system. The test consisted of structured daily communication checks and operational traffic.

Twenty-one other Army organizations are scheduled to be placed on the PACMERS system in 2003, according to Dennis Greenwood of the U.S. Army Pacific G-6 staff, which is the U.S. Pacific Command's executive agent for the program.

"The PACMERS system in Hawaii is a joint Defense Department radio system which provides land-mobile-radio connectivity to all military services in Hawaii as well as to other local, state and federal agencies," Greenwood explained. "PACMERS provides the capability to ensure interoperable emergency communications for first responders reacting to incidents involving weapons of mass destruction, terrorism, consequence management, civil disobedience and natural or manmade disasters.

"The trunked radio system provides seamless roaming, ruthless pre-emption, dynamic regrouping and multiple access by all agencies," he added.

PACMERS' features include a sophisticated ground-to-air radio capability, telephone interconnect feature, talk-group merge, seamless roaming, selective radio inhibit, dynamic regrouping and storm plans.

Greenwood also said that PACMERS Alaska's Phase Zero had been awarded to its prime vendor, and deployment was scheduled to begin in March.

Mr. Halligan and Mr. Arrowood work for 516th Signal Brigade.

ACRONYM QUICKSCAN

ADC – assistant division commander
AFATDS – Advanced Field-Artillery Tactical Data Systems
ANOSC-Eur – Army Network-Operations and Security Center-Europe
ARIOC – Army Reserve Information Operations Command
ASC – Army Signal Command
BUB – battle-update briefing
C2 – command and control
C3 – command, control and communications
C4 – command, control, communications and computers
C4I – command, control, communications, computers and intelligence
CCNA – Cisco Certified Networking Associate
CINC – commander-in-chief
DHS – Department of Homeland Security
DISN-E – Defense Information Systems Network-Europe
DOIM – directorate of information management
EUCOM – European Command
FM – field manual
FY – fiscal year
HICON – high command
I3MP – Installation Information Infrastructure Modernization Program
IDP – individual development plan
IMA – Installation Management Agency
IPRNET – Internet protocol routed network
IT – information technology
ITSC – Information Technology Steering Committee
JC4ISOC – Joint Command, Control, Communications, Computers and Intelligence Staff and Operations Course
JCIWS – Joint Command, Control and Information Warfare School
JFSC – Joint Forces Staff College
JRE – joint recovery element
JROTC – Junior Reserve Officers Training Corps
JTF – joint task force
LAN – local-area network
MOA – memorandum of agreement
MOS – military-occupation specialty
MP – military police
NCO – noncommissioned officer
NETCOM – Network Enterprise Technology Command
Netops – network operations
NIPRNET – non-secure Internet protocol routed network
NOSC – network-operations and security center
NSC – National Science Center
NSC – network-service center
O/C – observer/controller
PACMERS – Pacific Mobile Emergency Radio System
PM DCASS – project manager for Defense Communications and Army Switched Systems
PM DCS-E – project manager for Defense Communications Systems-Europe
RCIO – regional chief information officer
SATCOM – satellite communications
SBCT – Stryker Brigade Combat Team
SCI – sensitive compartmented information
SIPRNET – secure Internet protocol routed network
SMDC – Strategic Missile Defense Command
TCCC – Theater C4 (command, control, communications and computers) Coordination Center
TIG – theater information grid
TTP – tactics, techniques and procedures
USARAK – U.S. Army Alaska
USARHAW – U.S. Army Hawaii
USARPAC – U.S. Army Pacific
WFX – warfighter exercise

Signal command-level commands

Commander	CSM	Unit	Location
BG Marilyn Quagliotti	CSM Donna Mitchell	5th Signal Command (AC)	Mannheim, Germany
MG George Bowman	CSM Honora Rhatigan	311th Signal Command (USAR)	Fort Meade, Md.
MG Lowell Detamore	CSM Rick Berry	335th Signal Command (USAR)	East Point, Ga.
MG William Russ	CSM Calvin Jones	Communications-Electronics Command (AC)	Fort Monmouth, N.J.
MG James Hylton	CSM Ronald Desjardins	Network Enterprise Technology Command/9th Army Army Signal Command (AC)	Fort Huachuca, Ariz.
BG Janet Hicks	CSM Michael Terry	U.S. Army Signal Center and Fort Gordon (AC)	Fort Gordon, Ga.

Signal brigade-level commands

Commander	CSM	Unit	Location
COL Ronald Bouchard	CSM Alejo Quinata	1st Signal Brigade (AC)	Seoul, Korea
COL Hubert Newman	CSM Terry Braddock	2d Signal Brigade (AC)	Mannheim, Germany
COL Alan Lynn	CSM Roderick Johnson	3d Signal Brigade (AC)	Fort Hood, Texas
COL Susan Lawrence	CSM Kenneth Williams	7th Signal Brigade (AC)	Mannheim, Germany
COL Brian Hurley	CSM Oliver Forbes	11th Signal Brigade (AC)	Fort Huachuca, Ariz.
COL Allen Woodhouse	CSM Reuben Peppers	15th Signal Brigade (AC)	Fort Gordon, Ga.
COL Jeffrey Smith	CSM Ray Lane	22d Signal Brigade (AC)	Darmstadt, Germany
COL Howie Cohen	CSM James Jordan	35th Signal Brigade (AC)	Fort Bragg, N.C.
COL Daniel Gerstein	CSM Paul Scandrick	93d Signal Brigade (AC)	Fort Gordon, Ga.
BG Dallas Fanning	CSM Ted Creech	142d Signal Brigade (ARNG)	Decatur, Ala.
COL (P) Thomas Sinclair	CSM Stan Norman	228th Signal Brigade (ARNG)	Spartanburg, S.C.
BG James Dougherty	CSM Paul Breeding	261st Signal Brigade (ARNG)	Dover, Del.
BG Dennis Lutz	CSM Arlar Crout	359th Signal Brigade (USAR)	Fort Gordon, Ga.
COL Monica Gorzelnik	CSM Steven Violette	516th Signal Brigade (AC)	Fort Shafter, Hawaii
COL David Lopez	CSM George Roach	1108th Signal Brigade (AC)	Fort Detrick, Md.
COL Daniel Busby	CSM Nathan Hamilton	Regional Signal Group (AC)	SHAPE, Belgium

Signal battalion-level commands

Commander	CSM/SGM	Unit	Location
LTC Mearen Bethea	CSM Ricky Judy	1st Satellite Communications Battalion (AC)	Colorado Springs, Colo.
LTC John Hildebrand	CSM John Murray	10th Signal Battalion (AC)	Fort Drum, N.Y.
LTC William Heflin	CSM Byron Briscoe	13th Signal Battalion (AC)	Fort Hood, Texas
LTC Brian Hamilton	CSM Aaron General	16th Signal Battalion (AC)	Fort Hood, Texas
LTC Brian Moore	CSM Paul Grigsby	17th Signal Battalion (AC)	Darmstadt, Germany
LTC James Thompson	CSM John Crowe	28th Signal Battalion (ARNG)	Coraopolis, Pa.
LTC Orlando Goodwin	CSM David Fleming	29th Signal Battalion (AC)	Fort Lewis, Wash.
LTC Richard Volz	CSM Joshua McKinnon	30th Signal Battalion (AC)	Fort Shafter, Hawaii
LTC Laurie Buckhout	CSM John Graves	32d Signal Battalion (AC)	Darmstadt, Germany
LTC Juan Rosa	CSM Garibaldi Ortiz	35th Signal Battalion (USAR)	Juana Diaz, Puerto Rico
LTC Joe Cunningham	CSM Garry Tull	36th Signal Battalion (AC)	Seoul, Korea
LTC Randall Bland	CSM Thomas Danielly	39th Signal Battalion (AC)	Mannheim, Germany
LTC John Dewey	CSM Sherry Scheel	40th Signal Battalion (AC)	Fort Huachuca, Ariz.
LTC Darin Talkington	CSM Patricia Keit	41st Signal Battalion (AC)	Seoul, Korea
LTC Lewis Naumchik	CSM Sylvester Curry	43d Signal Battalion (AC)	Mannheim, Germany
LTC Theresa Coles	CSM Larry Bellamy	44th Signal Battalion (AC)	Mannheim, Germany
LTC Robert Burchell	CSM Mark Clifton	50th Signal Battalion (AC)	Fort Bragg, N.C.
LTC Frank Penha	CSM Rickey Witcher	51st Signal Battalion (AC)	Fort Bragg, N.C.
LTC Frank Sherod	CSM James Gholson	52d Signal Battalion (AC)	Mannheim, Germany
LTC Anthony Williams	CSM John Pollard	54th Signal Battalion (AC)	Riyadh, Saudi Arabia
LTC Robert Rhodes	CSM Robert Miller	56th Signal Battalion (AC)	Fort Buchanan, Puerto Rico
LTC Barry Hensley	CSM Gerardo Garcia	57th Signal Battalion (AC)	Fort Hood, Texas
LTC Leo Thrush	CSM Jessie Husband	58th Signal Battalion (AC)	Camp Buckner, Japan
LTC James Riseley	CSM Raymon O'Brien	59th Signal Battalion (AC)	Fort Richardson, Alaska
LTC John Rutt	CSM Jerry Baker	63d Signal Battalion (AC)	Fort Gordon, Ga.
LTC Kari Everett	CSM Clark Dimery	67th Signal Battalion (AC)	Fort Gordon, Ga.
LTC Michelle Fraley	CSM Vernetta Lewis	69th Signal Battalion (AC)	Mannheim, Germany
LTC Jeannie Tibbetts	CSM Paul Rodriguez	72d Signal Battalion (AC)	Mannheim, Germany
LTC William Montgomery	CSM Darrel Calton	78th Signal Battalion (AC)	Camp Zama, Japan
LTC Christopher Potalivo	CSM Ismall Apointe	3/80 Signal School Battalion (USAR)	Scranton, Pa.
LTC Bruce Crawford	CSM James Anderson	82d Signal Battalion (AC)	Fort Bragg, N.C.
LTC Lynn Lodwick	CSM Clarence Bellamy	4/84 Signal School Battalion (USAR)	Indianapolis, Ind.
LTC David Dodd	CSM Jacklyn Clay	86th Signal Battalion (AC)	Fort Huachuca, Ariz.

LTC Jon Kerr	CSM James Rhodes	6/95 Signal School Battalion (USAR)	Albuquerque, N.M.
LTC Charles Morin	CSM Walter Phillips	3/98 Signal School Battalion (USAR)	Providence, R.I.
LTC Jeff Anderson	CSM Freddie Lee Martin	3/100 Signal School Battalion (USAR)	Huntsville, Ala.
LTC Darrell Fountain	CSM Ronald Barefield	102d Signal Battalion (AC)	Mannheim, Germany
LTC James Trent	CSM William Davis	2/104 Regimental Signal Battalion (USAR)	Sacramento, Calif.
LTC Ricky Platt	CSM Charles Floyd	105th Signal Battalion (ARNG)	North Charleston, S.C.
LTC Debra Rose	CSM Larry Thompson	108th Signal Battalion (ARNG)	Camden, S.C.
MAJ(P) Ronald McCoy	CSM Larry Gilpin	3/108 Signal School Battalion (USAR)	Fort Jackson, S.C.
LTC Jeff Ashley	CSM Hilton Hutchins	111th Signal Battalion (ARNG)	Greenwood, S.C.
LTC Peter Gallagher	CSM Leandro San Feliz	112d Signal Battalion (AC)	Fort Bragg, N.C.
LTC Anthony Cottles	CSM James Boatright	115th Signal Battalion (ARNG)	Florence, Ala.
LTC Vernon Lister	CSM George Butler	121st Signal Battalion (AC)	Kitzingen, Germany
LTC Eric Albert	CSM Harold Littlejohn	122d Signal Battalion (AC)	Camp Red Cloud, Korea
LTC Joseph Brendler	CSM Rudolph Johns	123d Signal Battalion (AC)	Fort Stewart, Ga.
LTC John Schleifer	CSM Michael Davis	124th Signal Battalion (AC)	Fort Hood, Texas
LTC Bevan Daley	CSM Mike Bartelle	125th Signal Battalion (AC)	Schofield Barracks, Hawaii
LTC Sean Casey	CSM Gertrude Nobles	129th Signal Battalion (ARNG)	Bel Air, Md.
LTC Arthur Weller III	CSM Roger Allen	133d Signal Battalion (ARNG)	Crestwood, Ill.
LTC Richard Weaver	CSM Pattricia Ibberson	134th Signal Battalion (ARNG)	InverGrove Heights, Minn.
LTC Duane Probest	CSM Robert Aegerter	135th Signal Battalion (ARNG)	St. Joseph, Mo.
LTC Marvin Miller	CSM Joe Rodriguez	136th Signal Battalion (ARNG)	Temple, Texas
LTC David Babb	CSM Judith Macy	138th Signal Battalion (ARNG)	Anderson, Ind.
LTC Christopher Argo	CSM Arthur Washington	141st Signal Battalion (AC)	Bad Kreuznach, Germany
LTC James Gowen	CSM Lee Pearce	146th Signal Battalion (ARNG)	Jacksonville, Fla.
LTC Heather Meeds	CSM Jerry Martin	151st Signal Battalion (ARNG)	Greenville, S.C.
LTC Robert Linnan	CSM Michael Young	156th Signal Battalion (ARNG)	Ypsilanti, Mich.
LTC David Passwaters	CSM Dennis Lingren	198th Signal Battalion (ARNG)	Wilmington, Del.
LTC Dudley Smith	CSM Gretchen Doty	212th Signal Battalion (ARNG)	North Little Rock, Ark.
LTC Phillip Meals	CSM James White	230th Signal Battalion (ARNG)	Humboldt, Tenn.
MAJ Andrew Ussery	CSM Paul Ferneau	234th Signal Battalion (ARNG)	Cedar Rapids, Iowa
LTC Sandra Fusco	CSM Joseph Atone	240th Signal Battalion (ARNG)	Compton, Calif.
LTC Janis Bruno	CSM Kenneth Stovall	249th Signal Battalion (ARNG)	Dallas, Texas
LTC Kevin Hegarty	CSM Eloyd Britt	250th Signal Battalion (ARNG)	Westfield, N.J.
MAJ Gary Cathcart	CSM Russell Quinn	279th Signal Battalion (ARNG)	Huntsville, Ala.
LTC Pamela Gonce	CSM Scott Arterbridge	280th Signal Battalion (ARNG)	Georgetown, Del.
LTC John Holwick	CSM Phillip Douglas	304th Signal Battalion (AC)	Seoul, Korea
LTC Victor Butera	CSM Braley McCutchen	307th Signal Battalion (AC)	Seoul, Korea
LTC Curtis Madison	CSM Paul Ballinger	319th Signal Battalion (USAR)	Sacramento, Calif.
LTC Geoffery Freeman	CSM Art Owen	324th Signal Battalion (USAR)	Fort Gordon, Ga.
LTC Jerry Stidham	CSM Vincent Epps	327th Signal Battalion (AC)	Fort Bragg, N.C.
LTC Dwayne Williams	CSM Johnny Dorsey	369th Signal Battalion (AC)	Fort Gordon, Ga.
LTC James Hendricks	CSM Jerome Farmer	392d Signal Battalion (USAR)	West Hazelton, Pa.
LTC Herbert Starling	CSM Ray Anderson	417th Signal Battalion (ARNG)	Tallahassee, Fla.
LTC Melinda Grow	CSM Allan Callanan	422d Signal Battalion (ARNG)	Reno, Nev.
LTC Mark Lessig	CSM Thomas Clark	440th Signal Battalion (AC)	Darmstadt, Germany
LTC Robert Mosley	CSM Kenneth Golston	442d Signal Battalion (AC)	Fort Gordon, Ga.
LTC Chris Robertson	CSM Demetris Fields	447th Signal Battalion (AC)	Fort Gordon, Ga.
LTC Michelle Walla	CSM Lloyd Gardner	501st Signal Battalion (AC)	Fort Campbell, Ky.
LTC Blake Hollis	CSM Herman Badger	504th Signal Battalion (AC)	Fort Huachuca, Ariz.
LTC James Lamkin	CSM Arthur Newsome	509th Signal Battalion (AC)	Vicenza, Italy
LTC Karla Donovan	CSM Joseph Thomas	551st Signal Battalion (AC)	Fort Gordon, Ga.
LTC Scott Gedling	CSM Ray Green	711th Signal Battalion (ARNG)	Mobile, Ala.
LTC Charles Torrence	CSM James Sechrist	845th Signal Battalion (USAR)	Pascagoula, Miss.
LTC William Milani	CSM Ronnie Blanton	1110th Signal Battalion (AC)	Fort Detrick, Md.
LTC Michelle Seward	CSM Eliud Ortiz	1111th Signal Battalion (AC)	Fort Detrick, Md.
LTC John Cox	SGM Paul Schroeder	1112d Signal Battalion (AC)	Fort Bragg, N.C.
LTC Joseph (JJ) Frazier	SGM David Carr	1114th Signal Battalion (AC)	Fort Hood, Texas
LTC Molly O'Donnell	SGM Michael Tomczewski	1115th Signal Battalion (AC)	Fort Lewis, Wash.

Current as of January 2003. Please send corrections to this list to ACeditor@gordon.army.mil.
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